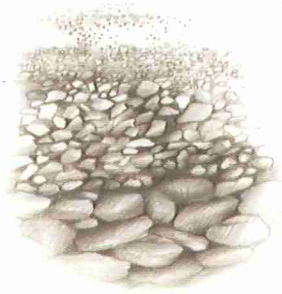
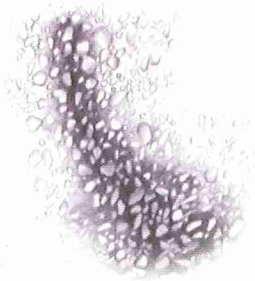


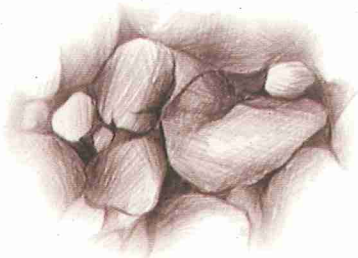
Geotechnical Engineering

Water Resources



Environmental Assessments and Remediation

Sustainable Development Services



Geologic Assessments

Associated Earth Sciences, Inc.

Serving the Pacific Northwest Since 1981

Environmental Impact Statement
Technical Report on
Geology, Soils, and Ground Water

THE VILLAGES

Black Diamond, Washington

Prepared for

BD Villages Partners, LP

Project No. KG060601A
September 26, 2008

ENVIRONMENTAL IMPACT STATEMENT
TECHNICAL REPORT ON
GEOLOGY, SOILS, AND GROUND WATER

THE VILLAGES

Black Diamond, Washington

Prepared for:
BD Villages Partners, LP
825 5th Avenue, Suite 202
Kirkland, Washington 98033

Prepared by:
Associated Earth Sciences, Inc.
911 5th Avenue, Suite 100
Kirkland, Washington 98033
425-827-7701
Fax: 425-827-5424

September 26, 2008
Project No. KG060601A

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1-1
1.1 Purpose and Scope 1-1
1.2 Report Organization 1-2
1.3 Physical Setting and Background 1-2
1.3.1 Project Location 1-2
1.3.2 Physiography and Topography 1-3
1.3.3 Streams and Wetlands 1-4
2.0 PROPOSED ACTION AND ALTERNATIVES 2-1
3.0 METHODOLOGY AND PREVIOUS STUDIES 3-1
3.1 Data Review and Previous Studies 3-1
3.2 Field Investigations 3-2
3.2.1 Exploration Pits/Infiltration Pits 3-2
3.2.2 Exploratory Wells 3-2
3.2.3 Ravine Reconnaissance Survey 3-4
3.2.4 Infiltration Testing 3-5
3.2.5 Ground Water Monitoring 3-6
4.0 AFFECTED ENVIRONMENT: GEOLOGY, SOILS, AND GEOLOGIC HAZARDS 4-1
4.1 Regional Geology 4-1
4.1.1 Bedrock Geology 4-1
4.1.2 Pleistocene Geology (10,000 years ago to 2.4 million years ago) 4-2
4.1.3 Holocene Geology (< 10,000 years ago) 4-4
4.2 Project Geology 4-4
4.2.1 Summary 4-4
Main Property – Summary of Geologic Conditions 4-5
North Property – Summary of Geologic Conditions 4-6
4.2.2 Geologic Units 4-6
Lower Tertiary - Puget Group 4-6
Upper Tertiary - Hammer Bluff Formation 4-7
Pleistocene Deposits 4-8
4.3 Surface Soils 4-19
4.3.1 General 4-19
4.3.2 Soil Units 4-20
Beausite Series 4-20
Alderwood Series 4-21
Alderwood and Kitsap Soils 4-21
Everett Series 4-22
Bellingham Silt Loam 4-22

TABLE OF CONTENTS (CONTINUED)

Page

Seattle Muck 4-22
Norma Series 4-23
Buckley Series 4-23
4.4 Geologic Hazards 4-23
4.4.1 Erosion Hazards 4-24
4.4.2 Landslide and Steep Slope Hazards 4-26
Class 2 – Moderate Hazard 4-28
Class 3 – High Hazard 4-28
4.4.3 Mine Hazard Areas 4-29
4.4.4 Channel Erosion 4-30
4.4.5 Seismic Hazards 4-30
Regional Seismicity 4-30
Ground Rupture Along Surficial Fault Zones 4-34
Ground Motion Response 4-34
Liquefaction 4-35
Seismically Induced Landslides 4-36
4.4.6 Volcanic Hazards 4-36
5.0 AFFECTED ENVIRONMENT: HYDROGEOLOGY AND HYDROLOGY 5-1
5.1 Regional Hydrogeologic Setting 5-1
5.1.1 Glacial and Nonglacial Aquifers 5-2
5.1.2 Bedrock Aquifers 5-2
5.2 Ground Water – Surface Water Interaction 5-3
5.2.1 General 5-3
5.2.2 Ground Water Subbasins 5-4
Black Diamond Lake Subbasin 5-4
Rock Creek Subbasin, Lake Sawyer, and Ravensdale Creek 5-5
Horseshoe Lake 5-6
Crisp Creek Subbasin 5-7
Green River Subbasin 5-7
5.3 Surface Water Features 5-7
5.3.1 On-Site Surface Water 5-7
5.3.2 Off-Site Surface Water 5-10
5.4 Project Hydrogeology 5-11
5.4.1 General 5-11
5.4.2 Summary 5-11
Main Property – Aquifer Summary 5-12
North Property – Aquifer Summary 5-14

TABLE OF CONTENTS (CONTINUED)

Page

5.4.3 Aquifers 5-14
Puget Group Aquifer 5-14
$Qpog_{2c}$ Aquifer 5-15
$Qpon_{1f}$ Aquifer 5-16
Pre-Olympia Aquifer - $Qpog_{1c}$/$Qpon_{1c}$ 5-16
Vashon Advance Aquifer 5-17
Vashon Ice-Contact Aquifer - Qvic 5-18
Vashon Recessional Aquifer - Qvr 5-19
Interflow 5-20
5.5 Water Users 5-21
5.6 Pre-Developed Condition Water Balance 5-23
5.6.1 General 5-23
5.6.2 Precipitation 5-23
5.6.3 Evapotranspiration 5-24
5.6.4 Runoff 5-25
5.6.5 Recharge 5-25
Main Property Ground Water Recharge 5-26
North Property Ground Water Recharge 5-28
6.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES: GEOLOGIC HAZARDS 6-1
6.1 Erosion Hazards 6-4
6.1.1 Erosion Hazard Impacts 6-4
6.1.2 Erosion Hazard Mitigation Measures 6-5
6.1.3 Erosion Hazard Conclusions 6-8
6.2 Stream Erosion Hazards 6-8
6.2.1 Stream Erosion Hazard Impacts 6-9
Stream S4 6-10
Off-Site Crisp Creek and Unnamed Tributary to Green River 6-11
6.2.2 Stream Erosion Hazard Mitigation Measures 6-11
6.3 Landslide Hazards 6-12
6.3.1 Landslide Hazard Impacts 6-12
6.3.2 Landslide Hazard Mitigation Measures 6-15
6.3.3 Landslide Hazard Conclusions 6-18
6.4 Seismic Hazards 6-18
6.4.1 Seismic Hazard Impacts 6-18
Surface Ground Rupture 6-19
Ground Motion 6-19
Liquefaction 6-19
Seismically Induced Landslides 6-19

TABLE OF CONTENTS (CONTINUED)

Page

6.4.2 Seismic Hazard Mitigation Measures 6-19
Surface Ground Rupture 6-19
Ground Motion 6-20
Liquefaction 6-20
Seismically Induced Landslides 6-20
6.5 Coal Mine Hazards 6-20
6.6 Geotechnical 6-21
6.6.1 Geotechnical Impacts 6-21
6.6.2 Geotechnical Mitigation Measures and Considerations 6-21
Soils Management 6-22
Site Preparation 6-22
Structural Fill 6-23
Foundations 6-25
Detention Ponds/Sand Filters 6-25
7.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES: GROUND WATER 7-1
7.1 Interflow 7-2
7.1.1 Interflow Impacts 7-2
7.1.2 Interflow Mitigation 7-2
7.2 Ground Water 7-3
7.2.1 Developed Conditions Water Balance 7-4
Discussion of Results - Main Property 7-5
Discussion of Results - North Property 7-8
7.2.2 Aquifer Impacts Under the Proposed Actions 7-9
Bedrock Aquifer, Qponif Aquifer, and Qva Aquifer 7-9
Pre-Olympia Aquifer 7-10
Shallow Aquifer 7-11
7.2.3 Spring Impacts 7-12
7.2.4 No Action Alternative 7-12
7.2.5 Ground Water Mitigation Measures 7-12
8.0 REFERENCES 8-1

TABLE OF CONTENTS (CONTINUED)

Page

LIST OF TABLES

Table 3-1. Summary of Well Construction Details 3-3
Table 3-2. Field Infiltration Rate Test Results 3-5
Table 4-1. Puget Lowland Stratigraphic Framework 4-3
Table 4-2. Summary of Subsurface Information from Exploratory Wells MW-1 to MW-23 4-11
Table 4-3. Summary of NRCS Soils Types 4-20
Table 4-4. Erosion Hazard Zone Descriptions 4-26
Table 4-5. Definition of Landslide Hazard Ratings at The Villages 4-28
Table 4-6. Historical Seismicity in the Vicinity of the Site (M > 3.0) 4-31
Table 5-1. Drainage Subbasins 5-10
Table 5-2. Manual Water Level Measurements 5-13
Table 5-3. Summary of Drinking Water Supply Wells and Springs 5-22
Table 5-6 Average Monthly Rainfall and Forest Evapotranspiration 5-24
Table 5-4. Main Property Water Balance Under Forested Conditions 5-28
Table 5-5. North Property Water Balance Under Forested Conditions 5-29
Table 6-1. Geologic Hazards: Summary of Impacts and Mitigations Under the Proposed Action 6-1
Table 7-1. Summary of Impacts and Mitigations 7-1
Table 7-2. Main Property of The Villages Comparison of Pre-Developed and Developed Condition 7-13
Table 7-3. North Property of The Villages Comparison of Pre-Developed and Developed Condition 7-14

LIST OF FIGURES

Figure 1. Vicinity Map
Figure 2. Regional Topographic Setting
Figure 3. Existing Drainage Basins, Stream and Wetlands Map
Figure 4. Regional Surface Water Features
Figure 5. Land Use Plan - Proposed
Figure 6. Land Use Plan - Alternative
Figure 7. Site and Exploration Plan
Figure 8. Puget Lowland Stratigraphic Column
Figure 9. Geology Map
Figure 10A. Geologic Cross-Section A-A'
Figure 10B. Geologic Cross-Section A-A'

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES (CONTINUED)

Figure 11A. Geologic Cross-Section B-B'
Figure 11B. Geologic Cross-Section B-B'
Figure 12. Geologic Cross-Section C-C'
Figure 13. Geologic Cross-Section D-D'
Figure 14. Geologic Cross-Section E-E'
Figure 15. Qvr/Qvic Distribution Map
Figure 16. Bedrock Distribution and Structural Map
Figure 17. Soils Map
Figure 18. Gross Erosion Flow Chart
Figure 19. Erosion Hazard Map
Figure 20. Landslide Hazard Map
Figure 21. Coal Mine Hazard Map
Figure 22. M≥3.0 Earthquake Location Map
Figure 23. Regional Structure Map
Figure 24. Water Supply Springs and Wells
Figure 25. Ground Water Subbasins Map
Figure 26. Black Diamond Lake – Water Level vs. Daily Rainfall
Figure 27. Pre-Olympia Aquifer and $Qpog_2$ Aquifer Ground Water
Figure 28. Shallow Aquifer Ground Water Distribution and Flow Map
Figure 29. Horseshoe Lake – Ground Water Level – Surface Water Interaction
Figure 30. Developed Basin Map
Figure 31. Water Balance Areas Map

LIST OF APPENDICES

Appendix 1. Field Methods
Appendix 2. AESI Exploration Pit Logs
Appendix 3. AESI Exploratory Well Logs
Appendix 4. Exploration Logs by Others
Appendix 5. Ground Water Data
Appendix 6. Channel Erosion and Stream Reconnaissance
Appendix 7. Reports by Golder Associates, Inc.
Appendix 8. Seismic Database
Appendix 9. Water Users
Appendix 10. Water Balance

1.0 INTRODUCTION

1.1 Purpose and Scope

Associated Earth Sciences, Inc. (AESI) completed an evaluation of existing geologic, ground water, and soils conditions for The Villages Master Planned Development (MPD) (Figure 1). Our evaluation of existing conditions was used to identify probable significant impacts and appropriate mitigation measures to the affected environments associated with the Proposed Action and No Action Alternative (described in Chapter 2, "Proposed Action and Alternatives"). AESI is responsible for assessing environmental effects of the proposed development with respect to geology, soils, and ground water. This report provides: (1) a summary of existing conditions, (2) our evaluation of probable significant impacts, and (3) potential mitigation measures.

The purpose of our studies was to obtain and evaluate geologic, hydrogeologic, and soils data needed to assess the existing conditions at the site, and to interpret those conditions with respect to environmental impacts resulting from development of the Proposed Action and No Action Alternative, and constraints on the proposed development opportunities. The specific scope of services completed for The Villages Environmental Impact Statement (EIS) is listed below.

1. Review, compile, and analyze existing geologic, soil, and ground water data for the site and surrounding vicinity.

2. Complete a geologic and geomorphic reconnaissance of the site.

3. Excavate and sample 110 exploration pits to evaluate subsurface conditions.

4. Drill 23 exploratory wells and 3 shallow piezometers to evaluate the shallow regional aquifer and deep aquifers.

5. Complete 8 infiltration/drain tests to evaluate infiltration feasibility.

6. Monitor ground water levels in the observation wells on a monthly basis.

7. Evaluate existing stream channels relative to erosion and sediment transport characteristics.

8. Identify and evaluate existing erosion, landslide, coal mine, and seismic hazards.

9. Identify and evaluate probable significant impacts from the Proposed Action and No Action Alternative with respect to geologic hazards and ground water.

10. Identify proposed mitigation measures for the Proposed Action and No Action Alternative.

1.2 Report Organization

This report summarizes the results of our literature review, data analysis, field exploration, and monitoring activities, and analysis of probable significant impacts completed between July 2005 through August 2008. The following sections of this report include: (1) a description of the physical setting and historic land use of the site, (2) relevant background information concerning development of the Proposed Action and No Action Alternative, (3) a summary of previous geologic and hydrogeologic studies of the sites and methods used to complete our analysis, (4) descriptions of existing geologic and soils conditions, (5) a summary of existing ground water conditions, (6) our analysis of probable significant environmental impacts and mitigation measures relative to geologic hazards, and (7) our analysis of probable significant environmental impacts and mitigation measures relative to ground water.

1.3 Physical Setting and Background

1.3.1 Project Location

The Villages Project is approximately 1189.9 acres in size and is comprised of several parcels of land. The Main Property portion of The Villages is 1108.4 acres and includes contiguous parcels located on portions of Sections 15, 22, 23, and 27 within T21N, R6E (Figures 1 and 2). The North Property (Parcel B) portion of The Villages is 81.5 acres, and is a separate parcel located 1 mile to the northeast of the Main Property on Section 11, T21N, R6E (Figures 1 and 2). All of The Villages parcels are located within the city of Black Diamond, Washington. The Main Property is located approximately 1 mile west of Lawson Hills.

The Main Property is bounded to the north, east, and south by rural residential and undeveloped properties, and to the west by forestry lands and the Horseshoe Lake and Diamond Acres residential developments. The southern boundary of the Main Property is formed in part by SE Green River Road.

The North Property is bounded to the north by the "North Triangle Property" (evaluated as part of the Lawson Hills EIS), to the east by an existing housing development, forested parcels, and a retail parcel with a building, parking lot, and detention pond, and to the south by residential and undeveloped properties.

Main gravel access roads to the Main Property are located off of the SE Auburn-Black Diamond Road, Lake Sawyer Road, State Route (SR) 169, and the SE Green Valley Road.

Several abandoned logging roads and unsanctioned all-terrain vehicle (ATV) trails also cross large portions of the property. Access to the North Property is from SR 169 on abandoned logging roads. An old railroad grade now serving as a trail crosses the southwest corner of the property.

Land use in the past at the Main and North Properties have included forestry, minor gravel extraction operations, and unsanctioned recreational use of old logging roads and railroad grades for ATV, horse, bike, and hiking trails.

1.3.2 Physiography and Topography

The city of Black Diamond and The Villages lie in a broad trough known as the Puget Lowland. The Lowland extends from the Fraser Valley in British Columbia to the Willamette Valley in Oregon and from the Olympic Mountains and the Cascade Range, which are situated approximately 50 miles to the west and a few miles to the east of the site, respectively. The portion of the Lowland north of Tenino, Washington (just south of the city of Olympia, Washington) has been subjected to several episodes of glacial advance and retreat. This portion of the lowland terrain (north of Tenino) is dominated by a broad plain composed of deposits from glaciers (drift) that occupied the region over the past 2.4 million years; the morphology of the land surface today is largely a result of erosion and deposition occurring during and since the retreat of the last continental glaciation (about 15,000 years ago). Modern postglacial streams and glacial meltwater channels have cut troughs and valleys up to several hundred feet deep into the drift plain.

Luzier (1969) described the plain in the Black Diamond area as the Covington Drift Plain. The Covington Drift Plain is separated from the Des Moines Drift Plain to the west by the Duwamish Valley. The northern and southern boundaries of the Covington Drift Plain are the Cedar and Green River valleys, respectively. The eastern boundary is formed by the Cascade bedrock foothills, located within a few miles east of The Villages. The surface of the Covington Drift Plain is gently rolling, slopes gently to the west, and ground surface elevations range from about 400 to 700 feet. Elongate northwest-southeast trending hills and swales parallel the flow direction of an ice sheet that occupied the Puget Lowland about 15,000 years ago. These hills and swales are cross-cut by northeast-southwest trending channels formed by glacial outwash during the retreat of the last glaciation. The deepest and youngest of these channels, termed the Covington Channel (Mullineaux, 1970), bisects the Covington Drift Plain, and is located 3 to 4 miles northwest of the project area. Elevations in the Covington Channel generally range from approximately 300 to 425 feet. Moving southeast from the Covington Channel toward The Villages, the outwash channels become progressively older and occur at progressively higher elevations. The morphology of these features plays an important role on the distribution and ground water flow of a shallow aquifer, described in detail in Sections 4.0 (Geology) and 5.0 (Hydrogeology).

The drift plain surrounding the Black Diamond area exhibits relatively low relief with poorly drained stream courses and local closed depressions occupied by lakes, wetlands, and peat bogs. Several well-drained abandoned outwash terraces are located along the margins of existing stream drainages. Many of the modern drainages, such as Ravensdale Creek, Rock Creek, and Covington Creek, are "underfit," meaning they occupy stream valleys formed by higher-energy glacial meltwater channels.

The topography of The Villages generally falls into three categories: till-mantled uplands, outwash terrain, and ice-contact deposits. Exceptions include some areas of steep slopes in the transition zone from upland topography to outwash terrain, such as the western edge of Section 22, where an outwash channel bisects the uplands on Sections 15 and 22. Another area of steep slopes occurs on either side of Black Diamond Lake where elevation drops rapidly from the upland surface (elevations around 600 to 650 feet mean sea level [fmsl]) down to the lake (approximate elevation 560 fmsl). The southwestern property boundary is near the top of an off-site steep slope, where the elevation drops rapidly (from about elevation 600 fmsl at the top of slope to about elevation 480 fmsl at SE Green Valley Road) over a short distance near the top of the steep slopes of the northern wall of the Green River valley.

Elevations on the till-mantled upland portions of The Villages range from about 570 fmsl to about 710 fmsl. The uplands are characterized by northwest-southeast trending hills and swales formed by the moving ice sheet, generally with wetland areas occurring in the upland swales. The outwash terrain is at lower elevations and was deposited by meltwater rivers cutting across and eroding through the upland surfaces. Elevations on the outwash terrain portions of The Villages range from about 520 fmsl to about 570 fmsl. Ice-contact deposits, located on the southern portion of Section 22, are characterized by irregular hummocky topography with mounds and closed depressions erratically scattered across the terrain. Elevations on the ice-contact terrain in Section 22 range from about 570 fmsl to about 595 fmsl.

The Villages is located within the Green River basin. Several subbasin hydrologic divides are present on the Main Property: portions of Sections 15, 22, and 23 drain to Rock Creek/Lake Sawyer, a portion of Section 15 drains to Horseshoe Lake, and portions of Sections 22, 23, and 27 drain to the Green River. The North Property is located within the Ravensdale Creek and Rock Creek basins. Existing drainage basins are shown on Figure 3.

1.3.3 Streams and Wetlands

Many tributary streams that flow on the drift plain originate from lakes or bogs. Surface water features are described in detail in Sections 4.4.4 and 5.3, and are briefly summarized here. Nearby lakes include Lake Sawyer, Horseshoe, Keevie, Marjorie, Black Diamond, and Jones Lakes. The Green River and Ravensdale, Rock, and Crisp Creeks are streams in the immediate vicinity of the project area. Ravensdale and Rock Creeks drain to Lake Sawyer, which drains via Covington Creek to the Green River. Crisp Creek drains to the Green River.

Other major surface water features in the project area include large wetlands and/or bogs within the swale containing Jones Lake and Rock Creek, the swale that includes Black Diamond Lake, and a large wetland complex located north and west of Parcel B. Several smaller wetland areas and small drainage courses are mapped on or in the area of The Villages and are described in detail in wetlands (Wetland Resources, 2008) and fisheries (Cedarock Consultants, Inc. [Cedarock], 2008) technical reports. Existing surface water drainage basins and wetlands are shown on Figure 3. Regional surface water features are shown on Figure 4. A total of 171.4 acres of wetlands have been delineated on The Villages by Wetland Resources (Wetland Resources, 2008). Five natural watercourses (Rock Creek and Streams S2, S4, S5, and S7) and two other watercourses (S3 and S6) were delineated on-site by Cedarock (Cedarock, 2008). S3 and S6 were dug or created during past road building activities, but contain flow from natural sources, and therefore were included in the evaluation (Cedarock, 2008).

2.0 PROPOSED ACTION AND ALTERNATIVES

3.0 METHODOLOGY AND PREVIOUS STUDIES

3.1 Data Review and Previous Studies

Associated Earth Sciences, Inc. (AESI) reviewed available soil, ground water, and geologic data to gain an understanding of existing conditions in the study area. Information reviewed included the following:

- Reports and maps published by the United States Geological Survey (USGS) and the Washington State Department of Natural Resources, Division of Geology and Earth Resources (WDNR);

- Water well records and water rights information obtained from the Washington State Department of Ecology (Ecology);

- Municipal (Group A) and community (Group B) water supply information obtained from the Washington State Office of Drinking Water (ODW), and the Seattle-King County Department of Health (SKDOH);

- Wellhead Protection Areas (WHPAs) and Critical Aquifer Recharge Areas (CARAs) designated by King County as listed on the King County iMAP website, ground water program map set;

- Soils maps obtained from the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS);

- Aerial photographs of the project;

- Maps provided by Triad Associates (Triad) and members of the Environmental Impact Statement (EIS) project team;

- City of Black Diamond Potential Annexation Area DEIS and Comprehensive Plan Amendments; and

- Published and unpublished consultant reports for the project area.

Complete citations for documents and communications referenced in this report are listed in Chapter 8, "References."

3.2 Field Investigations

Several types of field exploration activities were conducted for The Villages EIS study including: (1) reconnaissance and mapping of current site geologic and hydrologic conditions, (2) excavation and sampling of 110 exploration pits, (3) drilling of 23 exploratory wells and 3 piezometers, (4) ravine/stream reconnaissance, (5) 4 infiltration tests and 4 drain tests, and (6) water level monitoring. AESI reviewed limited aquifer testing, ground water quality sampling, and geophysical surveys performed by others. Our field investigation and monitoring activities were performed between September 2005 and August 2008.

3.2.1 Exploration Pits/Infiltration Pits

Subsurface soil conditions at the site were assessed by monitoring the excavation of 110 exploration pits, 4 infiltration test pits, 3 drain test pits, and 1 underground injection control (UIC) test drain at the locations shown on Figure 7. The exploration/infiltration pits were located in the field with hand-held GPS equipment and/or estimating distances from existing physical features, as shown on site plans provided by Triad. This work supplements previous shallow explorations conducted by others including: BP-1 through BP-X (McLucas, 1990) and TP-1 through TP-X (Golder Associates [Golder], 2006).

The pits were excavated using a trackhoe operated by Northwest Excavating & Trucking. The pits were excavated to depths ranging from about 5.5 to 21 feet below the existing ground surface, with the majority of the pits extending to depths of 10 to 15 feet. An AESI geologist observed all excavation and backfilling activities. Excavation, sampling, and backfilling procedures are described in Appendix 1. Detailed logs of the AESI exploration pits are presented in Appendix 2. Locations of AESI exploration pits are indicated on Figure 7 as "EP-", exploration pits where infiltration tests were conducted are indicated as "IT-", exploration pits where drain tests were conducted are indicated as "DT-", and the UIC drilled drain is indicated as UIC-1. Exploration pits excavated by Golder are indicated as "TP-" and exploration pits excavated by McLucas are indicated as "BP-".

3.2.2 Exploratory Wells

Subsurface conditions at the sites were also evaluated by drilling 23 exploratory wells. Wells MW-1 through MW-23 were drilled and installed under the full-time observation of an AESI geologist. Drilling and well construction procedures are described in Appendix 1. Triad surveyed the well locations, ground surface elevations, and well casing rim elevations.

Wells MW-1 through MW-4 and wells MW-7 through MW-23 were drilled and installed using dual air-rotary drilling equipment owned and operated by Tacoma Pump and Drilling, Inc. (Tacoma Pump) of Graham, Washington. Wells MW-5 and MW-6 were drilled and installed using air-rotary drilling equipment owned and operated by Aquatech Well Drilling and Pumps, Inc. (Aquatech) of Sedro-Woolley, Washington. Wells MW-1 through MW-23 were

completed by advancing a 6-inch inside-diameter, steel casing with a truck-mounted drill rig, and 6-inch-diameter, welded, steel casing was used to drill and construct wells. Grab samples of the soil cuttings were obtained at a minimum 5-foot sampling interval. Detailed drilling logs were prepared and are included as Appendix 3.

This work supplements previous exploratory drilling including: water supply test well W-Graddon (King County Water District #105, 1988), water supply test wells W-2, W-3, W-4, and W-5 (Walker, 1989), exploration borings DH-1 through DH-5 (McLucas, 1990), water supply test well W-1 (ICE, 1996), and monitoring wells ICE MW-1 through ICE MW-5 (ICE, 1998).

Locations of AESI exploratory wells are indicated on Figure 7 as "MW-", water supply test wells are indicated as "W-", exploration borings and monitoring wells installed by McLucas are indicated as "DH-" and monitoring wells installed by ICE are indicated as "ICE MW-".

A summary of pertinent construction details for wells completed for this study and wells completed previously by others and monitored during this study are presented in Table 3-1. Ground water levels from wells listed in Table 3-1 have been monitored monthly since installation. A table summarizing monthly hand measurements from the wells is included in Appendix 5. Individual well hydrographs are also included in Appendix 5.

Table 3-1
Summary of Well Construction Details

Well ID	Top of Casing Elevation (fmsl)	Ground Surface Elevation (fmsl)	Total Depth of Boring (feet)	Type of Well Completion	Screened Interval Depth (feet)	Screened Interval Elevation (fmsl)	Aquifer
MW-1	601.36	599.24	155	SS-WW	50-55	549.2-544.2	Qvic
MW-2	564.56	562.10	176.5	SS-WW	60-65	502.1-497.1	$Qpon_{lc}$
MW-3	564.25	562.05	151	SS-WW	75-80	487.1-482.1	$Qpon_{lc}$
MW-4	617.53	615.41	152	SS-WW	67.5-72.5	547.9-542.9	Qva
MW-5	603.74	601.59	100	SS-WW	65.4-70.4	536.2-531.2	Qva
MW-6	591.69	589.71	180	SS-WW	167.8-177.8	421.9-411.9	$Qpog_{lc}$
MW-7	553.36	550.70	150	SS-WW	120.7-125.7	430-425	$Qpog_{lc}$
MW-8	553.35	550.72	30	SS-WW	21.8-26.8	528.9-523.9	Qvr
MW-9	555.04	552.41	59	SS-WW	19-24	533.4-528.4	Qvr
MW-10	581.90	579.16	220	SS-WW	168-173	411.2-406.2	$Qpog_{lc}$
MW-11	532.95	530.61	318	SS-WW	298.5-303.5	232.1-227.1	Wx bedrock
MW-12	532.94	530.52	79	SS-WW	73.75-78.75	456.8-451.8	$Qpog_{lc}$
MW-13	532.88	530.41	51	SS-WW	38.9-48.9	491.5-481.5	$Qpog_{lc}$
MW-14	644.54	641.72	157.5	SS-WW	105.5-110.5	536.2-531.2	$Qpog_{2}$
MW-15	574.82	571.97	357.5	SS-WW	336.4-341.4	235.6-230.6	Wx bedrock
MW-16	566.36	563.80	52	SS-WW	26.6-31.6	537.2-532.2	Qvr
MW-17	545.33	542.59	116	SS-WW	82.5-87.5	460.1-455.1	$Qpog_{lc}$
MW-18	545.36	542.66	25	SS-WW	18.8-23.8	523.9-518.9	Qvr

Well ID	Top of Casing Elevation (fmsl)	Ground Surface Elevation (fmsl)	Total Depth of Boring (feet)	Type of Well Completion	Screened Interval Depth (feet)	Screened Interval Elevation (fmsl)	Aquifer
MW-19	604.79	602.15	198	SS-WW	171.4-176.4	430.8-425.8	$Qpon_{lf}$
MW-20	566.2	564.0	115	OB	115	449	$Qpog_{lc}$
MW-21	565.6	563.4	37	SS-WW	16.2-21.2	547.2-542.2	Qvr
MW-22	557.8	555.2	95	OB	95	460.2	$Qpog_{lc}$
MW-23	558.0	555.4	47	SS-WW	36.1-41.1	519.3-514.3	Qvr
DH-2	600.26	597.46	81	PVC	60-70	537.5-527.5	Qvic
DH-3	574.46	572.36	89	PVC	68-78	504.4-494.4	Qvic
W-1	606.06	602.75	240	OB	240	362.8	$Qpog_{lc}$
W-3	578.40	576.02	160	PERF	62-101	514-475	$Qpon_{lc}$
W-5	587.04	583.78	195	PERF	135-150, 155-190	448.8-433.8 428.8-393.8	$Qpon_{lc}$
ICE MW-1	570.35	567.91	45	PVC	35-45	532.9-522.9	Qvic
ICE MW-2D	581.55	578.94	23	PVC	13-23	565.9-555.9	Qvic
ICE MW-4	593.92	591.46	23	PVC	13-23	551-541	Qvic
P-1	539.97	538.19	48	PVC	28-48	563.5-543.5	Qvic
P-2	527.42	523.56	4	SS-DP	+0.5-2.5	539-536	Qvr
P-3	528.0	523.5	28	SS-DP	20.5-23.5	503-500	Qvr

fmsl = feet mean sea level.
SS-WW = stainless steel, wire wrapped.
OB = open bottom.
PVC = polyvinyl chloride.
PERF = perforated.
SS-DP = stainless steel drive point.
Qvr = Vashon recessional outwash.
Qvic = Vashon ice contact deposits.
Qva = Vashon advance outwash.
$Qpon_{lc}$ = upper pre-Olympia nonglacial deposits, coarse-grained
$Qpog_{lc}$ = upper pre-Olympia glacial deposits, coarse-grained.
$Qpog_2$ = lower pre-Olympia glacial deposits, coarse-grained.
Wx bedrock = weathered bedrock.

3.2.3 Ravine Reconnaissance Survey

Ravine reconnaissance surveys were conducted in Stream S4 and two nearby off-site ravines. Stream S4 was walked on May 15, 2008, off-site tributary ravine to Crisp Creek located in the northwest corner of Section 21 was walked on January 31, 2007, and off-site ravine located in the southeast corner of Section 21 was walked on February 7, 2007. The locations and lengths of surveyed channels are shown on Figure 4. The purpose of these surveys was to document existing geologic and geologic hazard conditions, to locate springs, and to evaluate potential ground water-surface water interactions. Stream S4 was also evaluated for erosion potential.

The survey methodology included performing a visual reconnaissance of selected reaches of the channels (Figure 4). Geologic, hydrogeologic, and geologic hazard conditions were documented. Where applicable, stream geometry measurements were recorded. These included channel width, channel depth, channel gradient, flow rates, and substrate

documentation. Photographs were taken at selected intervals and are available for review at AESI's office. Ravine reconnaissance details are presented in Appendix 6.

3.2.4 Infiltration Testing

Field infiltration testing, using a modification of the Pit Infiltration Test (PIT) method described in the 2005 Washington State Department of Ecology *Stormwater Management Manual for Western Washington* (Ecology Manual), was performed at eight locations on the Main Property of The Villages (Figure 7). Field-measured, constant head infiltration rates are summarized in Table 3-2.

The field infiltration testing consisted of a combination of constant head and falling head measurements in the testing locations. In general, water was discharged from a water truck at a relatively constant rate into the infiltration pits or UIC drain during an initial soaking phase, followed by a two-stage "testing" phase. A representative of AESI recorded relevant water flow and water level information throughout the field infiltration testing process.

A summary of infiltration testing is presented in Appendix 1.

Table 3-2
Field Infiltration Rate Test Results

Test No.	Approximate Test Elevation (fmsl)	Geologic Unit	Field-Measured Constant Head Infiltration Rate (iph)	Field-Measured Specific Capacity (gpm/ft)
IT-1	575	Qvic	>200	---
IT-2	615	Qva	<0.1	---
IT-3 (head of 1.5 ft)	555	$Qpog_{lc}$	10	---
IT-3 (head of 7.5 ft)	555	$Qpog_{lc}$	31	---
IT-4	560	Qvr	>200	---
DT-1	533	$Qpog_{lc}$	---	11.3
DT-2	528	$Qpog_{lc}$	---	3.3
DT-3	531	$Qpog_{lc}$	---	0.6

fmsl = feet mean sea level.
iph = inches per hour.
gpm/ft = gallons per minute per foot of head rise.
Qvr = Vashon recessional outwash.
Qvic = Vashon ice contact deposits.
Qva = Vashon advance outwash.
$Qpog_{lc}$ = upper pre-Olympia glacial deposits, coarse-grained.
Measured infiltration rates should not be used for design.

3.2.5 Ground Water Monitoring

Monitoring of ground water levels has been achieved through a combination of monthly measurements and nearly-continuous reading data loggers since installation (Figure 7). Monitoring of the wells is expected to continue throughout the EIS process. The ground water level data were used to determine ground water flow direction and gradient. A table summarizing monthly hand measurements from the wells is included in Appendix 5. Individual well hydrographs with data logger data are also included in Appendix 5. Ground water is described in detail in Section 5.4.3.

4.0 AFFECTED ENVIRONMENT: GEOLOGY, SOILS, AND GEOLOGIC HAZARDS

4.1 Regional Geology

The most comprehensive regional geological mapping of The Villages and surrounding areas was completed by D.R. Mullineaux of the United States Geological Survey (USGS) in the late 1950s. The results of the study were published by the USGS in Professional Paper 672, *Geology of the Renton, Auburn, and Black Diamond Quadrangles, King County, Washington* (Mullineaux, 1970) and in the associated Geologic Quadrangle series, numbers GQ-405, GQ-406, and GQ-407 (Mullineaux 1965a, 1965b, 1965c). Numerous studies focused on area coal reserves have also been published. A thorough coal district compilation map was completed by W.M. Phillips of the Washington Department of Natural Resources (WDNR) titled *Compilation Geologic Map of the Green River Coal District, King County, Washington* (WDNR Open-File Report 84-4, Phillips, 1984). Recent work in the area includes a *Geologic Map of King County, Washington* compilation map (Booth and Wisher, 2006) and revised USGS *Geologic Map of the Snoqualmie Pass 30x60 Minute Quadrangle, Washington* (Tabor et al., 2000).

4.1.1 Bedrock Geology

Bedrock outcrops in the Green River valley within approximately 1,000 feet of the southern boundary of the Main Property. Other bedrock outcrops are present within 1 mile east of The Villages. Bedrock was encountered in Associated Earth Sciences, Inc. (AESI) exploratory wells on The Villages Main Property and in AESI exploration pits on the Lawson North Triangle Property (AESI, 2008; Golder, 2008) immediately north of The Villages North Property. Bedrock was also reported in numerous domestic wells surrounding The Villages.

As described by Mullineaux (1970), bedrock geology in the study area vicinity consists of Tertiary rocks belonging to the Puget Group, which in the Black Diamond area, consists of a thick sequence of arkosic rocks that are at least 6,000 feet thick. The sequence consists chiefly of sandstone and shale, but also includes layers of claystone and coal. The thick arkosic rocks of the Puget Group were laid down under generally uniform conditions over a wide, subsiding coastal plain by westerly flowing, continuously aggrading rivers. Near the end of Eocene time, arkosic sedimentation ceased, and the mapped area subsided. By late Miocene time, the Puget Group had been folded, raised above sea level, and eroded to a surface of low relief. In late Miocene time, thin continental sediments of the Hammer Bluff Formation were deposited on this low-relief surface near Black Diamond. The lower member of the Hammer Bluff Formation consists of clayey quartzose and kaolinitic sediments derived from the arkosic rocks of the Puget Group. The upper member, however, consists chiefly of volcanic sandstone and conglomerate derived from farther east. The Hammer Bluff also contains volcanic ash and pumice (Mullineaux, 1970).

Structural features in the lower Tertiary bedrock include complex folds and faults produced before late Miocene time. In the Black Diamond area, the major trend of folds is nearly north. Later widespread, but relatively minor folding and faulting have affected upper Tertiary sediments and all but the youngest Pleistocene and Holocene sediments (Mullineaux, 1970).

Although bedrock is at ground surface within 1 mile of the study area, the depth to bedrock increases to the west and northwest. The depth to bedrock ranges from less than 100 feet below ground surface to over 600 feet below ground surface in the study area (Jones, 1996).

4.1.2 Pleistocene Geology (10,000 years ago to 2.4 million years ago)

Surficial geologic conditions within the Puget Lowland and the study area are primarily the result of multiple periods of continental glaciation, during which a vast ice sheet advanced south from the mountains of British Columbia as a broad ice tongue called the "Puget lobe" (Bretz, 1913) and covered much of the Puget Lowland of western Washington during the last 2.4 million years (Blunt et al., 1987). During each glacial advance and retreat, rivers emanating from the ice sheet deposited thick sequences of coarse-grained material (glacial outwash) and glacial till (an unsorted mixture of sand, silt, clay, and gravel). The ice sheets disrupted drainage systems and caused rivers to back up and form large lakes. These lake (lacustrine) sediments consist of fine sands and silts. During the time period between glaciations, the Puget Lowland was likely much like today, with primarily low-energy deposition occurring within floodplains, sedimentation in lakes, wetlands, bogs and streams, weathering of existing soils, and occasional large lahars or other volcanic events.

The most recent glacial episode, the Vashon Stade of the Fraser Glaciation, is largely responsible for the present topography throughout the Puget Lowland. Elongate northwest-southeast trending hills and swales parallel the flow direction of the Vashon ice sheet that occupied the Puget Lowland about 15,000 years ago. These hills and swales are cross-cut by northeast-southwest trending river channel deposits formed by glacial outwash rivers during the recession of the Vashon ice sheet. The result, in the project area vicinity, is a number of till-mantled upland "islands" surrounded by outwash plains and channels. In some areas on and nearby the site, the outwash rivers scoured through the underlying till and created "windows" to older sediments. These "windows" through the till provide conduits for ground water to recharge deeper units. The morphology of till uplands, surrounding outwash terrain and till windows, plays an important role on the distribution and patterns of ground water flow, described in detail in Section 5.0 (Hydrogeology).

Beneath these Vashon-age surficial deposits is a complex sequence of older unconsolidated sediments that can extend to over 600 feet below the modern ground surface in the vicinity of the project (Jones, 1996). The older sediments are very compact, having been weighted down by one or more glacial advances following their deposition. Many are also cemented or heavily oxidized from many tens or hundreds of thousands of years of weathering and ground water movement.

A generalized stratigraphic framework for the surficial sediments has been established for much of the Puget Lowland (Figure 8 and Table 4-1).

Table 4-1
Puget Lowland Stratigraphic Framework[1]

Time	Age[2]	Stratigraphic Unit	Event
Holocene	Present to 12.5 - 0.5 - 5.7	Recent Deposits - Electron Mudflow - Osceola Mudflow	Fluvial and mudflow aggradation in parts of the lowland, and local lacustrine sedimentation in closed depressions.
Late Pleistocene	12.5 – 15	Vashon Drift - Recessional outwash - Ice-contact deposits - Till - Advance outwash	After Puget Lobe retreat, invasion of the Duwamish Valley by Puget Sound. - Retreat of Puget Lobe - Maximum of Puget Lobe - Advance of Puget Lobe
Late Pleistocene	15 – 60	Olympia Nonglacial	Nonglacial deposition, slightly cooler than present-day climatic conditions.
Late Pleistocene	60 – 80	Possession Drift	Glacial deposition.
Late Pleistocene	80 – 125	Whidbey Formation	Comparable to present-day climatic conditions.
Late Pleistocene	125 – 190	Double Bluff Drift	Glacial deposition.
Late Pleistocene	190 – 215	Hamm Creek Interglaciation	Comparable to present-day climatic conditions.
Late Pleistocene	215 – 280	Defiance Glaciation	Glacial deposition.
Data Gap	280 – ~780		
Mid to Early Pleistocene	>780	Older Interglacial	Comparable to present?
Mid to Early Pleistocene	800	Salmon Springs Glaciation	Glacial deposition.
Mid to Early Pleistocene	>1000	Puyallup Interglaciation	Comparable to present.
Mid to Early Pleistocene	~1,600	Stuck Glaciation	Glacial deposition.
Mid to Early Pleistocene	>1,600	Alderton Interglaciation	Comparable to present.
Mid to Early Pleistocene	>1,600	Orting Glaciation	Glacial deposition.

[1] Based on work by Crandell, 1963; Easterbrook et al., 1967; Borden and Troost, 2001; Hagstrum et al., 2001; Troost, 2003; and Troost et al., in prep.
[2] Age is in thousands of years before present.

4.1.3 Holocene Geology (< 10,000 years ago)

Following the retreat of the Vashon-age ice sheet, streams incised through Vashon-age sediments and into the older deposits subdividing the drift plain. The drift plain surrounding the Black Diamond area exhibits relatively low relief with poorly drained stream courses and local closed depressions occupied by lakes, wetlands, and peat bogs. Several well-drained abandoned outwash terraces are located along the margins of existing stream drainages. Many of the modern drainages, such as Ravensdale Creek, Rock Creek, and Covington Creek, are "underfit," meaning they occupy stream valleys formed by higher-energy glacial meltwater channels. Post-glacial streams, such as the Green River, White River, and Cedar River, created relatively steep slopes that expose pre-Vashon-age sediments in the valley walls. Mass-wasting deposits of landslides and colluvium (small incoherent deposits from upper slopes) are common along the bases of these steep slopes. Covering the valley floor of the Green River are accumulations of stream deposits (alluvium) consisting predominately of sand and gravel. The smaller streams that originate on the drift plain also deposit thin, narrow alluvium in the channels, mainly composed of sand with some gravel and silt. Peat bogs and wetlands are abundant on the drift plain.

Although no mudflows are present in the near-project vicinity, massive landslides from the slopes of Mount Rainier have occurred occasionally throughout the Holocene. Some have formed mudflows by incorporating large volumes of water from glaciers and snowfields on flanks of Mount Rainier and traveled considerable distances. The Osceola mudflow (Crandell and Waldron, 1956) is one of the largest recognized volcanic mudflows in the world that occurred 5,700 years ago. It flowed westward down the White River valley and spread out mainly northward onto the drift plain south of the Green River, then entered the Green River valley and the Green/Duwamish valley near Auburn. The mudflow continued west and north along the existing river valleys toward Lake Washington. The mudflow was diverted west by the Green River valley, and therefore did not enter the study area (Dragovich et al., 1994; Mullineaux, 1970; Hoblitt et al., 1998).

4.2 Project Geology

4.2.1 Summary

Geologic conditions of the Main Property and the North Property were evaluated using: (1) data obtained from AESI's fieldwork for this report, (2) data obtained from AESI's field explorations for previous studies on the North Triangle Property, (3) data obtained from other consultant studies of the site, and 4) AESI's review of regional geologic maps and documents. Figure 9 presents a surficial geologic map of The Villages that is based on site explorations and regional mapping by Mullineaux (1965c) and Gower (1963). Five cross sections summarizing surface and subsurface geology relative to site topography are presented as Figures 10 to 14. The locations of the cross sections are shown on Figure 7. The geologic contacts presented on the maps and cross sections are generally dashed, indicating that they are approximately

located based on field data. Figure 15 is a contour map of the base of the Vashon recessional outwash. Figure 16 is a map of coal/oil/gas exploratory wells, AESI exploratory wells, and domestic wells that encountered sandstone bedrock at depth, and also includes surface exposures of rock and associated bedrock structure from Phillips (1984) *Compilation Geologic Map of the Green River Coal District, King County, Washington* (WDNR Open-File Report 84-4, Phillips, 1984).

Fourteen stratigraphic units were identified and delineated on the geologic maps and/or cross sections prepared for this study. The stratigraphic units were determined with regard to the following parameters: (1) age of deposition, (2) composition and source area, (3) importance of the unit in controlling the deposition of the other units, (4) thickness of the unit, and (5) geologic hazard characteristics of the unit.

Geologic conditions of the Main Property and the North Property are briefly summarized below. The geologic units shown on the surficial geologic map and accompanying cross sections are described in detail in Section 4.2.2 "Geologic Units." Geologic units are described below in order from oldest (deepest) to youngest (shallowest) unit.

Main Property – Summary of Geologic Conditions

The surficial geology (Figure 9) of the Main Property is dominated by a near-continuous blanket of Vashon-age sediments consisting of sand, gravel, and till associated with the Vashon Stade of Fraser Glaciation (12,500 to 15,000 years before present) and post-glacial alluvial and wetland deposits. Generally, Vashon lodgement till is present at the ground surface on the upland areas across the site, and underlies much of the outwash terrain topography that surrounds the uplands. A recessional outwash plain covers the portion of the Main Property in the north half of Section 15, and outwash swales cut through the uplands in the southwest corner of Section 15 and off-site south of Horseshoe Lake into Section 21. "Windows" through the till underlying the recessional outwash deposits occur in areas on and near the site and play an important role in ground water flow and distribution within a shallow aquifer system. A thick package of ice-contact deposits is present on the southern portion of the Main Property south of the Black Diamond Lake swale, across much of the south half of Section 22 and the portion of the site within Section 27.

In the subsurface beneath the Vashon-age sediments is a complex sequence of older unconsolidated sediments overlying an irregular bedrock surface. Some surficial exposures of older sediments were encountered on the upland south and southeast of Black Diamond Lake (northwestern corner of Section 23), in off-site ravines and along SE Green Valley Road. A paleotopographic high composed of pre-Olympia-age glacial and nonglacial sediments is present beneath Section 23 and the southeastern portion of Section 22. Younger pre-Olympia-age sediments onlap against the paleotopographic high in the subsurface. A productive aquifer is contained within the younger pre-Olympia-age deposits, and contributes to Crisp Creek base flow.

Post-glacial deposits include large wetland/bog areas located in a portion of the Black Diamond Lake swale and in the Jones Lake to Rock Creek swale, smaller wetland deposits on the till uplands, and thin alluvial sediments within stream corridors. Of importance to stormwater management to the Main Property are large off-site mass-wasting deposits present along the northern wall of the Green River valley, south of the Main Property.

Geologic units are described in detail in Section 4.2.2.

North Property – Summary of Geologic Conditions

Similar to the Main Property, the surficial geology (Figure 9) of the North Property is dominated by Vashon-age sediments consisting of sand, gravel, and till associated with the Vashon Stade of the Fraser Glaciation (12,500 to 15,000 years before present) with minor post-glacial alluvial and wetland deposits. The majority of the North Property occurs on a till upland; only the northwest corner of the North Property is lower-elevation recessional outwash terrain. No deep explorations were conducted on the North Property; however, based on explorations completed for the adjacent Lawson North Triangle Property (AESI, 2008 and Golder, 2008), shallow Puget Group bedrock is interpreted to underlie the upland portion of the North Property and either lodgement till or shallow Puget Group bedrock is interpreted to underlie the outwash present on the northwest corner of the site. Post-glacial deposits include minor alluvial deposits and smaller wetland deposits on the till upland.

4.2.2 Geologic Units

Lower Tertiary - Puget Group

Thick sedimentary rocks of the Puget Group underlie the study area vicinity. The Puget Group is thousands of feet thick and ranges in age from middle to late Eocene (50 to 41 Ma). Puget Group bedrock is at or near land surface east of Black Diamond and slopes downward west to southwest toward the center of the Puget Lowland (Jones, 1996). Bedrock in present at the ground surface to the south of the Main Property within the Green River valley and east of the Main Property in the foothills east of downtown Black Diamond.

In the project area, the Puget Group consists chiefly of light gray to light brown sandstone and interbedded shale, but also includes layers of claystone and coal (Mullineaux, 1970). More than 10 coal and carbonaceous shale zones are exposed along the Green River in the Black Diamond area. Locally, the Puget Group has undergone severe weathering. Mullineaux (1970) describes one locality of deep weathering near the southern boundary of The Villages at Hammer Bluff, located in the NW¼ of Section 28, Township 21 North, Range 6 East, where the bedrock is weathered and leached to a depth of as much as 30 feet and is now a light gray friable sand composed of mostly quartz and kaolinitic clay.

Weathered sandstone bedrock consisting of white to light gray sand was encountered in the subsurface in AESI exploratory wells MW-11 and MW-15. Other sandstone bedrock was encountered in AESI well MW-1 and reported on a driller water well report for W-Graddon in Section 22 on the southern portion of The Villages, in coal mine workings located at depth beneath the North Property and beneath Section 23 on the Main Property, and in shallow AESI exploration pits (EP-100 through EP-102) immediately north of the North Property on the Lawson North Triangle Property (AESI, 2008). Bedrock was also encountered in several domestic water wells and oil/gas exploration wells in the area surrounding the project. Figure 16 is a map of coal/oil/gas exploratory wells, AESI exploratory wells, and domestic wells that encountered sandstone bedrock at depth, and also includes surface exposures of rock and associated bedrock structure from Phillips (1984) *Compilation Geologic Map of the Green River Coal District, King County, Washington* (WDNR Open-File Report 84-4, Phillips, 1984).

Upper Tertiary - Hammer Bluff Formation

The Hammer Bluff Formation contains two members in the vicinity of The Villages. A lower member mainly contains light gray clayey sand and sandy clay sediments, and an upper member consists mostly of brownish green to brown volcanic sand and gravel (Mullineaux, 1970). Both members are typically cohesive and compact, but they have not been consolidated into rock. The Hammer Bluff also contains volcanic ash and pumice. Mullineaux (1970) indicated that although poorly exposed, the formation is at least 100 feet thick.

The Hammer Bluff Formation is exposed in a few areas south of The Villages, and likely underlies some of the large landslide areas along the northern wall of the Green River valley (Mullineaux, 1970). The Hammer Bluff Formation unconformably overlies the sandstone bedrock of the Puget Group.

Lacustrine sediments encountered in deep exploratory wells MW-11 and MW-15 between depths of 254 and 274 feet, corresponding to elevations 303 and 340 feet, are tentatively correlated with the lower member of the Hammer Bluff Formation based on: (1) a relative increase in drilling difficulty and amount of intact silt/clay clasts returned in the drill cuttings stream, and (2) stratigraphic position overlying weathered Puget Group sandstone and proximity to mapped Hammer Bluff Formation deposits at similar elevations. Alternatively, the upper portion of these sediments may be part of a Pleistocene-age nonglacial ($Qpon_{lf}$) sequence described later in this report.

The Hammer Bluff Formation in conjunction with overlying $Qpon_{lf}$ deposits (described later in this section) form the base of a regional aquifer. Ground water contained in the overlying units discharges in springs emanating along the Green River valley wall. The emergence of ground water along the steep slopes that form the northern Green River valley wall is largely responsible for the large landslide complexes (Figure 9) on portions of Sections 21, 27, and 28 (Mullineaux 1965c, 1970).

Pleistocene Deposits

The oldest, non-bedrock, stratigraphic units observed in the vicinity of the project include pre-Olympia-age deposits. Following the convention of Booth and Troost (2005, USGS SIM 2902); Booth, Waldron, and Troost (2004, USGS SIM 2854); and Booth and Waldron (2004, USGS SIM 2855), we make no effort to assign stratigraphic names to subdivisions of the pre-Olympia deposits because absolute age control is limited at present, and so the likelihood of inaccurate correlations is high. Instead, the units are described on the basis of likely depositional environment, and where appropriate, by sediment size. As such, the pre-Olympia deposits have been divided into likely glacial (Qpog) and nonglacial deposits (Qpon), and subdivided where appropriate into coarse-grained (fine to medium sand-size and larger) and fine-grained (silt, clay, and very fine to fine sand-size) facies. These units consist of sediments deposited prior to the Olympia nonglacial interval (Figure 8 and Table 4-1).

Lower Pre-Olympia-Age Deposits – $Qpon_2$ and $Qpog_2$

A Pleistocene paleo-topographic high is interpreted to core the upland on the southeast portion of the Main Project, corresponding to the structural "Black Diamond Anticline" (Phillips, 1984 and Mullineaux, 1965) mapped in the bedrock present at depth beneath Section 23 (Figure 16). Limited explorations by AESI across the upland area in Section 23 encountered an oxidized/cemented glacial sand and gravel (encountered in EP-18, EP-19, EP-30, EP-31, EP-33, and MW-14) underlain at depth by a nonglacial deposit (encountered only in MW-14).

Based on the degree of weathering/oxidation of the sand and gravel deposits encountered in AESI's exploration pits, these glacial and underlying nonglacial deposits are interpreted to represent much older glacial and nonglacial time periods than deposits mapped as $Qpon_1$ and $Qpog_1$, described separately later in this section. The interpreted stratigraphic relationship between the lower pre-Olympia-age deposits ($Qpon_2$, $Qpog_2$) and upper pre-Olympia-age deposits ($Qpon_1$ and $Qpog_1$) is illustrated on schematic geologic Cross Section B-B' (Figure 11). The $Qpon_2$ and $Qpog_2$ deposits are described in more detail below.

Lower Pre-Olympia-Age Nonglacial Deposits – $Qpon_2$

A sequence of likely older nonglacial deposits ($Qpon_2$) was encountered at a depth of 110 feet beneath Section 23 in exploratory well MW-14, corresponding to approximate elevation 530 feet mean sea level (fmsl). The material predominantly consisted of gray to dark gray and olive to greenish gray, silt/clay with few to trace sand and organics, and trace sandstone boulders, although a thin layer (estimated at 5 feet in thickness) of gray silty fine to coarse sand with gravel was encountered at a depth of 115 feet. The $Qpon_2$ sediments extended beyond the bottom of the exploration; total thickness penetrated was about 47 feet.

Due to the presence of organics, the dark gray to olive gray color of the silt/clay, and the sandstone and volcanic provenance of the coarser-grained material, these sediments are interpreted to have been deposited in a nonglacial environment. This unit may or may not be correlative with the Hammer Bluff Formation described above.

Lower Pre-Olympia-Age Glacial Deposits – $Qpog_2$

A Pleistocene paleo-topographic high is interpreted to core the upland on the southeast portion of the Main Project, corresponding to the structural "Black Diamond Anticline" (Phillips, 1984 and Mullineaux, 1965) mapped in the bedrock present at depth beneath Section 23 (Figure 9 and Figure 11). A sequence of likely older glacial deposits ($Qpog_2$) was encountered at the ground surface and at shallow depths beneath the Section 23 upland area in AESI exploration pits EP-30, EP-31, and EP-33, and exploratory well MW-14, and the eastern edge of Section 22 in AESI exploration pits EP-18 and EP-19. The sediments predominantly consisted of orangish brown to brown, moderately oxidized in areas, silty sand with variable amounts of gravel interbedded with sandy silt. In AESI's exploration pits, the gravels were noted to be severely weathered and would break easily with hand pressure. The $Qpog_2$ sediments were about 110 feet thick in exploration MW-14. The lower contact with the underlying $Qpon_2$ sediments was at approximate elevation 530 feet. Oxidized outwash sediments were also identified in an exploration pit completed by Golder (2008) (TP-17). AESI correlated these oxidized outwash sediments with $Qpog_2$ sediments due to the similar character and proximity to the AESI explorations.

Due to the generally coarser-grained nature of the sediments, the lack of organics and obvious volcanic and sandstone gravels, $Qpog_2$ sediments are interpreted to have been deposited in a glacial environment. Gravel lithology was difficult to determine due to the weathering and oxidation. The $Qpog_2$ sediments likely correspond to mapped exposures of "Orting Drift" (Mullineaux, 1965c) on the southwest corner of Section 23 and northwest corner of Section 26.

Upper Pre-Olympia-Age Deposits – $Qpon_{1f}$, $Qpon_{1c}$, $Qpog_{1c}$, and $Qpog_t$

Northwest and west of the paleotopographic high beneath the Section 23 upland, pre-Olympia-age deposits were encountered at depth beneath surficial Vashon-age material and discontinuous Olympia nonglacial deposits. These pre-Olympia-age units do not appear to correlate with the lower pre-Olympia-age deposits ($Qpon_2$ and $Qpog_2$), as described above. Instead, these deposits are interpreted to have been deposited against or around the paleotopographic high beneath Section 23, and are referred to as the upper pre-Olympia-age deposits in this report.

AESI exploratory wells MW-1 through MW-7, MW-10, MW-11, MW-15, MW-17, MW-19, MW-20, and MW-22 drilled across the Main Property and adjacent timberlands encountered a laterally extensive pre-Olympia-age sequence generally described from older to younger as follows: a nonglacial deposit of silt/clay interbedded with fine sand ($Qpon_{1f}$), locally overlain

by nonglacial sand with gravel ($Qpon_{lc}$), overlain by glacial sand and gravel ($Qpog_{lc}$) containing a productive aquifer, overlain in areas by a pre-Olympia-age glacial till ($Qpog_t$). In some areas, the $Qpog_t$ had been scoured away by Vashon-age meltwater streams, and the $Qpog_{lc}$ outwash was present at the ground surface or directly overlain by coarse-grained Vashon recessional outwash. In other areas, the $Qpog_t$ sediments were overlain by Vashon-age or Olympia-age material. The Vashon-age and Olympia-age sediments are described separately later in this section.

Not all upper pre-Olympia-age units were encountered in each exploratory well, as described in detail below.

Upper, Pre-Olympia-Age Nonglacial Deposits – $Qpon_l$, subdivided into $Qpon_{lf}$ and $Qpon_{lc}$

The upper surface of the $Qpon_l$ deposits was variable beneath the site. The highest surface was encountered on the Main Property, in the central portion of Section 22 (AESI wells MW-2 and MW-3), immediately west of the paleo-topographic high present beneath Section 23. Northwest and west of Section 23, the upper surface of the $Qpon_l$ deposits was encountered at progressively lower elevations. The $Qpon_l$ deposits contained a laterally extensive fine-grained facies described as $Qpon_{lf}$. Locally, the $Qpon_{lf}$ was overlain by a sequence of sandy gravel to fine to medium sand with varying amounts of gravel, described as $Qpon_{lc}$. $Qpon_{lf}$ and $Qpon_{lc}$ are described below.

Upper, Fine-Grained, Pre-Olympia-Age Nonglacial Deposits – $Qpon_{lf}$

$Qpon_{lf}$ deposits were encountered in exploratory wells MW-2, MW-3, MW-7, MW-10, MW-11, MW-15, MW-17, and MW-19. These sediments generally consisted of compact laminated or thinly interbedded, gray, dark gray, to olive gray, silt/clay and very fine to fine sand with scattered organics. The upper surface to this material was encountered between about elevation 460 and 390 fmsl. Where a lower contact was interpreted in AESI wells MW-11 and MW-15, the thickness of the deposit was about 90 to 150 feet. For all other exploration borings or observation wells in which $Qpon_{lf}$ deposits were encountered, the exploration did not fully penetrate the deposit. Elevation and thickness data are summarized in Table 4-2.

Note that the interpreted contact in wells MW-11 and MW-15 between $Qpon_{lf}$ and the underlying Hammer Bluff Formation was not abrupt; instead, the interpretation is based on: (1) a relative increase in drilling difficulty and amount of intact silt/clay clasts returned in the drill cuttings stream, and (2) stratigraphic position overlying weathered Puget Group sandstone and proximity to mapped Hammer Bluff Formation deposits at similar elevations approximately 1,700 to 5,000 feet south along the Green River valley wall.

Table 4-2
Summary of Subsurface Information from Exploratory Wells MW-1 to MW-23

Well No.	G.S. Elev	Total Depth	Qvr/Qvic			Qvt			Qva			Qo			Qpogt			$Qpog_{1c}$			$Qpon_{1c}$			$Qpon_{1f}$		
			Depth to top (ft)	Elev. Of Top (ft)	Thick-ness (ft)	Depth to top (ft)	Elev. Of Top (ft)	Thick-ness (ft)	Depth to top (ft)	Elev. Of Top (ft)	Thick-ness (ft)	Depth to top (ft)	Elev. Of Top (ft)	Thick-ness (ft)	Depth to top (ft)	Elev. Of Top (ft)	Thick-ness (ft)	Depth to top (ft)	Elev. Of Top (ft)	Thick-ness (ft)	Depth to top (ft)	Elev. Of Top (ft)	Thick-ness (ft)	Depth to top (ft)	Elev. Of Top (ft)	Thick-ness (ft)
MW-1	599.2	155	At G.S.	599.2	92.0	92.0	507.2	31.0	Not Present			Not Present			Not Present			Not Present			123.0	476.2	24.0	Not Present		
MW-2	562.1	176.5	Not Present			At G.S.	562.1	23.0	Not Present			Not Present			23.0	539.1	35.0	Not Present			58.0	504.1	102.0	160.0	402.1	16.5 *
MW-3	562.1	151	Not Present			At G.S.	562.1	17.0	Not Present			Not Present			17.0	545.1	20.0	Not Present			37.0	525.1	113.0	150.0	412.1	1 *
MW-4	615.4	152	Not Present			At G.S.	615.4	16.0	16.0	599.4	72.0	Not Present			88.0	527.4	5.0	93.0	522.4	33.0	126.0	489.4	26 *	Terminated in $Qpon_{1c}$		
MW-5	601.6	100	Not Present			At G.S.	601.6	49.0	49.0	552.6	26.0	75.0	526.6	10.0	Not Present			85.0	516.6	15 *	Terminated in $Qpog_{1c}$					
MW-6	589.7	180	Not Present			At G.S.	589.7	30.0	30.0	559.7	15.0	Not Present			45.0	544.7	16.0	61.0	528.7	119 *	Terminated in $Qpog_{1c}$					
MW-7	550.7	150	At G.S.	550.7	27.0	27.0	523.7	5.0	Not Present			Not Present			32.0	518.7	11.0	43.0	507.7	84.0	Not Present			127.0	423.7	23 *
MW-8	550.7	30	At G.S.	550.7	26.0	26.0	524.7	4 *	Terminated in Qvt																	
MW-9	552.4	59	At G.S.	552.4	27.5	27.5	524.9	10.5	Not Present			Not Present			38.0	514.4	21 *	Terminated in Qpogt								
MW-10	579.2	220	Not Present			At G.S.	579.2	49.0	Not Present			Not Present			Not Present			49.0	530.2	125.0	Not Present			174.0	405.2	46 *
MW-11	530.6	318	At G.S.	530.6	13.5	Not Present			Not Present			Not Present			Not Present			13.5	517.1	69.5	83.0	447.6	24.0	107.0	423.6	147.0
MW-12	530.5	79	At G.S.	530.5	13.5	Not Present			Not Present			Not Present			Not Present			13.5	517.0	65.5 *	Terminated in $Qpog_{1c}$					
MW-13	530.4	51	At G.S.	530.4	13.5	Not Present			Not Present			Not Present			Not Present			13.5	516.9	37.5 *	Terminated in $Qpog_{1c}$					
MW-14	641.7	157.5	Not Present			Not Present			Not Present			Not Present			Not Present			Not Present			Not Present			Not Present		
MW-15	572.0	357.5	Not Present			92.5	479.5	39.5	Not Present			Not Present			Not Present			Not Present			132.0	440.0	50.0	182.0	390.0	92.0
MW-16	563.8	52	At G.S.	563.8	32.0	32.0	531.8	16.0	Not Present			Not Present			Not Present			48.0	515.8	4 *	Terminated in $Qpog_{1c}$					
MW-17	542.6	116	At G.S.	542.6	23.0	23.0	519.6	13.0	Not Present			Not Present			Not Present			36.0	506.6	53.0	89.0	453.6	15.0	104.0	438.6	12 *
MW-18	542.7	25	At G.S.	542.7	24.0	24.0	518.7	1 *	Terminated in Qvt																	
MW-19	602.2	198	Not Present			At G.S.	602.2	47.5	47.5	554.7	5.5	53.0	549.2	17.0	70.0	532.2	8.0	78.0	524.2	30.0	108.0	494.2	35.0	143.0	459.2	55 *
MW-20	564.0	115	At G.S.	564.0	22.0	22.0	542.0	40.5	Not Present			Not Present			Not Present			62.5	501.5	52.5 *	Terminated in $Qpog_{1c}$					
MW-21	563.4	37	At G.S.	563.4	20.0	20.0	543.4	17 *	Terminated in Qvt																	
MW-22	555.2	95	At G.S.	555.2	41.0	41.0	514.2	17.0	Not Present			Not Present			Not Present			58.0	497.2	37 *	Terminated in $Qpog_{1c}$					
MW-23	555.4	47	At G.S.	555.4	41.0	41.0	514.4	6 *	Terminated in Qvt																	

Notes:

* Minimum thickness

G.S.: Ground Surface

1. Well MW-1 encountered Puget Group sediments at 147 feet below ground surface
2. Well MW-11 encountered Hammer Bluff sediments below $Qpon_{1f}$, and encountered Puget Group sediments at 303 feet below ground surface
3. Well MW-14 encountered older pre-Olympia deposits ($Qpog_{2c}$) at ground surface, and encountered $Qpon_{2f}$ deposits at 110 feet below ground surface
4. Well MW-15 encountered Hammer Bluff sediments below $Qpon_{1f}$, and encountered sandstone at 340 feet below ground surface

The $Qpon_{lf}$ deposits in combination with the underlying Hammer Bluff Formation form the base of the pre-Olympia aquifer beneath the site, described separately in Section 5.4.3. Ground water springs emanating from sand lenses from within $Qpon_{lf}$ deposits and the overlying units discharge along the Green River valley wall. The emergence of ground water along the steep slopes that form the northern Green River valley wall is largely responsible for the large landslide complexes (Figure 9) on portions of Sections 21, 27, and 28 (Mullineaux 1965c, 1970).

Upper, Coarse-Grained, Pre-Olympia-Age Nonglacial Deposits – $Qpon_{lc}$

$Qpon_{lc}$ deposits were encountered in exploratory wells MW-1, MW-2, MW-3, MW-4, MW-11, MW-15, MW-17, and MW-19. The upper surface of this unit was encountered between elevation 525 and 440 fmsl. In general, higher elevation $Qpon_{lc}$ deposits were encountered immediately west and northwest of the Section 23 paleotopographic high (see wells MW-2, MW-3, MW-4, and MW-19). The higher elevation $Qpon_{lc}$ sediments generally consisted of dense, gray, silty sandy gravel to sandy gravel with trace silt, and are overlain by glacial till.

Further to the west and north in MW-11, MW-15, and MW-17, the $Qpon_{lc}$ deposits were thinner and occurred at lower elevations (elevation 440 to 454 fmsl), likely due to erosion and scour by the overlying glacial outwash ($Qpog_{lc}$). In MW-2 and MW-3, the thickness of $Qpon_{lc}$ was 102 and 113 feet, respectively. Where a lower contact was observed in MW-11, MW-15, MW-17, and MW-19, the thickness of the deposit was 15 to 50 feet. In MW-4, the exploration did not fully penetrate the deposit, and the maximum thickness penetrated was 26 feet. A series of water supply test wells completed by others (W-1, W-2, W-4, and W-5) encountered coarse-grained sediments that AESI correlated with $Qpon_{lc}$ based on stratigraphic position, lithologic descriptions, and proximity to AESI explorations (Figure 10 and Appendices 3 and 4). Elevation and thickness data are summarized in Table 4-2.

The higher elevation $Qpon_{lc}$ deposits are interpreted to have lateral hydraulic continuity with ground water contained in onlapping $Qpog_{lc}$ deposits. West and north of the higher elevation $Qpon_{lc}$, the $Qpon_{lc}$ deposits are directly overlain by $Qpog_{lc}$ deposits. Ground water contained in these deposits forms a regional aquifer, termed the pre-Olympia aquifer, beneath the site. The pre-Olympia aquifer is described separately in Section 5.4.3.

Upper, Pre-Olympia-Age Glacial Deposits – $Qpog_l$, subdivided into $Qpog_{lc}$ and $Qpog_t$

The upper pre-Olympia-age glacial deposits consisted of a sand and gravel deposit ($Qpog_{lc}$) containing a productive aquifer capped in areas by a layer of very silty sand with varying amounts of gravel interpreted as a pre-Olympia glacial till deposit ($Qpog_t$). These units are described below.

Upper, Coarse-Grained, Pre-Olympia-Age Glacial Deposits –Qpog$_{lc}$

As discussed below, the character and distribution of the Qpog$_{lc}$ deposits are important to The Villages for several reasons: (1) ground water contained within the Qpog$_{lc}$ sediments is of regional importance to drinking water users, Crisp Creek baseflows, and Tribal hatchery production, (2) ground water contained within the Qpog$_{lc}$ contributes to landsliding along the Green River valley wall, and (3) the upper portion of the Qpog$_{lc}$ sediments is unsaturated and has the potential to serve as a receptor for clean storm water.

Qpog$_{lc}$ deposits were encountered in AESI wells MW-4 through MW-7, MW-10 through MW-13, MW-16, MW-17, MW-19, MW-20, and MW-22. Qpog$_{lc}$ deposits were encountered in AESI exploration pits at the ground surface or beneath a thin Vashon-age cover in the swale running south to southwest from Section 15, through Section 22, and into Section 21 (EP-39, EP-41 through EP-46, EP-50, EP-51, EP-55, EP-56, EP-64, and EP-68, EP-90, and EP-95), along the western upland edge north-central portion of Section 21 (EP-82, EP-83, EP-84, and EP-86), and exposed surficially in a tributary ravine to Crisp Creek on the northwest corner of Section 21 and a ravine on the southeast corner of Section 21. A series of water supply test wells completed by others (W-1, W-2, W-4, and W-5) and two monitoring wells completed by King County (BH-2 and BH-3) encountered coarse-grained sediments that AESI correlated with Qpog$_{lc}$ based on stratigraphic position, lithologic descriptions, and proximity to AESI explorations.

Qpog$_{lc}$ sediments generally consisted of dense, brown sand and gravel to sand with varying amounts of silt. In several AESI exploration pits, Qpog$_{lc}$ was distinguished from overlying younger outwash by the presence of scattered charcoal fragments. The upper surface of the Qpog$_{lc}$ ranged from elevation 507 to 529 fmsl in the on-site explorations, was observed at approximate elevation 500 fmsl in the Crisp Creek tributary, and at approximate elevation 510 fmsl in the ravine in the southeast corner of Section 21. Where a lower contact was observed in MW-4 and MW-19 in the northeastern quarter of Section 22, the thickness of the deposit was about 30 feet. In MW-7, MW-11, and MW-17, the thickness of the deposit was about 53 to 84 feet. Where a lower contact was observed in MW- 10, the thickness was 125 feet. In MW-6, the exploration did not fully penetrate the deposit; total thickness penetrated was about 120 feet. For all other AESI explorations in which Qpog$_{lc}$ deposits were encountered, the exploration did not fully penetrate the deposit. Elevation and thickness data are summarized in Table 4-2.

The distribution of the Qpog$_{lc}$ sediments is limited in the vicinity of the project to about a 1-mile-wide swath between the central portion of Section 22 and the eastern portion of Section 17/western portion of S21, based on area water well logs and on-site explorations. The distribution of the Qpog$_{lc}$ sediments may relate to a paleovalley with a roughly northeast/southwest axis that terminates against the higher elevation Qpon$_{lc}$ present beneath Section 22 and Qpon$_{lf}$ (?) fine-grained sediments present beneath Section 17/S21. The

northern extent could not be determined based on area well logs. The southern extent (continuation south of the Green River valley) was not investigated for this study.

Along the northern Green River valley wall, springs emanating from the contact between the coarse-grained pre-Olympia deposits ($Qpog_{lc}$ and $Qpon_{lc}$) and the underlying fine-grained $Qpon_{lf}$ deposits form the headwaters for Crisp Creek, and supply several spring and surface water withdrawals along the Green River valley wall.

The coarse-grained pre-Olympia-age glacial deposits accumulated in glaciofluvial environments (meltwater streams) that formed in conjunction with an ice sheet that covered the lowland. These sediments were consolidated into a dense condition by at least two glaciations.

Upper, Pre-Olympia-Age Glacial Till – $Qpog_t$

A dense gray to blue-gray silty sand with varying amounts of gravel was encountered in several AESI exploratory wells (MW-2, MW-3, MW-4, MW-6, MW-7, MW-9, and MW-19) completed on the site. Due to the silty nature of the cuttings and drilling conditions (open borehole, no loss of air into formation), this pre-Olympia-age deposit is interpreted as glacial till. No surficial exposures were observed in the off-site ravines or in shallow exploration pits completed along the margins of swales crossing the site. A series of water supply test wells completed by others (W-1, W-2, W-5, and W-Graddon) encountered silty sediments that AESI correlated with $Qpog_t$ based on stratigraphic position, lithologic descriptions, and proximity to AESI explorations. The upper surface to $Qpog_t$ ranged from elevation 513 to 545 fmsl in the on-site explorations, and the thickness ranged from about 5 to 35 feet. Elevation and thickness data are summarized in Table 4-2.

The $Qpog_t$ sediments were deposited at the sole of, and subsequently overrun by, an advancing ice sheet, and as a result, this material has been glacially consolidated into a dense condition. Due to the fine-grained nature and density, the till has a low permeability and behaves as an aquitard, perching ground water above it or confining ground water below it.

Olympia Nonglacial Deposits – Qo

Thin Olympia nonglacial deposits were encountered in only MW-5 and MW-19, at elevation 527 fmsl and 549 fmsl, respectively. These sediments generally consisted of hard, brown, green, or gray silt/clay interbedded with fine sand, and silty sand to sandy silt with few coarse sand or gravel. Organics were present intermittently. The thickness ranged from about 10 to 25 feet. Elevation and thickness data are summarized in Table 4-2.

The Olympia nonglacial deposits in combination with underlying $Qpog_t$ form the base of the Vashon advance aquifer beneath the site, described separately in Section 5.4.3.

Olympia nonglacial deposits were deposited in relatively low-energy alluvial environments between 15,000 to 60,000 years before present (Troost, 1999). Radiocarbon dating was performed on selected samples from on-site exploration borings MW-5 and MW-19. In MW-5, wood from a depth of 78 feet yielded an infinite date of >48,000 BP. In MW-19, organic sediment from a depth of 65 feet yielded a finite date of 29,510 +/- 300 BP (conventional radiocarbon age). The generally fine-grained nature, high organic content, and local interbeds of fine sand suggest deposition primarily in a lacustrine (lake) environment in the area now occupied by the Main Property.

Vashon Stade Deposits

The Vashon-age glacier occupied the Puget Lowland approximately 12,500 to 15,000 years ago and was the last major continental glaciation of the region. Four units have been identified that were deposited during the geologic period known as the Vashon Stade: Vashon advance outwash, Vashon lodgement till, Vashon ice-contact deposits, and Vashon recessional outwash. These units are described below.

Vashon Advance Outwash – Qva

Vashon advance outwash sediments were the target of an initial shallow exploration program on the upland portion of Section 22 (EP-2 through EP-19). Only one exploration pit (EP-3) on this portion of the upland penetrated the Vashon lodgement till and encountered underlying outwash. Subsequent investigations found that on the project site, the extent of Vashon advance outwash is limited to only a few upland areas.

Vashon advance outwash sediments were encountered in AESI wells MW-4, MW-5, MW-6, and MW-19, and in AESI exploration pits EP-3, EP-78, and IT-2, between elevations 553 fmsl and 601 fmsl. The advance outwash deposits consisted of moist to saturated, medium dense to very dense, brown to brown-gray sand, with varying amounts of gravel and fines. A series of water supply test wells completed by others (W-1 and W-5) encountered coarse-grained sediments that AESI correlated with Qva based on stratigraphic position, lithologic descriptions, and proximity to AESI explorations. The thickness ranged from about 15 to 70 feet. Elevation and thickness data are summarized in Table 4-2.

An isolated aquifer was present within the Vashon advance sediments beneath the upland area in the north-central portion of Section 22 and the south-central portion of Section 15. As illustrated in Cross Section A-A' (Figure 10), based on a series of exploration pits along the upland slope and swale bottom, AESI interprets the Vashon advance aquifer to be laterally constrained by Vashon lodgement till along the margins of the upland. The Vashon advance aquifer is described separately in Section 5.4.3.

The Vashon advance outwash deposits accumulated in glaciofluvial environments (meltwater streams) that formed in front of the advancing Vashon-age glacier. As the Vashon-age glacier spread into the region, the advance outwash sediments were consolidated into a dense condition by approximately 3,000 feet of ice.

Vashon Lodgement Till – Qvt

Vashon lodgement till was encountered in all the AESI exploratory wells with the exception of MW-11 to MW-14. Vashon lodgement till was also encountered in many of the exploration pits completed on the site, and was exposed surficially in the Crisp Creek ravine, and exposed in a road cut along SE Green Valley Road. Vashon lodgement till was also encountered in many of the explorations completed by others (Appendix 4). The lodgement till consisted of damp to moist, dense to very dense, brown to gray, fine sand with varying amounts of silt and gravel. The maximum till thickness encountered in the exploratory wells was 48 feet (MW-5), but generally was between about 15 to 30 feet in thickness. Elevation and thickness data are summarized in Table 4-2.

Generally, lodgement till is present at the ground surface on the upland areas across the site, and is present at depth beneath the Vashon ice-contact and recessional outwash deposits. On the upland areas across the site, seasonal winter rainfall can accumulate in low areas within the weathered portion of the lodgement till, forming an active "interflow" zone. In areas where the interflow zone cannot flow downslope along the weathered till/unweathered till contact, wetlands areas form. In other areas, where the Vashon lodgement till is overlain by thick recessional outwash or ice-contact deposits, the till forms the base of a shallow regional aquifer. The shape of the underlying Vashon till surface plays an important role in the distribution and flow within the shallow aquifer. Both interflow and the shallow aquifer are discussed in Section 5.4.3.

Lodgement till is not continuous beneath all of the recessional outwash on the site. Windows through the till occur in areas where the till is present only intermittently, likely due to scour and erosion from recessional meltwater streams during retreat of the Vashon glacier. These "windows" through the till can have a substantial effect on ground water recharge under the existing conditions, and have the potential to serve as infiltration basins under the developed conditions. Till windows documented by AESI include the following areas:

- Portions of the swale running south and southwest from Section 15, through Section 22, and into Section 21.

- A low area immediately east of Horseshoe Lake in the northwest corner of Section 15 south of Auburn-Black Diamond Road.

- Portions of west half of Section 21.

Based on nearby explorations, hydrograph comparisons, and a description of lake lining during development around the lake, AESI also concludes that portions of Horseshoe Lake itself are not underlain by till, but instead a portion of the lake bottom directly recharges the underlying $Qpog_{lc}$ sediments, as shown on Cross Section A-A', Figure 10. Ground water flow in the Horseshoe subbasin is discussed in more detail in Section 5.2.2.

The Vashon lodgement till was deposited at the sole of, and subsequently overrun by, the advancing Vashon ice sheet, and as a result, this material has been glacially consolidated into a dense condition. Due to the fine-grained nature and density, Vashon lodgement till has a low permeability and perches ground water above it.

Vashon Ice-Contact Deposits – Qvic

Vashon ice-contact deposits were noted in the south half of Section 22 on the southern portion of the Main Property. The sediments were deposited onto or adjacent to the ice sheet or ice blocks; when the underlying or adjacent ice melted, the deposits collapsed creating the distinctive hummocky shape of mounds and intermound depressions that is called kame-and-kettle topography. Because of their formation on or adjacent to ice, these kame deposits are more variable in texture and structure than the recessional outwash channel deposits described later in this section. A few of the near-site surface water features are contained in large kettles, including the wetland west of the Main Property in the north-central portion of Section 21, Horseshoe Lake and Lake Majorie.

Vashon ice-contact deposits were encountered in AESI exploratory wells MW-1 and MW-15, and AESI exploration pits EP-1, EP-15, EP-24 through EP-29, EP-68 through EP-71, EP-87 through EP-89, and IT-1. A series of explorations completed by others (TP-11, TP-45, DH-1 through DH-5, BP-1 through BP-8, and ICE MW-1 through ICE MW-4) encountered coarse-grained sediments that AESI correlated with Qvic based on geomorphology, stratigraphic position, lithologic descriptions, and proximity to AESI explorations (Appendix 4). Vashon ice-contact deposits are exposed immediately south of the site along SE Green Valley Road in a road cut and old borrow pit. As discussed in the "Previous Studies" section of this report, the Qvic deposits on the southern half of Section 22 were investigated for gravel mining purposes (McLucas, 1990). The ice-contact deposits consisted of damp to moist, medium dense, brown, medium to coarse sand with varying amounts of gravel/cobble, trace to few silt. Fines may be present in the bottoms of the kettles. The thickness of the deposits ranged from a few feet to 91 feet. Elevation and thickness data are summarized in Table 4-2.

A thin aquifer was present within the Vashon ice-contact deposits in the southern half of Section 22. Ground water within the Vashon ice-contact deposits is described separately in Section 5.4.3.

Vashon Recessional Outwash – Qvr

A recessional outwash plain composed of pitted outwash terraces and channels forms a low-relief surface over much of the Back Diamond area. Portions of the Main Property occur on this outwash plain, including the northwestern portion of Section 15 and the swale trending south and southwest from Section 15 into Section 22.

Recessional outwash deposits were encountered in AESI exploratory wells MW-7 to MW-9, MW-11 to MW-13, MW-16 to MW-18, and MW-20 to MW-23, and in about half of the AESI exploration pits completed for this study. A series of explorations completed by others (TP-2, TP-4 to TP-10, TP-28 to TP-31, TP-35, TP-38, TP-40 to TP-45, and BH-1 through BH-4) also encountered coarse-grained sediments described as outwash. Where observed, the recessional outwash was generally encountered within 1 foot of the ground surface. The recessional outwash deposits consisted of damp to wet, medium dense, brown sand with varying amounts of silt, gravel, and cobbles. The thickness of the deposits ranged from a few feet to 40 feet. Elevation and thickness data are summarized in Table 4-2.

An aquifer was present within the Vashon recessional deposits across the site. Ground water within the Vashon recessional deposits is described separately in Section 5.4.3.

As described in Mullineaux (1970), most of the Vashon recessional outwash was deposited as an ice-marginal river that flowed through a chute that had been formed between the Vashon glacier front and the sloping drift plain. On the northwest, the river channels were bounded partly by ice and partly by till uplands. The highest terrace deposits in the southeastern part of the outwash plain were deposited first. When they were deposited, the northwestern part of the outwash plain was still largely covered by ice. Frequent small changes in the position of the ice front allowed concurrent small shifts of the river into successive channels, each of which was only slightly lower and farther northwest than the previous ones.

A review of the topography for the Main Property and surrounding area illustrates the process described by Mullineaux (1970). The highest elevation recessional outwash terraces in the near-site vicinity are at approximately elevation 570 feet in the southwest corner of Section 22 and southeast corner of Section 21. Lower elevation outwash surfaces are present to the northwest at elevation 560 feet across much of the north half of Section 15; at elevation 540 feet in the swale trending south from Horseshoe Lake into the eastern portion of Section 21; at elevation 520 feet in the swale trending south from Lake Keevie into the center of Section 21; and successively lower elevation outwash deposits in the western portion of Section 21. Crisp Creek flows through, and near its confluence with the Green River incised into, an abandoned outwash channel with several terrace levels at approximately elevations 520 feet, 500 feet, and 480 feet.

Recent Sediments – Qa and Qmw

Recent sediments on The Villages primarily consist of alluvial sands with varying amounts of gravel, and fine sand, silt, and peat. These deposits occur near or within existing wetlands and stream channels. In these areas, the recent sediments consist of a thin veneer of locally stratified gravel, sand, silt, and clay underlain by till. This material has been eroded from upslope glacial deposits and subsequently re-deposited. Except for the large wetland/bog deposits in the Black Diamond Lake swale and the Jones Lake to Rock Creek swale, this unit does not appear on the geology maps because the thickness is interpreted to be generally less than 5 feet and the deposits are of very limited areal extent.

Off-site large-scale mass-wasting deposits occur on the northern wall of the Green River valley, south of the Main Property. Large portions of the valley wall are covered with slumps as much as several hundred feet long. The slumps are surrounded by smaller blocks, flows and slope wash, or colluvium. The mass wasting is the result of a number of factors, including steep slopes, weak formations, vertical and lateral river erosion following deglaciation, rainfall, and ground water discharge at the steep slope face.

Fill Soils

Fill soils (those not naturally placed) are present across The Villages in existing old logging roads. The depth of fill soils for logging roads is estimated to be between 1 to 4 feet. Quality, thickness, and compaction of fill soils are unknown. This unit does not appear on the geology maps because the thickness is generally less than 5 feet and the deposits are of very limited areal extent.

4.3 Surface Soils

4.3.1 General

Soils on the site formed over relatively young glacial deposits and have not had sufficient time to develop the deep weathering profiles present in soils of many unglaciated terrains. Instead, they exhibit a direct relationship to the underlying parent material, local climate, topography, and vegetation. Additionally, soils were encountered on the site that formed over sandstone bedrock and also show a direct relationship with the parent material, local climate, and vegetation.

The soil types identified on the site are extrapolated from the Soil Conservation Service (1979 – name changed to Natural Resources Conservation Service (NRCS) in 1994) and the geologic information obtained from the exploration pits. In general, seven major soil types were identified on the project site and are as follows:

- Beausite Series
- Alderwood Series
- Alderwood and Kitsap Soils
- Everett Series
- Bellingham Series
- Seattle Muck
- Norma Series

The locations of these soils are graphically illustrated on Figure 17 and are described in detail below. The soils series designations shown on Figure 17 are based on association with the underlying geologic parent material based on site-specific investigations and may differ from regional NRCS mapping. Topographic gradients, which typically subdivide each soils series into subunits have been combined on the map to simplify presentation. The soil characteristics are summarized in Table 4-3 and are described in greater detail in the following sections.

Table 4-3
Summary of NRCS Soils Types

Soil Name	USDA Textural Classification	Percent Slope	Runoff Rate	Erosion Hazard
Beausite (BeC)	Gravelly Sandy Loam	6 to 15	Medium	Moderate
Alderwood (AgC)	Gravelly Sandy Loam	6 to 15	Slow to Medium	Moderate
Alderwood (AgD)	Gravelly Sandy Loam	15 to 30	Medium	Severe
Alderwood Kitsap (AkF)	Gravelly Sandy/Silt Loam	Greater than 40	Rapid to Very Rapid	Severe to Very Severe
Everett (EvC)	Gravelly Sandy Loam	5 to 15	Slow to Medium	Slight to Moderate
Everett (EvD)	Gravelly Sandy Loam	15 to 30	Medium to Rapid	Moderate to Severe
Bellingham (Bh)	Silt Loam	Less than 2	Slow	Slight
Seattle Muck (Sk)	Muck	Less than 1	Ponded	None
Norma (No)	Sandy Loam	Less than 2	Slow	Slight

USDA = U.S. Department of Agriculture.
Refer to Figure 17 for soils map.

4.3.2 Soil Units

Beausite Series

The Beausite gravelly sandy loam (BeC) is composed of well-drained soils that are underlain by sandstone. These soils are characterized by dark brown to dark yellowish brown, gravelly sandy loam overlying an olive brown very gravelly sandy loam.

The Beausite soils (BeC) form 6 to 15 percent slopes. The permeability is moderately rapid, resulting in a medium surface runoff and a moderate erosion hazard. This soil type was mapped by the NRCS near the portion of the Main Property east of SR 169 (also known as the Enumclaw-Black Diamond Road).

Alderwood Series

The Alderwood gravelly sandy loam series is composed of moderately well-drained soils having a strongly-consolidated substratum. These soils are characterized by dark brown and grayish brown, gravelly sandy loam developed over a substratum of grayish brown glacially consolidated lodgement till.

Alderwood gravelly sandy loam (AgC) forms 6 to 15 percent slopes and consists of gently rolling soil. Permeability in the Alderwood Series is considered to be moderately rapid in the surface layer and subsoil, becoming very slow to nil in the underlying lodgement till, where ground water has a tendency to perch and form an interflow ground water regime during winter months. Runoff is slow to moderate and the hazard of erosion is moderate. This soil type is present across large portions of the Main Property, including most of Section 23, the northern half of Section 22, and portions of the southern half of Section 15, all located in Township 21 North, Range 6 East. AgC also is present across nearly all of the North Property, with the exception of the northwest corner and isolated wetland areas.

Alderwood gravelly sandy loam (AgD) forms 15 to 30 percent slopes. The soil occurs where steeper slopes are present, such as the upland margin on the west-central portion of Section 22, the ravine located in the northeast quarter of Section 23, margins of the Black Diamond Lake swale in Section 22 and Section 23, and the upland margin on the northwest corner of the North Property. The physical characteristics of this soils phase are similar to AgC, however the erosion potential is severe, and the slippage potential is moderate due to the steeper slopes.

Alderwood and Kitsap Soils

The Alderwood and Kitsap (AkF) soils are about 50 percent Alderwood gravelly sandy loam and 25 percent Kitsap silt loam and form 25 to 75 percent slopes. Distribution of the soils varies greatly within short distances. About 15 percent of some mapped areas is an included, unnamed, very deep, moderately coarse textured soil; and about 10 percent of some areas is a very deep, coarse textured Indianola soil. Drainage and permeability vary. Runoff is rapid to very rapid, and the erosion hazard is severe to very severe. The NRCS classifies the slippage potential as severe. This soil type is found on steep slopes along the northwest and southeast margins the of Black Diamond Lake swale and on off-site steep slopes above the Green River south of the site.

Everett Series

The Everett gravelly sandy loam series is composed of well-drained soils forming over glacial outwash. These soils are characterized by very dark brown, gravelly sandy loam, underlain by dark yellowish brown, gravelly sandy loam and dark brown, very gravelly coarse sandy loam. The substratum below 60 inches is generally composed of clean, very gravelly sand.

The Everett gravelly sandy loam (EvC) forms rolling hills with 5 to 15 percent slopes. Due to its high permeability, surface runoff within the Everett Series soils is considered slow to medium, and erosion hazards are considered slight to moderate as surface water tends to percolate downward. This soil type is present in large portions of the Main Property, including the southern half of Section 22 and most of the west half of Section 15. This soil type is also present on the northwest corner of the North Property.

The Everett gravelly sandy loam (EvD) occurs mostly along drainageways or on short slopes between terrace benches forming 15 to 30 percent slopes. The physical characteristics of this soil phase are similar to EvC, however the runoff is medium to rapid and the erosion hazard is moderate to severe due to the steeper slopes. These soils were mapped by the NRCS in the northeast quarter of Section 23, Township 21 North, Range 6 East along the Enumclaw-Black Diamond Road and in isolated bands across the hummocky ice-contact terrain on the south half of Section 22. This soil type was also mapped in off-site adjacent areas in Sections 22 and 27 on the slope above the Green River.

Bellingham Silt Loam

The Bellingham silt loam (Bh) is composed of poorly drained soils that formed in alluvium that is in depressions on the upland glacial till plain. These soils are characterized by dark brown to very dark grayish brown to gray silty clay loam and heavy silt loam.

The Bellingham silt loam is nearly level, and forms on slopes less than 2 percent. The permeability is slow and the available water capacity is high, resulting in slow surface runoff and a slight erosion hazard. The Bellingham Series soils were mapped by NRCS in the Rock Creek drainage on the northern portion of the Main Property in the eastern half of Section 15, Township 21 North, Range 6 East.

Seattle Muck

The Seattle Muck (Sk) is typically very poorly drained organic soils that formed in material derived primarily from sedges. These soils are in depressions and valleys on the glacial till plain. These soils are characterized by stratified mucky peat, muck, and peat.

The Seattle Muck is nearly level, and forms on less than 1 percent slopes. The permeability is moderate, however there is a seasonal high water table at or near the surface. The surface water ponds in these soils due to the seasonal high water table and erosion hazards are considered nil. Seattle Muck soils were mapped by NRCS in the Black Diamond Lake swale that crosses the central portion of Section 22, southwest of Black Diamond Lake, and in the Rock Creek drainage on the eastern half of Section 15.

Norma Series

The Norma sandy loam (No) is composed of poorly drained soils that are formed in alluvium in basins on the glaciated uplands in areas along stream bottoms. These soils are characterized by black to very dark brown sandy loam overlying mottled gray sandy loam that is stratified with silt loam and loamy sand in places.

The Norma sandy loam is nearly level, and forms on less than 2 percent slopes. The permeability is moderately rapid, surface runoff is slow, and the erosion hazard is slight. The Norma series soils were mapped by the NRCS just off-site north of Black Diamond Lake.

Buckley Series

An area of the project site on the southeast slope of the Black Diamond Lake swale (the northwest quarter of Section 23, Township 21 North, Range 6 East) was mapped by the NRCS as the Buckley Series soils (Bu). This is likely a typographical error as the geologic parent material for the Buckley Series is the Osceola Mudflow, which did not flow across the Green River valley (Mullineaux, 1965, 1970), and therefore could not be present on-site. This area has been mapped and described as peat/organic deposits in this report (Figure 9).

4.4 Geologic Hazards

The City of Black Diamond is in the process of revising their hazards ordinances. The current ordinance is the *Environmentally Sensitive Areas Ordinance of 1993* (Chapter 19.12). This report has been prepared in accordance with the January 22, 2008 *DRAFT City of Black Diamond Critical Areas Ordinance* (Draft CAO). Chapter 19.10.400 *Black Diamond Municipal Code* (BMC), describes Geologically Hazardous Areas. Geologic hazards regulated by the Draft CAO relevant to The Villages include landslide, erosion, seismic, and coal mine hazards. In the Draft CAO, seismic hazards are referenced only in the "Definitions" section (19.10.090).

Per discussions with Triad Associates (Triad) and the City of Black Diamond, we understand that the CAO is a draft, and may have future modifications. As such, changes may need to be made to this report as changes are made to the CAO prior to final adoption.

The analysis to determine erosion and landslide hazard areas included a slope analysis and association of slopes with geologic, soils, and hydrogeologic data. As part of the slope analysis, Triad produced a map showing slope categories (Triad, 2008). The slope categories were selected based on the slopes identified in 19.10.400 BMC, as follows: less than 15 percent slopes, 15 to 40 percent slopes, and slopes which are 40 percent or greater. The vast majority of the Main and North Properties are in the lowest category, less than 15 percent slopes. The 15 to 40 percent slopes are found along the transitions from uplands to valleys or ravines, and are largely contained within wetland buffers. Slopes with gradients of 40 percent or greater are primarily limited to portions of the upland margins adjacent to the Black Diamond Lake swale and a portion of the upland margin on the northern portion of the North Property. There are scattered areas of 15 to 40 percent, and 40 percent and greater slopes in the hummocky ice-contact terrain on the south half of Section 22.

4.4.1 Erosion Hazards

Draft 19.10.410A1 BMC defines erosion hazard areas: *Erosion hazard areas are those areas with soils identified by the U.S. Department of Agriculture's Natural Resources Conservation Service [NRCS] as having a "moderate to severe," "severe," or "very severe" rill and inter-rill erosion hazard.* The applicable soils mapped by the NRCS on The Villages properties include the following when they occur on slopes 15 percent or greater:

A. The Alderwood gravelly sandy loam ("AgD");
B. The Alderwood and Kitsap soils ("AkF");
C. The Beausite gravelly sandy loam ("BeD" and "BeF"); and
D. The Everett gravelly sandy loam ("EvD").

Based on these criteria, erosion hazard areas on The Villages generally coincide with slopes of 15 percent or steeper. Erosion processes and hazard zones are described in this section of the report.

In order to evaluate probable significant erosion impacts (and subsequently provide mitigation) as a result of the proposed development, it is important to understand where and how erosion occurs. Sediment begins motion by a process called gross erosion (Figure 18) that can be subdivided into sheet erosion and channel erosion.

Sheet erosion is caused by shallow "sheets" of water flowing over the cleared land surface and transporting soil particles that have been detached by raindrops. The shallow surface flow rarely moves as a uniform sheet for more than a few feet before concentrating in surface irregularities and resulting in rill erosion. Additional sediment is thus picked up and transported. This erosion process is continuous over several storm or normal rainfall events. If the rills become more than a few inches deep, then the erosive regime changes to gully (channel) erosion where concentrated water flow can transport large quantities of sediment during a single storm event; this usually occurs on slopes greater than 15 percent.

Different soil types and geologic parent material can have widely differing susceptibilities toward each erosive regime. As an example, lodgement till typically develops a soil horizon (Alderwood Soil Series) that is significantly less dense than the underlying parent material. This soil is susceptible to sheet erosion or gully erosion due to its lower density. However, the underlying lodgement till is generally resistant to gully erosion due to its dense, consolidated nature. As a result, gully erosion is not common in lodgement till for slopes under 15 percent. However, for slopes greater than 15 percent, the risk of channel erosion in lodgement till can increase. Conversely, the coarser-grained Vashon recessional outwash and Vashon ice contact deposits develop a soil horizon (Everett Soil Series) that is much less susceptible to sheet erosion, primarily due to its high permeability preventing the development of sheet flow during normal rainfall events. However, both the soil and the parent material (mostly sand and gravel) are susceptible to gully erosion under concentrated flow regimes, even on relatively gentle slopes.

Slope gradients and vegetation also play an important role in determining erosion impacts. In general, steeper slopes have a higher susceptibility to erosion as surface water has the capability of achieving higher velocities and, hence, has more energy available to erode and transport sediments. Vegetation, on the other hand, has a tendency to reduce the potential development of concentrated flows by dispersing rainfall, impeding surface water flow, and reducing surface water velocities.

Based on existing erosion occurrence on the site, sediment characteristics, and slope gradients, the site has been divided into three hazard classifications, as described in Table 4-4 below and shown in Figure 19.

The vast majority of the Main and North Properties does not fall under the BMC definition of an erosion hazard area (Erosion Hazard Zone 1), having slopes which are less than 15 percent. Erosion Hazard Zone 2, moderate to severe erosion risk areas, are primarily found: (1) along the transitions from uplands to valleys or ravines in areas which are largely contained within wetland buffers, (2) the slopes of the S4 ravine, and (3) the hummocky ice-contact terrain on the south half of Section 22. Erosion Hazard Zone 3, very severe erosion hazard risk areas, is primarily limited to portions of the upland margins adjacent to the Black Diamond Lake swale and a portion of the upland margin on the northern portion of the North Property. See Figure 19 for erosion hazard zone mapping.

Table 4-4
Erosion Hazard Zone Descriptions

Hazard Zone	Description
Erosion Hazard Zone 1	Low erosion hazard risk. Typically contain slopes of less than 15 percent and underlain by soils defined by NRCS as having a slight erosion risk. Does not fall under the BMC definition of an erosion hazard area.*
Erosion Hazard Zone 2	Moderate to severe erosion hazard risk. Typically contain slopes greater than 15 percent and are underlain by soils that have a slight to moderate erosion risk. Falls under the BMC definition of an erosion hazard area.*
Erosion Hazard Zone 3	Very severe erosion hazard risk. Typically contain slopes greater than 40 percent and/or are underlain by soils defined by the NRCS as having a very severe erosion potential. Falls under the BMC definition of an erosion hazard area.*

*19.10.410A1 *Draft Black Diamond Municipal Code* (BMC).
See Figure 19 for erosion hazard mapping.

4.4.2 Landslide and Steep Slope Hazards

Generally, there are two types of landslides that commonly occur in the Puget Sound region. The first type is termed earth slump or slump-earth flow. This type of earth movement is deep-seated and usually involves the regolith (topsoil and weathered zone) and the underlying sedimentary units. Slides of this type can be very large and may require costly stabilization measures. The second type is termed debris slump or debris flow and usually involves the upper few feet of the regolith. This type of slide is very dependent on the moisture content and weathering characteristics of the sediment. Slides of this type are typically triggered by ground water seepages, oversteepening of the banks by stream erosion, or movement of saturated sediments on steep slopes.

Landslide hazard areas are defined in 19.10.410A2 BMC. Landslide hazard areas are shown on the Black Diamond Critical Areas Map(s), referenced in 19.10.410 BMC. These maps were not available for our review as of this writing. Chapter 19.10.410A2 defines landslide hazard areas in the following way:

Landslide hazard areas are areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible due to any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. These may include the following:

a. Areas of historic failures, such as:

1. Those areas delineated by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "severe" limitation for building site development;

2. Those areas mapped by the Washington State Department of Natural Resources (slope stability mapping) as unstable (U or class 3), unstable old slides (UOS or class 4), or unstable recent slides (URS or class 5);

b. Areas with all three of the following characteristics:

1. Slopes steeper than fifteen percent (15%); and

2. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and

3. Springs or ground water seepage;

c. Areas potentially unstable because of rapid stream incision, stream bank erosion, and undercutting by wave action;

d. Any area with a slope of forty percent (40%) or steeper and with a vertical relief of ten (10) or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and is measured by averaging the inclination over at least ten (10) feet of vertical relief.

For the purposes of this report, AESI has categorized landslide hazards into three ratings: Class 1, Class 2, and Class 3 for low, medium, and high landslide hazard zones, respectively. Landslide hazard area ratings were determined using the percent slope analysis by Triad (2008), in conjunction with geologic, hydrogeologic, and hydraulic factors. Table 4-5 below provides a summary of these ratings.

Table 4-5
Definition of Landslide Hazard Ratings at The Villages

Landslide Hazard Area Rating	Definition
Class 1 (Low)	Low landslide hazard. Includes areas with slopes of less than 40 percent underlain by stable glacial deposits with no evidence of slope instability. Does not meet the City of Black Diamond's municipal code definition of a landslide hazard area.
Class 2 (Moderate)	Moderate landslide hazard. Includes soil slopes steeper than 40 percent that are vertically continuous for 10 or more feet, or areas underlain by fill on slopes steeper than 30 percent. May or may not meet the definition of a landslide hazard area according to the City of Black Diamond's municipal code.
Class 3 (High)	High landslide hazard. Includes areas that have shown evidence of Holocene slope movement, such as current or historical landslides, except areas of shallow soil "creep." Meets the definition of landslide hazard area according to the City of Black Diamond's municipal code.

Landslide hazard areas, as defined herein, are shown on Figure 20. The majority of the Main and North Properties fall into Class 1, or low hazard area rating. Areas meeting the definitions of Class 2 and Class 3 landslide hazard areas include the following:

Class 2 – Moderate Hazard

Slope areas greater than 40 percent with vertical relief of at least 10 feet, but where no documented seeps are present. These areas include slope sections located: (1) along the upland transition on the North Property in the north portion of Basin 7 where the slope is composed of Vashon lodgement till, (2) areas in Basin 8 which will remain undeveloped, and (3) a portion of the southern margin of the Black Diamond Lake swale where the slope is composed of coarse-grained ice-contact deposits.

Class 3 – High Hazard

On-site Class 3 landslide hazard areas include slope areas greater than 15 percent on hillsides where the granular sediments ($Qpog_2$) overlie the fine-grained $Qpon_{2f}$, and ground water seeps are present on the slope face. Class 3 landslide hazard areas are present along the south and southeast margins of the Black Diamond Lake and Black Diamond Lake swale. A seep zone has been documented along the southeast margin of the swale, and it is likely that other areas along the slope exhibit annual or perennial seepage as well.

Other Class 3 landslide hazard areas are steep slopes above SE Green Valley Road and the large off-site mass-wasting complexes mapped by Mullineaux (1965c) occurring south of the

Main Property along the northern wall of the Green River valley on portions of Sections 21, 27, and 28.

4.4.3 Mine Hazard Areas

Mine Hazard Areas are defined in *Black Diamond Municipal Code* 19.10.410A3, and are described as follows:

Mine Hazard Areas are those areas underlain by or affected by mine workings such as adits, gangways, tunnels, drifts, or airshafts, and those areas of probable sink holes, gas releases or subsidence due to mine workings.

A limited coal mine hazard assessment of The Villages was performed by Golder Associates, Inc. (Golder, 2006) and is attached as Appendix 7. The purpose of the mine hazard assessment was to identify any portions of The Villages land parcels that are known to be underlain by abandoned coal mine workings or have areas classified as potential mine hazard areas by the City of Black Diamond or King County. The study identified three areas of the site that are underlain by mine workings, and did not document any sinkholes or subsidence areas. Only the workings of Mine B under the North Property would be classified as a potential hazard area. Due to the depth of the other mine workings, the study recommended declassification of a hazard designation (Golder, 2006). The moderate coal mine hazard is shown on Figure 21.

Areas underlain by mine workings include portions of the North Property, portions of the southeast quarter of Section 15, and a small portion of the northwest quarter of Section 23, east of Black Diamond Lake.

The delineation (Golder, 2006) of mine hazards under the North Property yielded classifications of, at most, a moderate hazard. The North Property is underlain by workings of the #11 Mine and Mine B. There are no documented sinkholes or subsidence areas associated with the mines below the North Property. According to the Golder assessment, the depth of the #11 Mine would warrant declassification of the mine hazard, and the depth and extent of Mine B workings under this parcel would warrant a moderate hazard classification. Mine B had a mined thickness of about 4.5 feet and extends under the North Property at a depth of about 350 to 420 feet. The #11 Mine extends under the North Property at depths ranging from about 650 to 1,500 feet below ground surface.

The mine workings in the portion of the southeast quarter of Section 15 are a part of the #14 Mine workings. Below this portion of the site, the mined seam ranges in depth from about 1,015 feet to 1,784 feet below ground surface. There are no documented sinkholes or subsidence in the area of the #14 Mine. According to the Golder assessment, the depth of the mine under this portion of the site would warrant declassification of the mine hazard.

The mine hazard in the northwest quarter of Section 23 appears to be associated with the deep workings of the #14 Mine. According to the Golder assessment, due to the significant depth of these workings the hazard designation would warrant declassification.

4.4.4 Channel Erosion

Surface water features on The Villages Main Property and North Property are shown on Figure 3 and Figure 4. On-site watercourses include five natural watercourses (Rock Creek and Streams S2, S4, S5, and S7, wetlands, and the western end of Black Diamond Lake. Two other on-site watercourses (S3 and S6) were dug or created during past road building activities, but contain flow from natural sources. A number of roadside ditches and natural wetlands are also present on-site. Other off-site streams evaluated for stream erosion include Crisp Creek and an unnamed tributary to the Green River, which both receive baseflow from the pre-Olympia aquifer downgradient from proposed infiltration facilities. On-site watercourses are described in detail in Cedarock (2008).

Channel erosion details of on-site Stream S4 and off-site stream Crisp Creek and an unnamed tributary to the Green River and a discussion of channel erosion processes are included in Appendix 6.

4.4.5 Seismic Hazards

Seismic hazard areas are defined in the Draft CAO, Chapter 19.10.090, as follows:

Areas that are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction.

The Draft CAO does not contain hazard designations, performance standards, or mitigation requirements for seismic hazards. The *King County Sensitive Areas Ordinance* (SAO) defines significant seismic hazard in a similar manner to the Draft CAO.

Regional seismicity is discussed in the following section, followed by a description of potential seismic hazards, including ground rupture, ground motion response, liquefaction, and seismically induced landslides.

Regional Seismicity

The Main Property and North Property of The Villages are located in an area of moderate to high historical seismicity. Table 4-6 summarizes historical and recorded seismic events greater than magnitude (M) 3.0 in the vicinity of The Villages, as obtained from the University of Washington's Pacific Northwest Seismograph Network. Figure 22 shows the locations and magnitudes for earthquakes listed in Table 4-6. All events $M \geq 2$ are listed and presented in

Appendix 8. (A significant number of seismic events of M < 2 have been recorded in The Villages' vicinity that are not presented in this report.)

The four largest earthquakes ranging from M 3.5 to M 3.9 were located within a 20-mile radius of the site. The nearest and largest of these earthquakes (M 3.9) occurred approximately 8 miles south of the main property in 1994.

Table 4-6
Historical Seismicity in the Vicinity of the Site (M>3.0)

Date	Latitude (°N)	Longitude (°W)	Depth (km)	Magnitude
7/30/1966	47.2000	122.0000	16.00	3.4
8/13/1972	47.4023	121.8277	14.46	3.0
5/22/1974	47.3423	122.0250	19.22	3.0
2/1/1979	47.5307	121.9075	7.38	3.5
6/23/1980	47.5405	122.2477	0.02	3.3
6/23/1980	47.5427	122.2508	0.05	3.7
1/24/1983	47.0737	121.9698	6.62	3.0
10/5/1983	47.4603	121.8377	21.82	3.0
12/16/1983	47.3203	122.0043	12.91	3.0
6/16/1985	47.4343	121.8262	17.03	3.1
12/30/1990	47.4738	121.8122	17.07	3.5
4/19/1992	47.4610	122.0535	23.08	3.1
9/10/1994	47.1845	121.9652	17.73	3.9
1/21/1996	47.4507	121.7875	21.16	3.3
2/14/2001	47.5182	121.8973	6.63	3.1
7/22/2002	47.4090	121.7848	28.05	3.1

Source: University of Washington's Pacific Northwest Seismograph Network (2008).
km = kilometer

Stresses that cause the earthquakes are mainly due to the interaction of tectonic plates that meet off the coast of Washington State. The Juan de Fuca oceanic plate, which forms the floor of the northeastern Pacific Ocean, moves northeastward with respect to the North American continental plate at an average rate of about 34 millimeters per year (Miller et al., 2001). Differences in density of the two plates cause the Juan de Fuca plate to sink or subduct beneath the North American plate. The interaction of the plates forms the Cascade volcanoes and potentially large earthquakes.

Three types of earthquakes occur in the Pacific Northwest that affect western Washington: (1) deep intraplate earthquakes that occur within the subducting Juan de Fuca plate, (2) shallow to deep interplate earthquakes that occur between the Juan de Fuca and North American plates, and (3) shallow crustal earthquakes that occur in the North American plate. The Juan de Fuca

plate must bend as it subducts beneath the North American plate causing deep intraplate earthquakes within the Juan de Fuca plate. Three such events have been recorded in western Washington: the recent Nisqually 2001 earthquake (M=6.8), a 1965 earthquake (M~6.8), and a 1949 earthquake (M~7.1). There is evidence that six such earthquakes have occurred in the Puget Sound region with estimated magnitudes greater than 6.0 since 1870 (Walsh et al., 2002). An earthquake recurrence interval for this type of earthquake can be estimated at approximately 20 years, given this historic record.

Shallow to deep interplate (or subduction zone) ruptures occur between the Juan de Fuca plate and the North American plate. Records provided by buried soil layers, tree ring and radiocarbon dating of dead trees, and deep-sea deposits indicate that a subduction earthquake such as this occurred in the year 1700 with a magnitude of approximately 8.9 (Adams, 1996; Atwater, 1987 and 1996; Atwater et al., 1991; and Yamaguchi, 1997). A documented tsunami occurred in Japan that has been correlated to this earthquake (Satake et al., 1996). A recurrence interval of 500 to 600 years is estimated for this type of earthquake (Haugerud et al., 1999).

The third type of event is a shallow, crustal earthquake occurring within the North American plate. Although no evidence of surface faults or associated ground rupture was observed at the The Villages, there are several active crustal faults in western Washington that may pose significant, though very infrequent, seismic hazards in the vicinity of the Villages North and Main Properties. The most notable of these, the Seattle and Tacoma Fault Zones, are described below.

The Seattle Fault is a 4- to 6-kilometer-wide zone of three or more active fault strands. Johnson et al. (1999) map the west-trending fault zone in waterways from Dyes Inlet to Lake Washington. A recent exposure of the fault was excavated in Bellevue, Washington approximately 18 miles north-northwest of The Villages at Black Diamond. This is the easternmost exposure documented to date. The Bellevue exposure of the fault shows significant surface displacement of approximately 6 feet. Researchers estimate that an earthquake of M 6.8 occurred 3,500 to 11,000 years ago to cause the offset (Margeson, 2002). A large later earthquake event (M>7) occurred on the Seattle Fault approximately 1,100 years ago (roughly A.D. 900) and produced 5 to 7 meters (about 15 to 20+ feet) of documented uplift at Restoration Point and in the Duwamish River Valley (Johnson et al., 1999). This earthquake was accompanied by a tsunami in Puget Sound (Atwater and Moore, 1992), landslides in Lake Washington (Jacoby et al., 1992; Karlin and Abella, 1992, 1996), and rock avalanches in the Olympic Mountains (Schuster et al., 1992). Since 1970, the largest two earthquakes associated with the Seattle Fault are a M 5.0 event beneath Point Robinson and a M 4.9 event beneath southwestern Bainbridge Island. Slip rates across the Seattle Fault Zone are estimated at 0.7-1.1 millimeters per year (mm/yr), but no information on recurrence interval is available at this time (Johnson et al., 1999).

The Tacoma Fault Zone is identified as an arcuate structure that stretches from just north of Tacoma to the west side of the Kitsap Peninsula, trending generally east to southeast. The closest observed occurrence of the fault is its northern lineament, which is mapped as being approximately 6 miles southeast of The Villages. Holocene earthquake activity on the Tacoma Fault Zone is suggested by seismicity along the fault zone and by paleoseismic evidence for abrupt uplift of tidal marsh deposits to the north (Brocher et al., 2001). Evidence derived from surface fault scarps, trenching of fault zones, and dating of fault zones and uplifted tidal flats indicates that the Tacoma Fault is a reverse fault that has ruptured in the time range of A.D. 770-1160. This rupture event may have occurred at or near the same time as a rupture of the Seattle Fault in A.D. 900 as discussed above (Sherrod et al., 2004).

The mechanism of the Seattle and Tacoma Fault Zones is not clearly understood, however recent research indicates that it is a complex system of associated reverse or thrust faults. Recent geophysical evidence indicates that the area between the Seattle and Tacoma Fault Zones, known as the Seattle Uplift, is a "passive roof duplex." A passive roof duplex is generated by a complex system of faults in a fold-and-thrust belt. The Seattle Fault is a south-dipping reverse fault that forms the leading edge of the uplift and the Tacoma Fault is a north-dipping reverse fault that forms the trailing edge of the uplift. The model indicates that the faults form a triangle-wedge structure, the Seattle Uplift, which is forced upward during fault ruptures. The model further indicates that a master fault joins both faults at depth, suggesting the faults are part of a large system that is accommodating north to south directed compression of Washington state. As indicated above, the Seattle and Tacoma Faults may have ruptured at the same time in the past (Brocher et al., 2004).

A third fault zone in the general vicinity of The Villages is the White River Fault Zone. The White River Fault Zone, as mapped in the *Geologic Map of the Snoqualmie Pass 30 X 60 Minute Quadrangle, Washington* (Tabor et al., 2000), trends east-southeast/west-northwest. The westernmost extent of this fault zone is approximately 5 to 6 miles east-southeast of The Villages. The mapped fault zone extends from this point for approximately 50 miles, terminating in an area south of Manastash Ridge in Kittitas County, Washington. The White River Fault Zone offsets two different Tertiary bedrock types, the Oligocene Ohanapecosh Formation (To) and Miocene Fife's Peak Formation (Tf). Significant movement on this fault appears to predate the Pleistocene, as the overlying mapped Pleistocene units (notably the units mapped as Vashon drift, undivided [Qvu] and Pleistocene Alpine Glacial Deposits [Qag]) are shown to cross the fault trace, but do not show evidence of faulting. As described in the *Crustal Controls on Magmatic-Hydrothermal Systems: A Geophysical Comparison of White River, Washington, with Goldfield, Nevada* (Blakely et al., 2007), the White River Fault Zone is Tertiary-aged (about 20 million years before present). The White River Fault Zone appears to align with the northern lineament of the Tacoma Fault Zone farther to the west (Figure 23), however it should be emphasized that although the Tacoma Fault Zone has been active during the Pleistocene, the White River Fault Zone has not been active since Tertiary times, as described above.

A review of the *Seismotectonic Map of the Puget Sound Region, Washington* (Gower et al., 1985) indicated the presence, about 1.5 to 2 miles west-southwest of the main property, of a near-vertical north-trending fault in glaciolacustrine and fluvial deposits of the Orting(?) drift. This fault is described in the *Geology of the Renton, Auburn, and Black Diamond Quadrangles, King County, Washington* (Mullineaux, 1970). This fault is exposed along the Green River and is downthrown about 30 feet on the east side. The displacement cuts through 200 feet of the Orting(?) drift and does not occur within the younger, Fraser-age sediments overlying the Orting(?) drift. This indicates that the fault is a pre-Fraser feature, occurring more than about 15,000 years ago.

Evidence of faulting has been observed and documented in the bedrock underlying the site and region, as identified in Gower et al., 1985. Faults in the immediate vicinity of Black Diamond include the Franklin Fault and several unnamed faults. These unnamed Tertiary-aged faults are identified on *Compilation Geologic Map of the Green River Coal District, King County, Washington* (Phillips, 1984). None of these faults are known to have been active in the Pleistocene. Regional structure is shown on Figure 23.

Four types of potential seismic hazards are usually associated with large seismic events: ground rupture along a surficial fault zone, ground motion response, liquefaction, and seismically induced landslides.

Ground Rupture Along Surficial Fault Zones

Ground rupture occurs as offsets of the ground surface and is limited to the immediate area of the fault. No evidence of surface faults or associated ground ruptures was observed at the Main or North Properties. The U.S. Geological Survey (USGS) identifies several major faults in the Puget Sound region[1]. The Seattle, Tacoma, and White River Faults/Fault Zones are in the vicinity of the Main and North Properties, although none of the fault strands are documented to pass through the site. It is our opinion, based on existing geologic data, that the risk of surface rupture impacting the proposed projects is low.

Ground Motion Response

Ground motion from an earthquake results from shear, pressure, and surface waves propagating through the earth's crust from the earthquake's hypocenter. The ground motion caused by these waves is the seismic shaking felt during an earthquake. The intensity of the shaking felt at a given location during and immediately after an earthquake, is a result of several variables including: (1) the magnitude of the earthquake, (2) distance from the earthquake, (3) depth of the earthquake, (4) the type of rocks and unconsolidated sediments underlying a given site, and (5) attenuation of the seismic energy between the earthquake and a given site. Although The Villages are located in an area of relatively moderate to high

[1] http://wrgis.wr.usgs.gov/docs/wgmt/pacnw/lifeline/eqhazards.html

historical seismicity, as shown in Table 4-6, there are several sources of large earthquakes in western Washington that are capable of generating significant earthquakes as discussed above.

The Nisqually 2001 earthquake provided opportunities for direct observation of ground motion during a large regional earthquake. The University of Washington's Pacific Northwest Seismograph Network created a "shake map" of peak acceleration and velocity from wave forms collected from the earthquake. Peak acceleration is the maximum acceleration experienced by a particle at the earth's surface during the course of the earthquake motion. A ground station located approximately 4.5 miles northeast of the project site recorded movement from the event (located between Olympia and Tacoma, 32.6 miles deep, and approximately 34 miles from The Villages and indicated moderate shaking (peak acceleration of approximately 17 percent of the acceleration of gravity [g, 9.8 meters per second per second]) in the vicinity of The Villages[2].

Liquefaction

Liquefaction is the process in which soil loses strength or stiffness during vibratory shaking, such as that caused by earthquakes, and temporarily behaves as a liquid. Shaking during an earthquake can cause an increase in pore water pressure in the soil, and decrease the soil shear strength. Soils are considered to liquefy when nearly all of the weight of the soil is supported by the pore water pressure and becomes unstable. The seismically induced loss of soil strength can result in failure of the ground surface and can be expressed as landslides or lateral spreads, surface cracks and settlement, and/or sand boils.

Seismically induced liquefaction typically occurs in loose, saturated, non-cohesive sandy and silty soils commonly associated with recent river, lake, and beach sedimentation. In addition, seismically induced liquefaction can be associated with areas of loose, saturated fill. Unconsolidated soils underlying wetlands and stream corridors may be susceptible to liquefaction during larger seismic events, although most of the susceptible soil layers are likely relatively thin.

Based on the results of our field exploration program, the majority of on-site wetlands are founded on relatively dense lodgement till, which does not typically pose a significant liquefaction risk. The Black Diamond Lake bog area is mapped as peat by the NRCS. Peat soils, while compressible, do not meet the criteria for liquefiable soils. Based on our experience with similar soil types, and our understanding of the regional seismicity, it is our opinion that the potential for liquefaction of the soils underlying the Main and North Properties is low and would be limited to small wetland areas, which are in delineated sensitive areas and not in development areas.

[2] http://www.ess.washington.edu/shake/0102281854/intensity.html

Seismically Induced Landslides

Earthquake vibration may cause unstable material to fail by influencing existing planes of weakness within bedrock (such as bedding planes or fault planes) or within unconsolidated material (such as existing landslides). The USGS documented many earthquake-induced landslides throughout the Puget Lowland that occurred due to shaking from the 2001 Nisqually event, and several researchers have correlated previous mass movements in Lake Washington to the earthquake on the Seattle Fault about 1,100 years ago (Jacoby et al., 1992; Karlin and Abella, 1992, 1996). The risk of seismically induced landslides is low across the majority of the Main and North Properties. The risk would be higher where slopes exceed 40 percent, or where they exceed 15 percent and occur in granular material ground water present. These areas are mapped as Landslide Hazard Classes 2 and 3 on Figure 20.

4.4.6 Volcanic Hazards

Volcanic hazards are not specifically addressed in the Draft CAO. Volcanic hazard areas are areas subject to ash fall, pyroclastic flows, lava flows, and inundation by debris flows, mudflows, or related flooding resulting from geologic and volcanic events on Mount Rainier, located approximately 30 miles south-southeast of The Villages. The White River and Green River valleys serve as barriers to debris flows associated with Mount Rainier. The subject site is located outside of the volcanic hazard zones, as delineated in *Volcanic Hazards from Mount Rainier, Washington* (Hoblitt et al., 1998), USGS Open-File Report 98–428.

The Villages is mapped by the USGS as having a 0.02 percent chance per year of an accumulation of 10 centimeters or more of volcanic ash (tephra) from a nearby eruption (Scott et al., 1995). This represents a very low annual probability of significant ash accumulation and therefore is unlikely to represent a significant hazard to The Villages.

5.0 AFFECTED ENVIRONMENT: HYDROGEOLOGY AND HYDROLOGY

This section of the report summarizes regional and site-specific hydrogeology, and describes surface water features and associated ground water – surface water interactions. Associated Earth Sciences, Inc. (AESI) has performed significant exploration, testing, and monitoring designed to develop a comprehensive understanding of hydrogeologic conditions at The Villages. Descriptions of the exploration, testing, and monitoring are presented in Section 3.0, and regional and site-specific geology is described in Section 4.1.

Interaction between ground water and surface water is a controlling factor on ground water flow in the aquifer systems beneath the site and in the site vicinity. AESI's characterization of hydrogeologic conditions at The Villages forms the basis for ground water – surface water interactions.

Other site-specific surface water and hydraulics information is contained in multiple consultant reports completed for The Villages, including "Water Quality Analysis" (A.C. Kindig & Co. [A.C. Kindig], 2008), "Fisheries Technical Report" (Cedarock Consultants, Inc., [Cedarock], 2008), "Wetlands Assessment" (Wetland Resources, Inc. [Wetland Resources], 2008), and unpublished maps and tables from Triad Associates (Triad, 2008).

5.1 Regional Hydrogeologic Setting

Descriptions of regional hydrogeology are contained in reports prepared by the United States Geological Survey (USGS), including Water-Supply Bulletin No. 28 (Luzier, 1969) and Water-Resources Investigations Report 92-4098 (Woodward et al., 1995). Relevant off-site hydrogeologic information specific to Horseshoe Lake is contained in a technical memorandum by Herrera Environmental Consultants (Herrera, 1996), and for Lake Sawyer in a technical report titled "Lake Sawyer Hydrogeologic Study," prepared by Hart Crowser (1990).

Water well logs obtained from multiple sources were reviewed and compiled for the area surrounding The Villages. The wells were located as accurately as possible based on the underlying data, and a database was created to compile and retrieve pertinent drilling and well construction information. The locations of water users located within approximately 1 mile of The Villages are shown on Figure 24. A copy of the water users database is included as Appendix 9.

The Puget Group and younger Tertiary bedrock formations are areally extensive geologic units located throughout southeastern King County. Ground water flow through the consolidated Tertiary bedrock units is typically low except in areas where rock was removed during mining operations. The overlying unconsolidated Pleistocene deposits form the primary aquifer system beneath the Covington Drift Plain. The Pleistocene deposits are a source of both a shallow unconfined water table aquifer and a deeper semi-confined aquifer.

The following sections summarize general characteristics of the glacial/nonglacial and bedrock aquifer systems, and ground water - surface water interaction, in the vicinity of the site. Detailed descriptions of ground water subbasins (Section 5.2), surface water features (Section 5.3), aquifers (Section 5.4), and water users (Section 5.5) are presented later in this chapter.

5.1.1 Glacial and Nonglacial Aquifers

The major glacial outwash aquifers in the site vicinity were formed primarily by deposition on drift plains during multiple periods of glaciation. Nonglacial fluvial aquifers were deposited in ancestral Green River drainages formed during ice-free intervals. The upper portions of the Pleistocene water table aquifers also include Holocene (also termed Recent [10,000 years ago to present]) alluvial sediments that are typically reworked glacial deposits. Glacial outwash sediments usually underlie the Recent alluvial sediments, and often comprise the majority of the deposits forming the individual aquifers, although there is at least one major nonglacial fluvial aquifer beneath the site. These aquifers contain considerable ground water storage, and provide significant contribution to streamflow during dry periods.

Recharge to the alluvial aquifers is provided largely by infiltration of precipitation, runoff from surrounding till-mantled uplands and bedrock ridges, infiltration of water in lakes, and streamflow. Regional ground water flow in the glacial/nonglacial aquifers generally corresponds to the overall topography of the land surface, eventually flowing from bedrock areas in the east toward discharge points in the major river valley systems to the west and south of the site. In general, ground water flowing in the glacial/nonglacial aquifers discharges primarily to rivers, streams, lakes, and underlying bedrock.

Layers of fine-grained till and lacustrine sediments have been identified in borings and wells completed in the vicinity. These fine-grained sediments often comprise a confining layer between more permeable glacial outwash or nonglacial fluvial deposits. The depth, thickness, and lateral extent of individual fine-grained layers appear to vary over relatively short distances based on review of water well logs near The Villages. In areas where fine-grained sediments are absent, multiple glacial outwash/nonglacial fluvial layers may comprise a single thick aquifer interval that is capable of yielding large volumes of ground water.

5.1.2 Bedrock Aquifers

The primary bedrock unit in the immediate vicinity is mapped as the Eocene-age Puget Group (Mullineaux, 1965 and 1970). The Miocene-age Hammer Bluff Formation is also exposed in the general vicinity of the site, and was mapped by Mullineaux in the Green River valley. Bedrock units are exposed at or near the ground surface in the Lawson Hills area immediately east of The Villages, and are exposed in the walls of the Green River Gorge immediately south of The Villages sites. Bedrock was encountered in some on-site wells and has been identified in a few area water wells. Due to the generally low permeability of the bedrock mass, the

rock is typically considered to be a barrier to ground water flow. Flow through the rock is typically highly anisotropic (preferential orientation), controlled by discontinuities in the rock mass. Discontinuities include fractures (joints), faults, bedding planes, and other geological discontinuities. Ground water preferentially flows through open fractures and other permeable discontinuities. In the Black Diamond area, significant ground water flow also occurs through abandoned coal mine workings.

Puget Group rocks are typically well-cemented, commonly have a high clay content due to the effects of diagenesis (alteration) of unstable minerals, and exhibit low porosity and permeability (Luzier, 1969 and Woodward et al., 1995). Wells drilled into the Puget Group would generally yield very low quantities of water, and in some cases, no water. Since the end of active subsurface coal mining in the Black Diamond area, ground water has filled up portions of the abandoned mine workings. Significant volumes of water are stored in the abandoned coal mine workings and flow rates can be high through mined coal seams.

Recharge to individual bedrock aquifers is provided by overlying alluvial aquifers, direct precipitation and runoff into abandoned mine entries. Ground water flowing in the bedrock aquifer system likely discharges primarily to glacial/nonglacial aquifers, and surface water.

5.2 Ground Water – Surface Water Interaction

5.2.1 General

In the site vicinity, there is significant interaction between the glacial/nonglacial aquifers and surface water features. These aquifers contain considerable ground water storage, and provide significant contribution to streamflow or lake levels during dry periods. Streams and lakes in the vicinity at times provide direct recharge to underlying aquifers.

Streams flowing across the outwash plain or outwash terraces interact with ground water through three general processes:

1. via gain of water (baseflow) from inflowing ground water when the ground water table surface is above the channel bottom;

2. via loss of water to ground water by outflow through the channel bottom when the ground water table surface is below the channel bottom; or

3. streams can vary between gaining water in some reaches and losing water in others, depending on the change in elevation of the channel bottom.

Lakes and wetlands can also receive water from ground water, can provide a source of recharge to ground water, or both. Springs occur when a ground water table surface intersects the land surface. Springs can provide baseflow to streams or create wetlands.

To characterize ground water and surface water interactions, AESI identified ground water subbasins associated with surrounding surface water features. Five ground water subbasins comprise the glacial/nonglacial aquifer system beneath and adjacent to the Main Property. These include: (1) Black Diamond Lake, (2) Rock Creek and Lake Sawyer, (3) Horseshoe Lake, (4) Crisp Creek, and (5) the Green River. The North Property is located within the Ravensdale Creek subbasin.

The approximate extent of the subbasins is illustrated on Figure 25. Subbasin boundaries were delineated based on surface geology and subsurface hydrogeologic characteristics, and the nature of ground water - surface water interactions. Aquifer systems are described in Section 5.4.3.

5.2.2 Ground Water Subbasins

Black Diamond Lake Subbasin

Ground water flow in the Black Diamond Lake subbasin can be subdivided into very shallow interflow components that directly contribute recharge to Black Diamond Lake and surrounding wetlands, and deeper ground water flow in underlying aquifers. Based on the available subsurface exploration data, Black Diamond Lake is interpreted to have formed in an abandoned, low-gradient, meltwater channel incised into Vashon lodgement till. Black Diamond Lake formed in a topographic depression on the very low-permeability till substrate. Topographically higher upland areas to the north and east contribute to the hydrology of Black Diamond Lake and associated wetlands present in the topographic depression. Recharge to the Black Diamond Lake subbasin is very limited south of the lake since the top of the low-permeability till slopes away (south) from the topographic depression. Minor spring flow from $Qpog_{2c}$ contributes a small amount of recharge to a portion of the buffer upslope of the eastern margin of Black Diamond Lake, as shown on Figure 3. No other ground water sources have been identified that contribute recharge to Black Diamond Lake, although the lake is directly hydraulically connected to very shallow ground water contained in the Recent alluvial deposits present in the abandoned meltwater channel. Surface water discharge from Black Diamond Lake is to the north toward the abandoned meltwater channel containing Rock Creek.

Surface water levels in Black Diamond Lake have been monitored at a staff gauge located near the southern margin of the lake (staff gauge location is shown on Figure 7). Water levels in Black Diamond Lake show a direct relationship to precipitation events, and are consistent with annual hydrologic cycles typical of shallow lakes and wetlands formed on till that receives recharge primarily from interflow and direct precipitation. A hydrograph showing surface water elevation in Black Diamond Lake and weekly precipitation is illustrated on Figure 26.

Deeper ground water is present in the Black Diamond Lake subbasin, including ground water present in the Vashon advance aquifer and in older underlying pre-Vashon age units. Details of the aquifers are described in Section 5.4.3. Flow through the deeper ground water system

is not constrained by the surface topography of the Black Diamond Lake subbasin. Ground water elevations are high beneath the Black Diamond Lake subbasin. Based on the available ground water elevation data, ground water flow in the deeper aquifer intervals is primarily toward the west, and is part of the Crisp Creek and Green River ground water subbasins. The high ground water elevations in the Black Diamond Lake subbasin and general westerly flow direction are interpreted to be due to a combination of factors including: (1) year-round recharge to deeper aquifers via leakage from Black Diamond Lake through a relatively thin till substrate, (2) lateral geologic flow barriers to the east where the primary deeper aquifers onlap (terminate against) older low-permeability Pleistocene deposits, as illustrated on Figure 11, and (3) bedrock barriers to the south, as shown on Figure 10 and Figure 16.

Rock Creek Subbasin, Lake Sawyer, and Ravensdale Creek

The on-site portion of the Rock Creek ground water subbasin is limited to the eastern margin of the Main Property, as shown on Figure 25. Rock Creek is an underfit stream flowing through a relatively wide swale formed in an abandoned, low-gradient, meltwater channel. The floor of the swale contains a cover of fine-grained alluvial deposits, Rock Creek, wetlands, and Jones Lake, presumably underlain by shallow low-permeability till deposits. Rock Creek is directly hydraulically connected to very shallow ground water contained in the alluvial deposits present in the swale. Recharge to the shallow ground water occurs from direct precipitation, through-flow from upgradient areas, such as Jones Lake, runoff from topographically higher till-covered upland areas, and from other surface water features discharging into the swale. Ground water within the Rock Creek swale flows northwest and discharges to Lake Sawyer.

A technical report titled "Lake Sawyer Hydrogeologic Study," prepared by Hart Crowser (1990), summarizes the hydrogeology of Lake Sawyer as follows: *"Lake Sawyer is located between bedrock to the east and till outcrops to the north and west. It appears to be situated in a till trough with major recessional meltwater channels extending out from its northeast and southwest corners. Groundwater inflow to the lake occurs along its east and south sides. Outflows to the ground water occur predominantly through the recessional deposits in the northeast and southwest, and also through sediment and till deposits lining the lake's bottom."* This conceptual model is consistent with site-specific information on The Villages.

The North Property of The Villages is within the Ravensdale Creek subbasin. Ravensdale Creek is formed within an abandoned recessional meltwater channel that extends to the southeastern side of Lake Sawyer. The North Property discharges to the outwash channel. Ground water within the channel recharges Ravensdale Creek and flows southwest to Lake Sawyer.

Horseshoe Lake

Approximately 179 acres of the Main Property are located within the Horseshoe Lake ground water subbasin. Subsurface exploration data, Horseshoe Lake surface water elevation data, and ground water elevation data from shallow and deeper aquifer intervals have been integrated to develop a conceptual hydrogeologic model of ground water – surface water interactions in the Horseshoe Lake subbasin. In general, shallow ground water flow in the Horseshoe Lake subbasin is dominated by flow through the Vashon recessional outwash (Qvr) deposits that blanket the underlying low-permeability Vashon lodgement till (Qvt) surface across much of the subbasin. Recharge to the shallow ground water occurs from direct precipitation, through-flow from upgradient areas, and runoff from topographically higher upland areas. Deeper ground water contained in $Qpog_{lc}$ flows from the Horseshoe Lake subbasin toward Crisp Creek. Distribution of the deeper ground water contained within $Qpog_{lc}$ and $Qpon_{lc}$ (termed pre-Olympia aquifer) is illustrated on Figure 27. Shallow aquifer distribution is illustrated on Figure 28. Details of the aquifers are described in Section 5.4.3.

Horseshoe Lake is located in a large topographic depression where pockets in the till that separate overlying shallow Qvr ground water from deeper $Qpog_{lc}$ ground water have been eroded. The Horseshoe Lake depression is essentially a window into the underlying aquifer, providing a significant source of concentrated ground water recharge to $Qpog_{lc}$, which in turn ultimately discharges to Crisp Creek and the Green River. Infiltration out of the lake bottom is somewhat inhibited by fine-grained lake sediments and activities related to residential development. As discussed in Herrera (1996), portions of the lake bottom were re-graded and lined with bentonite pellets in conjunction with surrounding residential development.

Surface water levels in Horseshoe Lake have been monitored by Golder (2008) at a network of staff gauges (Appendix 7). A hydrograph showing surface water elevation in Horseshoe Lake and ground water elevations in the shallow and pre-Olympia aquifers is illustrated on Figure 29. The hydrograph demonstrates the connection between Horseshoe Lake as a source of recharge to the pre-Olympia aquifer. The surface water level in Horseshoe Lake generally mirrors the ground water levels in the deeper pre-Olympia aquifer; however, the Horseshoe Lake elevations are higher, indicating vertical flow from the lake into the pre-Olympia aquifer.

Based on the available ground water elevation data, ground water flow in the pre-Olympia aquifer interval is primarily toward the southwest, and contributes to the Crisp Creek and Green River ground water subbasins. Occasional flow gradient reversals may occur in the immediate vicinity of Horseshoe Lake when lake levels are high, due to interaction of surface water and ground water. Surface water runoff into Horseshoe Lake infiltrates and creates a ground water mound within the pre-Olympia aquifer beneath Horseshoe Lake.

Crisp Creek Subbasin

Ground water flow in the Crisp Creek subbasin can be subdivided into shallow Qvr aquifer components in the headwater area (located approximately 1 mile west of the northwest corner of the Main Property) and deeper ground water flow components in the steep reaches of Crisp Creek from the pre-Olympia aquifer. Similar to Rock Creek, Crisp Creek is an underfit stream flowing through a relatively wide swale formed in an abandoned, low-gradient, meltwater channel. The headwater wetlands and upper reaches of Crisp Creek are likely recharged by ground water within the Qvr deposits adjacent to the creek within the swale. Depending on the thickness of the Qvr deposits and the shape of the underlying till surface, portions of the upper Crisp Creek channel probably vary between "losing" reaches, where surface water infiltrates along the channel bottom, to "gaining" reaches, where ground water recharges the channel. The steep portion of Crisp Creek is gaining streamflow as it descends to the Green River valley floor due to recharge from pre-Olympia aquifer springs.

The Crisp Creek ground water subbasin corresponds to the distribution of the pre-Olympia aquifer, as illustrated on Figure 25, and encompasses all of the Horseshoe Lake and most of the Black Diamond Lake subbasins, and includes significant off-site areas located west and north of the Main Property.

Green River Subbasin

Deep ground water flow in the Green River subbasin includes the entire site. Several aquifer intervals discharge as springs along the steep valley wall of the Green River. The largest spring systems include discharge from the pre-Olympia aquifer. Smaller springs discharge from fractures in the bedrock or occur at the contact of unconsolidated sediments with underlying bedrock, from thin water-bearing zones within the thick fine-grained $Qpon_{lf}$ and Hammer Bluff deposits, and from the shallow aquifer. This spring flow discharges at various locations along the slope flowing towards the valley floor where it ultimately directly recharges the Green River.

5.3 Surface Water Features

5.3.1 On-Site Surface Water

The Villages sites are located in the Green River surface water basin. The Green River is located within 1,000 feet of the southern boundary of the Main Property, and is the eventual receiving body for all surface water runoff from the Main and North Properties. Six unnamed watercourses (designated S2 through S7), Black Diamond Lake, Rock Creek, and 98 wetlands were identified on The Villages. Streams are described in detail in the "Fisheries Technical Report" (Cedarock, 2008) and wetlands are described in detail in the "Wetland Assessment" (Wetland Resources, 2008).

There are five existing drainage subbasins on the Main Property: Horseshoe Lake subbasin, Rock Creek subbasin, Black Diamond Lake subbasin, Jones Lake subbasin, and Green River Slope subbasin. The North Property falls entirely within the Ravensdale Creek subbasin.

Triad (2008) has divided The Villages into Basins 1 through 8 for stormwater management analyses. General subbasin information is presented on Figure 30 and summarized in Table 5-1. Ground water and surface water interactions are described in more detail in Section 5.2. Existing conditions geology and hydrology are discussed below and summarized in Table 5-1 for these project subbasins:

- Basins 1 and 2: No off-site surface water discharge occurs. All precipitation infiltrates into the surficial recessional outwash deposits (Qvr), recharging the shallow aquifer where present. The shallow aquifer recharges Horseshoe Lake and the pre-Olympia aquifer.

- Basin 3: No off-site surface water discharge occurs. Some on-site discharge from till uplands occurs, including ditch S3, but infiltrates along the upland margins into the surrounding outwash plain or outwash-filled swales. Within Basin 3 North, this infiltrated water would flow toward Horseshoe Lake, and within Basin 3 South, the infiltrated till runoff would bypass Horseshoe Lake, flowing off-site to the south via ground water. The shallow aquifer recharges Horseshoe Lake and the pre-Olympia aquifer.

- Basin 4: Topographically, Basin 4 is within the Green River, Black Diamond Lake, and Jones Lake subbasins. Geologically, Basin 4 is comprised of till-covered uplands, thin wetland alluvial deposits, and highly permeable Vashon ice-contact deposits (Qvic). Runoff from the majority of till uplands located in the north portion of the basin would discharge to either Wetland 108 in the Black Diamond Lake swale or to Black Diamond Lake directly. Stream S5 has its headwaters in on-site wetlands and conveys surface water directly to Black Diamond Lake. The eastern till upland discharges northwest to the Black Diamond Lake swale, north to the Jones Lake swale, south to a large wetland complex, and west to the highly permeable Qvic deposits. Runoff from the till upland in the northwest portion of the basin would discharge to a number of wetlands south and east of the upland. Wetland G flows off-site to the north, and then infiltrates into Qvr. No surface water runoff occurs from the portion of the basin comprised of highly permeable Qvic deposits. All precipitation falling onto Qvic deposits would infiltrate into the shallow aquifer, flowing westerly off-site, and eventually discharging to the Green River slope and/or pre-Olympia aquifer.

- Basin 5: Discharge from the till upland would flow toward the Rock Creek swale and onto the flat valley bottom sediments, and flow toward Rock Creek. It is assumed that at some times of the year, the valley bottom sediments are completely saturated and overland flow would occur. At other times, the discharge from the till upland likely

infiltrates at the base of the slope into the valley bottom sediments. This infiltrated water would eventually discharge to Rock Creek. Rock Creek flows off-site to Lake Sawyer.

- Basin 6: Off-site discharge from the till upland occurs via Stream S4. Stream S4 is located on the extreme eastern edge of Basin 6. The stream is headwatered off-site to the south in a large wetland complex. Flow travels north through a broad wetland near the toe of the State Route (SR) 169 fill slope and enters the site. Flow then crosses under 257th Avenue SE in a small (approximately 8-inch) culvert and continues northwest through the site in a well-defined channel through densely vegetated young forest (Cedarock, 2008). Discharge from Stream S4 eventually reaches Jones Lake. Man-made watercourse S6 is also located in Basin 6. S6 begins as drainage from a 15-inch culvert under an old logging road. The road crosses the eastern tip of Wetland Q. Flow has created a small poorly defined channel that persists part of the way down the slope towards Watercourse S4.

- Basin 7: Discharge from the till upland would flow onto the outwash plain or to Wetland B4, infiltrate, and flow eventually to Ravensdale Creek. Stream S2 is located in Basin 7. Headwaters are located in on-site wetlands on the eastern upland portion of the North Property. As Stream S2 reaches the lower terrace, all flow quickly infiltrates into recessional outwash. This effect was observed even during a very wet period in January 2007 (Cedarock, 2008). The water from Stream S2 ultimately provides baseflow to Ravensdale Creek.

- Basin 8: Off-site discharge from the till upland occurs via Stream S7, which flows to an off-site tributary of Jones Lake.

Table 5-1
Drainage Subbasins

On-Site Subbasin (Triad, 2008)	Topographic Drainage Subbasin	Geology	Receiving Waters
Basin 1	Horseshoe Lake	Qvr	• No off-site surface water discharge. • Infiltrates to shallow aquifer contained in Qvr, which recharges Horseshoe Lake and pre-Olympia aquifer.
Basin 2	Horseshoe Lake	Qvt and Qvr	• No off-site surface water discharge. • Runoff infiltrates to shallow aquifer contained in Qvr, which recharges Horseshoe Lake and pre-Olympia aquifer.
Basin 3	Horseshoe Lake Green River Slope	Qvt and Qvr	• No off-site surface water discharge. • Runoff infiltrates to shallow aquifer contained in Qvr, which recharges Horseshoe Lake and pre-Olympia aquifer.
Basin 4	Black Diamond Lake Jones Lake Green River Slope	Qvic, Qvt, and $Qpog_{2c}$	• Portion of basin directly discharges to Black Diamond Lake and Wetland 108. • Black Diamond Lake discharges off-site to Rock Creek. • Portion of basin directly discharges to Wetland G, which discharges off-site and infiltrates into Qvr. • Portion of basin discharges to Jones Lake swale via wetlands. • Portion of basin discharges south via wetlands. • Portion of basin infiltrates to shallow aquifer contained in Qvic, which flows westerly, eventually to Green River slope and/or to pre-Olympia aquifer.
Basin 5	Rock Creek	Qp/Qvr and Qvt	• Rock Creek and wetland within Rock Creek swale. • Rock Creek discharges off-site, eventually to Lake Sawyer.
Basin 6	Jones Lake	Qvt	• Stream S4 and headwater wetlands. • Stream S4 discharges off-site to Jones Lake.
Basin 7	Ravensdale Creek	Qvr and Qvt	• No off-site surface water discharge. • Infiltrates to shallow aquifer and Wetland B4, which eventually recharges Ravensdale Creek and Lake Sawyer.
Basin 8	Jones Lake Trib	Qvr and Qvt	• Stream S7 discharges off-site to Jones Lake Trib. • Portion of basin infiltrates to shallow aquifer and eventually recharges Jones Lake Trib.

5.3.2 Off-Site Surface Water

Nearby off-site surface water features include Ravensdale Creek, Lake Sawyer, Jones Lake, Black Diamond Lake Creek, Horseshoe Lake, Crisp Creek, several unnamed spring-fed streams along the Green River slope, and the Green River. Ground water - surface water

interactions related to these features are discussed in Section 5.2.2. The off-site surface water bodies are also described in detail in the "Fisheries Technical Report" (Cedarock, 2008).

5.4 Project Hydrogeology

5.4.1 General

Water is present in the pore spaces of soils and sediment. This "ground water" is part of the continuous hydrologic cycle, which, in the natural state, begins with infiltration of precipitation and runoff (termed recharge) and ends with discharge to rivers, springs, streams, and wetlands.

Under natural conditions, ground water recharge and discharge may shift with climatic cycles, but remain in overall balance. Withdrawal of ground water by wells diverts a part of the ground water cycle, resulting in adjustments to natural recharge, discharge, or both.

Ground water under saturated conditions flows preferentially through materials with greater porosity and permeability, such as clean gravels and sands. Where geologic conditions limit discharge, ground water accumulates in permeable zones, which, if they can support production from wells, are termed "aquifers." The sustainability of wells, or the long-term aquifer capacity, depends both on the extent of the aquifer, its rate of recharge and natural discharge, and the amount of withdrawal by producing wells.

5.4.2 Summary

Descriptions of regional hydrogeology are contained in reports prepared by the USGS, including Water-Supply Bulletin No. 28 (Luzier, 1969) and Water-Resources Investigations Report 92-4098 (Woodward et al., 1995). The Villages are included in the mapping area of Luzier, but are near the edge of the Woodward et al. mapping area.

Information obtained from AESI's project-specific subsurface exploration and geologic reconnaissance, in combination with regional hydrogeologic mapping, has been used to describe ground water in the vicinity of The Villages.

AESI has identified seven principal ground water "regimes" in the site vicinity. These include, from oldest to youngest:

- bedrock aquifer
- $Qpog_2$ aquifer: "lower" pre-Olympia aquifer
- $Qpon_{1f}$ aquifer: nonglacial fine-grained pre-Olympia aquifer
- $Qpog_{1c}/Qpon_{1c}$ aquifer: "upper" pre-Olympia aquifer
- Qva aquifer: Vashon advance aquifer

- Qvr/Qvic aquifers: shallow aquifer
- interflow

A surficial geology map (Figure 9), distribution and ground water flow direction maps (Figures 27 and 28), and geologic cross sections (Figures 10 to 14) illustrate the geology and hydrogeology beneath the site. Cross-section locations are shown on Figure 8. Table 5-2 summarizes manual water level measurements from project monitoring wells.

Main Property – Aquifer Summary

The Main Property of The Villages is underlain by several hundred feet of unconsolidated sediments overlying bedrock. AESI has delineated two major aquifer systems and a number of minor aquifer systems in the vicinity of the Main Property:

- Major Systems
  - shallow aquifer: a shallow aquifer system contained within the surficial Vashon recessional outwash, Vashon ice-contact deposits, and wetland/alluvial deposits, and
  - pre-Olympia aquifer: an aquifer contained within pre-Olympia coarse-grained glacial ($Qpog_{1c}$) and nonglacial deposits ($Qpon_{1c}$).
- Minor Systems
  - bedrock aquifer
  - $Qpog_{2c}$ aquifer
  - $Qpon_{1f}$
  - Qva
  - interflow

The shallow aquifer system is generally present near the ground surface and is directly recharged by precipitation, interaction with lakes and streams, and runoff from till upland surfaces. The pre-Olympia aquifer is present deeper in the subsurface and is generally separated from the shallow aquifer by low-permeability till. However, exceptions occur in areas where "windows" through the till occur, as discussed in the "Project Geology" section (Section 4.3.2). These windows allow ground water within the shallow aquifer and surface water to recharge the pre-Olympia aquifer.

Both the shallow and pre-Olympia aquifer systems terminate against the paleotopographic high composed of older pre-Olympia-age glacial ($Qpog_{2c}$) and nonglacial ($Qpon_2$) sediments located beneath Section 23 and the southeastern portion of Section 22.

Table 5-2
Monthly Hand-Measurements of Ground Water Levels

	2006									2007												2008							
Well/Date	**5/9**	**6/9**	**7/20**	**8/10**	**9/28**	**10/11**	**11/9**	**11/21**	**12/14**	**1/18**	**2/20**	**3/20**	**4/17**	**5/23**	**6/21**	**7/31**	**8/29**	**9/20**	**10/18**	**11/19**	**12/20**	**1/30**	**2/26**	**3/25**	**4/29**	**5/20**	**6/19**	**7/30**	**8/28**
MW-1	Dry	Dry	Dry	Dry	Dry	Dry	Dry	NM	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW-2	512.71	513.29	511.83	510.48	507.52	506.97	506.88	NM	511.10	514.31	515.05	515.88	516.74	515.10	513.53	511.06	509.29	508.06	507.29	507.24	508.80	510.02	510.66	511.34	512.03	511.55	511.49	509.48	507.87
MW-3	536.44	540.80	532.94	530.96	527.29	526.86	531.83	NM	540.57	542.75	540.71	543.99	542.86	537.16	534.47	531.44	529.34	527.93	527.25	527.39	535.87	539.44	540.23	540.05	540.26	536.42	539.03	531.37	529.04
MW-4	554.05	555.08	554.46	554.25	553.25	553.12	552.56	NM	552.94	553.57	554.31	554.73	555.36	555.47	555.12	554.48	553.95	553.51	553.23	552.23	551.78	552.29	552.67	553.24	553.79	553.83	553.93	553.60	553.17
MW-5	---	---	---	---	535.77	535.69	535.48	NM	535.66	535.63	535.77	NM	536.03	536.17	536.17	536.02	535.94	535.78	535.76	535.42	535.23	535.32	535.44	535.56	535.68	535.75	535.82	535.81	535.72
MW-6	---	---	---	---	486.21	485.38	483.99	NM	491.22	499.56	496.17	NM	499.84	495.27	492.36	489.14	487.15	485.62	484.01	482.18	481.94	485.69	488.98	488.74	489.82	488.77	487.70	486.62	484.08
MW-7	---	---	---	---	487.52	486.59	485.48	489.38	492.50	500.36	497.39	NM	500.80	496.54	493.71	490.47	488.41	486.89	485.20	483.46	483.17	486.84	490.09	489.90	490.72	489.89	488.70	486.99	485.19
MW-8	---	---	---	---	524.64	531.01	531.58	534.81	535.14	534.91	535.05	NM	534.91	534.68	534.26	532.88	531.32	530.03	530.79	533.93	534.48	534.63	534.68	534.92	535.00	534.85	535.06	533.86	532.30
MW-9	---	---	---	---	534.49	533.53	546.18	NM	550.22	548.22	547.98	NM	546.70	542.73	540.14	537.30	535.00	533.30	532.40	532.60	541.99	546.49	547.00	547.10	546.09	543.34	544.73	539.78	537.12
MW-10	---	---	---	---	---	476.30	475.46	NM	480.14	483.61	482.22	482.89	483.72	481.29	479.86	478.22	477.19	NM	474.93	473.40	473.03	476.11	478.32	478.38	478.83	478.36	477.83	476.64	475.35
MW-11	---	---	---	---	---	461.37	462.01	461.91	462.26	463.15	464.52	465.02	465.60	465.95	465.57	464.76	464.06	NM	463.12	462.42	461.86	461.46	461.49	461.96	462.34	462.40	462.36	461.86	461.60
MW-12	---	---	---	---	---	475.63	474.83	477.84	480.63	486.01	483.79	484.72	486.08	482.91	480.85	478.37	476.82	NM	474.33	472.72	472.45	475.81	478.73	478.40	479.05	478.32	477.63	476.03	474.63
MW-13	---	---	---	---	---	Dry	482.25	483.60	484.86	492.77	489.59	491.29	492.64	488.46	485.60	Dry	Dry	NM	Dry	Dry	Dry	Dry	483.82	482.52	Dry	482.10	Dry	Dry	Dry
MW-14	---	---	---	---	---	---	---	---	558.25	560.17	557.85	559.42	558.81	557.49	557.48	557.32	557.19	557.11	557.15	556.91	557.85	558.64	558.59	557.96	559.30	557.62	558.52	557.21	557.19
MW-15	---	---	---	---	---	---	---	---	385.53	385.93	386.69	387.13	387.38	387.64	387.57	387.32	387.09	386.83	386.94	386.62	386.61	386.49	386.38	386.56	387.46	386.82	386.87	386.56	386.77
MW-16	---	---	---	---	---	---	Dry		Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW-17	---	---	---	---	---	---	---	487.37	490.40	NM	495.24	NM	498.95	494.33	491.63	488.22	486.25	484.97	483.17	481.42	481.21	485.02	488.30	488.10	488.75	487.88	486.94	485.05	483.32
MW-18	---	---	---	---	---	---	---	Dry		NM	Dry	NM	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW-19	---	---	---	---	---	---	---	496.51	497.59	500.66	501.96	502.52	503.98	503.04	501.79	500.01	498.74	497.73	496.60	495.33	494.24	494.91	495.79	496.70	497.43	497.44	496.95	496.44	495.20
MW-20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	491.60	490.01	487.99
MW-21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	544.08	543.30	542.39
MW-22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	492.43	490.20	488.24
MW-23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	527.76	526.45	524.75
P-1	---	---	---	---	---	---	---	---	---	537.27	537.22	Dry	537.00	Dry	Dry	Dry	Dry	Dry	Dry	Dry	536.93	536.88	536.91	536.73	536.77	Dry	536.65	Dry	Dry
P-2	---	---	---	---	---	---	---	---	---	511.08	510.44	Dry	511.49	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
P-3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	501.96	500.17	Dry
DH-2	NM	NM	NM	NM	NM	NM	NM	NM	NM	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
DH-3	NM	NM	NM	NM	NM	NM	NM	NM	504.19	506.49	501.80	505.43	504.65	498.88	Dry	Dry	Dry	Dry	Dry	Dry	Dry	504.32	504.92	501.34	503.07	501.45	Dry	Dry	Dry
W-1	NM	NM	NM	NM	NM	NM	NM	NM	496.42	500.15	501.05	501.93	503.42	501.97	500.42	498.43	497.06	495.96	494.79	493.41	492.10	493.19	494.50	495.32	496.05	496.00	495.49	494.54	493.53
W-3	NM	NM	NM	NM	NM	NM	NM	NM	NM	488.67	489.97	490.36	492.25	490.70	488.81	486.39	484.93	483.95	482.97	481.61	480.20	480.48	481.43	482.69	483.58	483.71	483.43	482.58	481.82
W-5	NM	NM	NM	NM	NM	NM	NM	NM	502.16	503.97	505.36	505.87	506.89	505.62	505.99	504.74	503.84	503.07	502.23	501.26	500.34	500.46	500.74	501.55	502.18	502.23	501.90	501.37	500.64
MW-1-ICE	NM	NM	NM	NM	NM	NM	NM	NM	522.55	522.58	522.68	522.89	522.86	522.67	522.65	522.64	522.62	522.61	522.57	522.54	522.53	522.86	522.94	522.91	522.89	522.81	522.65	522.66	522.63
MW-2D-ICE	NM	NM	NM	NM	NM	NM	NM	NM	NM	559.43	559.07	559.46	NM	558.56	558.34	558.09	557.93	Dry	Dry	Dry	559.34	559.28	559.30	559.21	559.05	Dry	559.05	Dry	Dry
MW-4-ICE	NM	NM	NM	NM	NM	NM	NM	NM	561.57	561.79	561.54	561.54	561.57	561.50	561.40	561.09	560.70	560.40	560.04	559.68	560.12	561.45	561.60	561.53	561.67	561.52	561.47	561.39	561.20

Notes:
Refer to Figure 7 for well locations.
--- Indicates that the well was not constructed until a later date.
NM: Not Measured

Aquifers are described in detail in Section 5.4.3 and ground water - surface water interaction in Section 5.2.

North Property – Aquifer Summary

The North Property of The Villages is underlain at relatively shallow depths by bedrock. A shallow aquifer is present beneath the northwest lowland portion of the property within the outwash plain. The large wetland in the southwest portion of the property would recharge the shallow aquifer. An interflow network is present on the till-covered upland portion of the North Property.

5.4.3 Aquifers

Puget Group Aquifer

The Puget Group Formation is the source for a number of low yield wells located near The Villages sites. Flow to wells is interpreted to originate primarily in fracture zones within the rock mass since intergranular porosity and permeability are interpreted to be very low in the Puget Group due to alteration. Although the Puget Group rocks are capable of supplying limited quantities of water to wells, the bulk hydraulic conductivity of the rock mass is low, and the unit typically behaves as a barrier to ground water flow. The term bedrock "aquifer" is used in this report since a few wells do produce from the rock mass; however, within the context of the overall hydrogeologic setting for the site, the Puget Group rocks are considered aquitards or aquicludes relative to the highly transmissive aquifer intervals in the Pleistocene/Holocene deposits.

Flow through fractured rock is highly anisotropic (preferential orientation), controlled by discontinuities in the rock mass. Discontinuities include fractures (joints), faults, bedding planes, and other geological discontinuities. Ground water preferentially flows through open fractures and other permeable discontinuities. Typically, most of the flow is through only a small percentage of the total fracture set. Ground water storage in a rock mass with low primary porosity and permeability is relatively limited. Production rates in fractured rock wells typically decline rapidly with time as the available fracture storage is depleted during pumping; however, they can be adequate for low demand residential uses. Higher yields can be obtained in more intensely fractured zones where fracture connectivity may be enhanced. In the Black Diamond area, significant ground water flow also occurs through abandoned coal mine workings. Since the end of active subsurface coal mining in the Black Diamond area, ground water has filled up portions of the abandoned mine workings. Significant volumes of water are stored in the abandoned coal mine workings and flow rates can be high through mined coal seams.

Conceptually, ground water in the Puget Group rocks flows through discrete, poorly interconnected, fracture zones. Ground water recharge is interpreted to be primarily from:

(1) direct precipitation where bedrock is exposed at the ground surface, (2) leakage from streams, wetlands, or lakes in direct contact with bedrock, and (3) leakage through overlying geologic materials into bedrock. Discharge from the bedrock occurs: (1) where saturated fractures or mine shafts daylight at the ground surface, (2) into adjacent geologic units, and (3) to production wells.

AESI wells MW-11 and MW-15 completed for this study are completed at the contact with weathered Puget Group and overlying Hammer Bluff deposits. Water levels ranged from elevation 461.4 to 466.0 feet mean sea level (fmsl) and 383.7 to 387.7 fmsl, respectively. Completion elevations in the wells were 227.1 and 230.6 fmsl, respectively. (See Table 5-2 and Appendix 5 for manual measurements and hydrographs.)

The water users search yielded approximately 51 wells with completions in the bedrock aquifer in the vicinity of The Villages and are shown on Figure 24. A number of dry wells were also recorded. Seventeen bedrock well logs included well production information (both pump rate and drawdown), and the calculated specific capacity ranged from less than 0.1 to about 2 gallons per foot of drawdown. Completion intervals in rock wells are typically long in order to compensate for the low yields associated with the rock mass. For example the "open" interval for rock wells completed in the Puget Group averages in excess of 170 feet. In contrast, completion intervals in domestic water wells producing from sand and gravel aquifers are typically less than 5 feet since the yield potential can be several orders of magnitude higher than rock well yields.

$Qpog_{2c}$ Aquifer

The lower pre-Olympia, glacial, coarse-grained aquifer ($Qpog_{2c}$) is formed in a sequence of coarse-grained pre-Olympia-age deposits present beneath Sections 22 and 23 in the southeastern portion of the Main Property, correlative with Mullineaux's (1965) Orting Drift exposures on the south margin of the upland. Regionally, the depth to Orting Drift increases dramatically to the west and north of The Villages sites. Locally, the $Qpog_{2c}$ aquifer present beneath the upland on Section 23 is truncated on the west, north, and east by erosion of the swales containing Black Diamond Lake and Jones Lake, and to the south by the Green River valley.

Monitoring well MW-14, completed for this study, was completed within the $Qpog_{2c}$ aquifer. Water levels ranged from elevation 556.9 to 561.9 fmsl. (See Table 5-2 and Appendix 5 for manual measurements and hydrographs.)

A distinct spring zone representing discharge from the $Qpog_{2c}$ aquifer is present at approximately elevation 600 to 620 fmsl along the northwestern portion of the upland in Sections 22 and 23 within Basin 4 (Figure 3). Discharge from this spring zone forms the headwaters to Wetlands 401 and 402, which discharge to the Category 1 Wetland 108 contained in the Black Diamond Lake swale. Off-site to the south in Section 27, Mullineaux's

Orting Drift is mapped as directly overlying bedrock along the northern slope of the Green River valley. Springs forming at this contact are interpreted to represent discharge from the $Qpog_{2c}$ aquifer.

Recharge to the $Qpog_{2c}$ aquifer is provided from direct precipitation where $Qpog_{2c}$ deposits are found at the ground surface. In other areas, the $Qpog_{2c}$ deposits are directly overlain by Vashon lodgement till. In these areas, recharge would occur from wetlands and precipitation infiltrating through the overlying till. Recharge to the $Qpog_{2c}$ aquifer may also occur from connections to the bedrock.

$Qpon_{1f}$ Aquifer

The laterally extensive fine-grained pre-Olympia-age ($Qpon_{1f}$) deposits are present beneath the majority of the Main Property, and contain likely discontinuous, thin water-bearing interbeds of fine sand under confining pressure. As described in Section 4.2.2, the contact between $Qpon_{1f}$ deposits and clayey Hammer Bluff deposits was difficult to distinguish in AESI wells MW-11 and MW-15. When reviewing driller's reports on water well logs, AESI did not attempt to discriminate $Qpon_{1f}$ from clayey Hammer Bluff.

Monitoring well MW-19, completed for this study, was completed within a $Qpon_{1f}$ sand layer. Water levels ranged from elevation 494.0 to 504.3 fmsl. (See Table 5-2 and Appendix 5 for manual measurements and hydrographs.)

As described briefly in Section 4.2.2, the $Qpon_{1f}$ deposits and underlying Hammer Bluff Formation form the base of a regional aquifer. Any water-bearing fine sand seams within $Qpon_{1f}$ that outcrop along the Green River valley wall would form springs or would discharge in the subsurface to the mass wasting deposits mapped along the valley wall (Figure 9).

Recharge to the $Qpon_{1f}$ aquifer is interpreted to be from leakage from the pre-Olympia aquifer and potentially from bedrock.

Pre-Olympia Aquifer - $Qpog_{1c}$/$Qpon_{1c}$

The pre-Olympia aquifer is comprised of both coarse-grained glacial ($Qpog_{1c}$) and nonglacial ($Qpon_{1c}$) sediments, and is interpreted to underlie the majority of the Main Property. As described briefly in Section 4.2.2, in many areas beneath the site, the $Qpon_{1c}$ sediments are directly overlain by pre-Olympia, glacial, coarse-grained deposits ($Qpog_{1c}$). An exception occurs near the paleo-high beneath the eastern portion of Section 22, where $Qpog_{1c}$ is interpreted to onlap against and not directly overlie $Qpon_{1c}$. Ground water contained within $Qpon_{1c}$ and $Qpog_{1c}$ deposits are interpreted to be laterally hydraulically connected and are described collectively as the pre-Olympia aquifer in this report. The pre-Olympia aquifer is of regional importance to drinking water users (Figure 24 and Appendix 9) and hatchery production.

Aquifer distribution and ground water flow within the pre-Olympia aquifer is shown on Figure 27. The static water elevations indicate a strong west-southwesterly gradient beneath the majority of the Main Property. Ground water flowing in the pre-Olympia aquifer discharges to lower elevation portions of Crisp Creek, to a number of springs along the northern Green River valley slope, and to many area water wells north and west of the Main Property of The Villages sites. In the vicinity, the pre-Olympia aquifer is generally unconfined, although confined conditions exist near the paleo-topographic high.

Based on AESI observation wells completed in the pre-Olympia aquifer, the aquifer generally ranges from about 43 to 113 feet thick. During the time of AESI observation, water table elevations have fluctuated on the order of 10 to 18 feet with seasonal high ground water levels occurring in April 2007 and seasonal low ground water levels occurring in December 2007 (Table 5-2 and Appendix 5). Static water elevations in the pre-Olympia aquifer range from approximately 478 to 502 fmsl in AESI's monitoring wells. Table 5-2 summarizes the manual water level measurements obtained to date from The Villages monitoring wells. Hydrographs for the wells and piezometer are included in Appendix 5.

Recharge to the pre-Olympia aquifer is interpreted to be from wetlands and precipitation infiltrating through the overlying till and unsaturated $Qpog_{lc}$ sediments. In areas identified as till "windows" on Figure 27, recharge to the pre-Olympia aquifer is from direct connection with ground water in the Vashon recessional outwash, described separately later in this section. Recharge to the pre-Olympia aquifer also occurs from Horseshoe Lake and potentially the large kettle wetland that forms the headwaters for a tributary to Crisp Creek, west of the Main Property.

Surface water levels in Horseshoe Lake have been monitored by Golder (2008) at a network of staff gauges (Appendix 7). A hydrograph showing surface water elevation in Horseshoe Lake and ground water elevations in the shallow and pre-Olympia aquifers is illustrated on Figure 29. The hydrograph demonstrates the connection between Horseshoe Lake as a source of recharge to the pre-Olympia aquifer. The surface water level in Horseshoe Lake generally mirrors the ground water levels in the deeper pre-Olympia aquifer; however, the Horseshoe Lake elevations are higher, indicating vertical flow from the lake into the pre-Olympia aquifer. Interaction between Horseshoe Lake and ground water is described in more detail in Section 5.2.2.

Vashon Advance Aquifer

The Vashon advance aquifer (Qva) is a relatively thin, unconfined aquifer developed in Vashon advance deposits that underlie portions of the upland areas in Sections 15 and 22 on the Main Property. AESI interprets the Vashon advance aquifer to be isolated beneath the upland, and laterally constrained by Vashon lodgement till along the margins of the upland. Beneath the Main Property, the Vashon advance aquifer is underlain in most areas by very low

permeability pre-Olympia-age glacial till ($Qpog_t$) together with discontinuous Olympia deposits, which impede further downward vertical flow.

Monitoring wells MW-4 and MW-5 were installed as part of The Villages project and are completed in the Vashon advance aquifer. Water levels ranged from elevation 535.2 to 555.8 fmsl. (See Table 5-2 and Appendix 5 for manual measurements and hydrographs). Our review of water users in the site vicinity did not indicate any water users using the Vashon advance aquifer as their water source.

Recharge to the Vashon advance aquifer is interpreted to be from wetlands and precipitation infiltrating through the overlying till and unsaturated Vashon advance outwash.

Vashon Ice-Contact Aquifer - Qvic

The Vashon ice-contact aquifer (Qvic) and the Vashon recessional outwash aquifer both comprise the shallow aquifer. The Qvic portion of the shallow aquifer is developed in highly permeable Vashon ice-contact sand and gravel deposits on the southern portion of the Main Property.

Figure 28 illustrates aquifer distribution and ground water flow within the Qvic aquifer and Vashon recessional outwash aquifer, which is described separately later in this section. The Qvic aquifer is underlain in most areas by low-permeability Vashon till that impedes further downward vertical flow. Immediately west of the Main Property, the Qvic sediments have been truncated by younger recessional outwash, and ground water contained within the Qvic deposits can flow laterally into recessional outwash in the subsurface. As shown on Figure 28, ground water flow within the Qvic deposits is interpreted to be westerly beneath the southern portion of the Main Property. Slopes above SE Green Valley Road south of the Main Property were investigated for seepage. No seepage was noted in outcrops where gravelly Qvic deposits overlie low-permeability till. A wet area was present in a roadside ditch that may represent Qvic seepage. Ground water monitoring and reconnaissance indicate that very little, if any, ground water within the Qvic flows directly south under existing conditions; instead ground water flows westerly, discharging into the off-site recessional outwash swale before flowing toward the steep slopes of the Green River valley or recharging the pre-Olympia aquifer, an important consideration for stormwater management.

In The Villages vicinity, the Qvic aquifer is unconfined. Monitoring wells completed in Qvic deposits include AESI well MW-1 and wells completed by others (DH-1 to DH-5, ICE MW-1, ICE MW-2D, and ICE MW-4). Most of these wells have been monitored at least monthly by representatives of AESI since 2006. Monitoring wells MW-1 and DH-2 have been dry during the period of monitoring. Static water elevations in DH-3, ICE MW-1, ICE MW-2D, and ICE MW-4 range from approximately elevation 504 to 562 fmsl. Table 5-2 summarizes the manual water level measurements obtained to date from The Villages monitoring wells. Hydrographs for these wells are included in Appendix 5. During the time of AESI observation, in wells that

do not consistently go dry in the fall, water table fluctuations range from 2 to 15 feet with seasonal high ground water levels occurring in April 2007 and seasonal low ground water levels occurring in December 2007 (Table 5-2).

Our review of water users in the vicinity did not indicate any water users using the Vashon ice-contact aquifer as their water source within a 1-mile radius of the site. The Vashon ice-contact aquifer would not be considered a viable aquifer (would not support domestic water supply) downgradient of the site.

Recharge to the Vashon ice-contact aquifer is provided from direct precipitation and infiltration through unsaturated Vashon ice-contact deposits. Recharge also occurs due to infiltration of surface runoff from till uplands, which infiltrates along the upland margins into the lower elevation ice-contact deposits.

Vashon Recessional Aquifer - Qvr

The Vashon recessional aquifer (Qvr) is an unconfined aquifer formed in Vashon recessional outwash sand and gravel deposits present at or near the ground surface on portions of The Villages, and as described above, comprises the shallow aquifer in combination with the Qvic aquifer. The distribution of Vashon recessional outwash deposits on The Villages is shown on Figure 28.

Figure 28 illustrates aquifer distribution and ground water flow within the Qvr aquifer. The Qvr aquifer is underlain in most areas by low-permeability Vashon till that impedes further downward vertical flow. Figure 15 is a contour map of the base of Vashon recessional outwash. In areas identified as till "windows" on Figure 28, ground water within Qvr can infiltrate into underlying $Qpog_{lc}$ deposits and recharge the pre-Olympia aquifer. Ground water flow within the Qvr aquifer is somewhat complex, and is controlled in large part by the shape of the underlying till surface and proximity to surface water features. Ground water divides are present within the two north-south trending swales between Section 15 and Section 22, where shallow till forms a barrier to ground water movement.

Ground water flowing in the Qvr aquifer interacts with surface water features present on the outwash plain, such as the Jones Lake to Rock Creek system, Lake Sawyer, Ravensdale Creek, Horseshoe Lake, Crisp Creek, and Keevie Lake. The Qvr aquifer can provide recharge for surface water features when aquifer levels are high; in turn, when aquifer levels are low, some surface water features provide recharge to the Qvr aquifer. Interaction between surface water and ground water is described in more detail in Section 5.2.2.

AESI monitoring wells MW-8, MW-9, MW-16, MW-18, MW-21, and MW-23, and piezometers P-1 and P-2 are completed in Vashon recessional outwash deposits. These wells and piezometers have been monitored at least monthly by representatives of AESI since installation. Monitoring well MW-16 has consistently been dry during the period of

monitoring. Monitoring well MW-18, and piezometers P-1 and P-2 have been dry during the period of record except after periods of heavy rain. Static water elevations in MW-8 and MW-9 range from approximately elevation 529 to 552 fmsl. Static water elevations drop below elevation 509 fmsl in the vicinity of P-2. Table 5-2 summarizes the manual water level measurements obtained to date from The Villages monitoring wells. Hydrographs for these wells are included in Appendix 5.

The Qvr aquifer is generally thin due to the high permeability of the outwash sand and gravel. The aquifer thickens in low areas on the underlying till surface (such as in the vicinity of MW-9), and thins or goes dry on underlying higher till surfaces (such as MW-16). Areas of dry outwash occur over "sink" areas, where the underlying till has been eroded away exposing permeable older sediments.

Based on our review of water users in the vicinity, the Vashon recessional aquifer may provide water to a limited number of domestic and community wells north of The Villages sites within an approximate 1-mile radius from the project boundary. Our search did not indicate any water users using the Vashon recessional aquifer as their water source south of The Villages sites. The Vashon recessional outwash aquifer would not be considered a viable aquifer (would not support domestic water supply) downgradient of the site.

Recharge to the Vashon recessional aquifer is provided from direct precipitation and infiltration through unsaturated Vashon recessional outwash deposits, and from surface water features on the outwash plain. Recharge also occurs due to infiltration of surface runoff from till uplands, which infiltrates along the upland margins into the surrounding outwash plain or outwash-filled swales.

Interflow

On the upland areas across the site, seasonal winter rainfall can accumulate in low areas within the weathered portion of the lodgement till, forming an active "interflow" zone. In areas where the interflow zone cannot flow downslope along the weathered till/unweathered till contact, wetland areas form.

Water in the interflow zone moves downslope at rates strongly influenced by the hydraulic conductivity of the soil (average 10^{-3} to 10^{-4} centimeters/second [cm/sec]) and to a lesser extent, by macro-pores in the soil created by animals and rotting root structures. The flow generally corresponds to the slope of the land surface and discharges to streams and springs, or to bodies of open water, such as nearby wetlands. Much of the discharge from the interflow zone occurs during the summer by transpiration of plants, whose roots penetrate the soil horizon. It should be noted that thickness of the interflow network will fluctuate due to the time of year and amount of annual precipitation. In areas where a more permeable parent material is present, ground water in the interflow network will infiltrate and recharge underlying aquifers. Some of the ground water in the interflow zone seeps through the

lodgement till and other underlying sediments to recharge deeper aquifers. The interflow zone is generally not active during prolonged periods of dry weather.

5.5 Water Users

A water user database for users within about 1 mile of The Villages project boundary was compiled from water well reports and water right information from the Washington State Department of Ecology (Ecology), Seattle-King County Department of Health, Washington State Office of Drinking Water Quality (ODQ), and King County's iMAP ground water map set, and is presented in Appendix 9. Ground water sources mapped on the King County iMAP Ground Water Program were cross-referenced with the Ecology information. The King County iMAP Ground Water Program includes information from Seattle-King County Department of Health, Ecology, USGS, and King County monitoring programs. Much of the King County iMAP information is duplicative with information on file at Ecology. However, a number of water users were on file with King County iMAP that were not on file with Ecology. Sources identified as Community Group A or Group B ground water sources by either Ecology or King County iMAP were cross-referenced with information on file with the ODQ.

For purposes of this report, springs are considered ground water sources. The water supply well and spring information from the above-described mapping is summarized in Table 5-3. The locations of these water users are shown on Figure 24. Surface water users are included in Appendix 9. Note that the limited resolution provided by the Ecology well logs and water rights typically allows water users to be located only within the nearest quarter-quarter section; however, attempts were made to locate water users more precisely when possible. Water users mapping is described in Appendix 9. It should be noted that most of the Ecology well logs are prepared by non-geologists, and standardized geologic descriptions are not commonly utilized. Therefore, interpretations from the well logs are considered to be rough approximations and are only used to obtain a general overview of regional conditions.

Ground water (both wells and springs) near the site is used from domestic, community and municipal supply, fish propagation, irrigation, stock watering, and industrial use (mining). Based on AESI's hydrogeologic analyses on the Main Property, AESI correlated descriptions on the drillers' logs with geology and aquifer intervals encountered in the subsurface on-site, and where possible, assigned the producing interval described in the drillers' logs an aquifer name. Because the quality of drillers' descriptions is highly variable, some wells could not be correlated with aquifers encountered in the subsurface beneath the project.

Table 5-3
Page 1 of 8

AESI ID	Source	Well Use	DOE Well Log	DOE Ground/Surface Water Right File #	GS Elev. (ft)	Boring Depth (ft)	Completion Type	Completion Depth	Completion Elevation	Static Water Depth (ft)	Static Water Elev. (ft)	Date Recorded	Aquifer
09-A-01	GW	SFR / D	N	G1-048696CL	535	27	-	-	-	-	-	-	Qvr
09-A-02	GW	SFR / D	N	G1-075253CL	540	-	-	-	-	-	-	5/18/1974	unknown well depth
09-A-03	GW	SFR / D	N	G1-035020CL	540	-	-	-	-	-	-	10/10/1973	unknown well depth
09-A-04	GW	SFR / D	N	G1-037366CL	540	-	-	-	-	-	-	8/11/1973	unknown well depth
09-A-05	GW	SFR / D	N	G1-133465CL	530	-	-	-	-	-	-	6/24/1974	unknown well depth
09-A-06	GW	SFR / D	N	G1-133613CL	530	-	-	-	-	-	-	6/24/1974	unknown well depth
09-A-07	GW	SFR / D	N	G1-121690CL	540	-	-	-	-	-	-	6/23/1974	unknown well depth
09-A-08	GW	SFR / D	N	G1-072575CL	540	-	-	-	-	-	-	3/17/1974	unknown well depth
09-A-09	SW	Irrigation	N	S1-072574CL	524	-	-	-	-	-	-	3/17/1974	NA-Lake Sawyer
09-A-10	SW	SFR / D	N	S1-031521CL	527	-	-	-	-	-	-	6/21/1973	NA-Lake Sawyer
09-A-11	SW	SFR / D	N	S1-106106CL	533	-	-	-	-	-	-	6/18/1974	NA-Lake Sawyer
09-A-12	SW	SFR / D	N	S1-106136CL	535	-	-	-	-	-	-	6/18/1974	NA-Lake Sawyer
09-A-13	SW	SFR / D	N	S1-144459CL	536	-	-	-	-	-	-	6/17/1974	NA-Lake Sawyer
09-A-14	SW	SFR / D	N	S1-052491CL	539	-	-	-	-	-	-	1/3/1974	NA-Lake Sawyer
09-A-15	SW	SFR / D	N	S1-124202CL	526	-	-	-	-	-	-	6/11/1974	NA-Lake Sawyer
09-A-16	GW	SFR / D	N	G1-044621CL	525	39	-	-	-	-	-	-	NA-Lake Sawyer
09-A-17	GW	SFR / D	N	G1-052322CL	580	-	-	-	-	-	-	12/31/1973	unknown well depth
09-B-1	GW	SFR / D	Y	-	575	99	OB	99	476	60	515	1/26/2005	Qpog
09-B-2	GW	SFR / D	Y	-	575	98	OB	98	477	80	495	10/17/2000	Qpog
09-B-3	GW	SFR / D	Y	-	580	120	OB	120	460	75	505	8/15/2000	Qpog
09-B-4	GW	SFR / D	Y	-	575	97	OB	97	478	60	515	6/21/2001	Qpog
09-G-1	GW	SFR / D	Y	-	565	92	OB	92	473	60	505	2/14/2001	Qpog
09-G-2	GW	SFR / D	Y	-	555	119	OB	119	436	40	515	8/8/2000	Qpog
09-G-3	GW	SFR / D	Y	-	570	95.5	OB	95.5	474.5	53	517	7/6/2007	Qpog
09-H-1	GW	Irrigation	Y	-	545	103	S	96-101	449-444	35	510	5/13/2002	Qpog
09-J-1	GW	Irrigation	Y	-	545	100	S	95-100	450-445	35	510	2/21/2006	Qpog
09-J-2	GW	Irrigation	Y	-	540	100	S	90-95	450-445	15	525	2/21/2006	Qpog
09-J-3	GW	Irrigation	Y	-	540	60	OB	60	480	40	500	8/31/2005	Qpog
09-J-4	GW	Irrigation	Y	-	540	97	S	91-96	449-444	29	511	2/24/2007	Qpog
09-J-5	GW	Irrigation	Y	-	540	117	S	105-110	435-430	39	501	8/1/2006	Qpog
09-J-6	GW	Community (B)	N	-	545	-	-	-	-	-	-	-	Qvr?
09-K-1	GW	Irrigation	Y	-	545	82	P	60-75	485-470	50	495	12/17/2004	Qpog
09-K-2	GW	Irrigation	Y	-	550	78	P	68-78	482-472	50	500	12/6/2004	Qpog
09-K-3	GW	Irrigation	Y	-	550	118	S	106-111	444-439	49	501	10/21/2005	Qpog
09-K-4	GW	Irrigation	Y	-	560	120	S	115-120	445-440	60	500	4/14/2007	Qpog
09-K-5	GW	Irrigation	Y	-	550	82	S	77-82	473-468	35	515	4/28/2007	Qpog
09-L-1	GW	SFR / D	Y	-	555	137	OB	137	418	69	486	8/9/2007	Qpog
09-L-2	GW	Irrigation	Y	-	560	119	S	112-117	448-443	55	505	10/10/2006	Qpog
09-N-1	GW	Irrigation	Y	-	518	131	S	120-125	6-Nov	62	456	2/10/2005	Qpog
09-P-1	GW	Irrigation	Y	-	555	120	S	112-117	443-438	47	508	10/6/2006	Qpog
09-Q-01	GW	Irrigation	Y	-	575	124	S	119-124	456-451	53	522	3/12/2007	Qpog
09-Q-02	GW	Irrigation	Y	-	575	122	OB	122	453	57	518	1/26/2006	Qpog
09-Q-03	GW	Irrigation	Y	-	555	122	OB	122	433	60	495	4/9/2007	Qpog
09-Q-04	GW	Irrigation	Y	-	540	81	P	60-80	480-460	30	510	2/28/2005	Qpog
09-Q-05	GW	Irrigation	Y	-	575	124	S	119-124	456-451	71	504	3/8/2007	Qpog
09-Q-06	GW	Irrigation	Y	-	540	81	P	60-80	480-460	30	510	2/25/2005	Qpog

Table 5-3
Page 2 of 8

AESI ID	Source	Well Use	DOE Well Log	DOE Ground/Surface Water Right File #	GS Elev. (ft)	Boring Depth (ft)	Completion Type	Completion Depth	Completion Elevation	Static Water Depth (ft)	Static Water Elev. (ft)	Date Recorded	Aquifer
09-Q-07	GW	Irrigation	Y	-	550	138	OB	138	412	59	491	5/3/2006	Qpog
09-Q-08	GW	SFR / D	Y	-	535	98	OB	98	437	23	512	3/27/2006	Qpog
09-Q-09	GW	SFR / D	Y	-	539	89	OB	89	450	35	504	5/5/1999	Qpog
09-Q-10	GW	Irrigation	Y	-	538	78	OB	78	460	31	507	7/24/2002	Qpog
09-Q-11	GW	SFR / D	Y	-	541	93	OB	93	448	55	486	5/30/2000	Qpog
09-R-1	GW	Irrigation	Y	-	540	77	OB	77	463	35	505	7/27/2004	Qpog
09-R-2	GW	Irrigation	Y	-	540	60	OB	60	480	20	520	2/6/2006	Qpog
09-R-3	GW	Irrigation	Y	-	540	100	OB	100	440	27	513	5/3/2004	Qpog
09-R-4	GW	SFR / D	Y	-	540	156	OB	156	384	81	459	8/17/2005	Qpog
09-R-5	GW	Irrigation	Y	-	540	81	P	60-80	480-460	30	510	3/3/2005	Qpog
09-R-6	GW	Irrigation	Y	-	569	57	OB	57	512	-	-	3/14/1992	Qpog?
10-C-1	GW	Community (B)	N	-	550	50	-	-	-	-	-	-	Qvr?
10-C-2	GW	SFR / D	N	G1-132654CL	550	-	-	-	-	-	-	6/25/1974	Unknown well depth
10-C-3	SW	SFR / D	N	S1-160625CL	516	-	-	-	-	-	-	4/10/1974	NA-Lake Sawyer
10-D-1	GW	SFR / D	N	G1-141991CL	545	48	-	-	-	-	-	-	Qvr?
10-D-2	GW	SFR / D	N	G1-141992CL	547	-	-	-	-	-	-	-	Qvr?
10-D-3	SW	SFR / D	N	S1-149828CL	535	-	-	-	-	-	-	6/7/1974	NA-Lake Sawyer
10-D-4	SW	SFR / D	N	S1-086435CL	538	-	-	-	-	-	-	2/16/1974	NA-Lake Sawyer
10-E-01	GW	Community (B)	N	-	550	43	-	-	-	-	-	-	Qvr?
10-E-02	GW	SFR / D	N	G1-057836CL	550	42	-	-	-	-	-	-	Qvr?
10-E-03	GW	Community (B)	N	G1-026355CL	550	-	-	-	-	-	-	3/28/1973	Unknown well depth
10-E-04	GW	SFR / D	N	G1-005913CL	550	-	-	-	-	-	-	9/17/1971	NA-Lake Sawyer
10-E-05	GW	SFR / D	N	G1-155694CL	550	-	-	-	-	-	-	5/25/1974	Unknown well depth
10-E-06	GW	SFR / D	N	G1-019811CL	550	-	-	-	-	-	-	11/21/1972	Unknown well depth
10-E-07	GW	SFR / D	N	G1-048418CL	550	-	-	-	-	-	-	11/27/1973	Unknown well depth
10-E-08	GW	SFR / D	N	G1-091220CL	560	-	-	-	-	-	-	5/24/1974	Unknown well depth
10-E-09	SW	SFR / D	N	S1-091219CL	532	-	-	-	-	-	-	5/24/1974	NA-Lake Sawyer
10-E-10	SW	SFR / D	N	S1-149829CL	545	-	-	-	-	-	-	6/27/1974	NA-Lake Sawyer
10-E-11	SW	SFR / D	N	S1-088424CL	547	-	-	-	-	-	-	5/6/1974	NA-Lake Sawyer
10-E-12	SW	SFR / D	N	S1-033498CL	548	-	-	-	-	-	-	7/7/1973	NA-Lake Sawyer
10-F-1	GW	SFR / D	N	S1-115229CL	540	22	-	-	-	-	-	-	NA-Lake Sawyer
10-F-2	GW	SFR / D	N	G1-055651CL	550	-	-	-	-	-	-	1/20/1974	Unknown well depth
10-F-3	SW	Irrigation	N	S1-055652CL	542	-	-	-	-	-	-	1/20/1974	NA-Lake Sawyer
10-J-1	GW	Likely SFR / D	N	-	573	-	-	-	-	-	-	-	Unknown well depth
10-K-1	GW	Likely SFR / D	N	-	556	-	-	-	-	-	-	-	Unknown well depth
10-N-1	GW	Likely SFR / D	N	-	500	45	-	-	-	-	-	-	Qvr?
11-A-1	SW	Industrial	N	S1-141793CL	669	-	-	-	-	-	-	6/24/1974	NA-Ginder Lake
11-G-1	GW	SFR / D	Y	-	725	127	P	80-120	645-605	50	675	3/11/1981	bedrock
11-G-2	GW	SFR / D	Y	-	627	106	OB	106	521	DRY	DRY	8/24/1999	NA-dry well
11-H-1	GW	Community (B)	Y	-	790	240	P	190-240	600-550	40	750	2/4/1980	bedrock
11-H-2	GW	SFR / D	Y	-	770	300	P	120-160	650-610	80	690	4/13/1992	bedrock
11-H-3	GW	SFR / D	Y	-	795	240	P	85-240	710-555	65	730	11/20/1986	bedrock
11-P-1	SW	Industrial	N	S1-141791CL	757	-	-	-	-	-	-	6/24/1974	NA-Mud Lake
13-Q-1	GW	SFR / D	Y	-	920	86	OB	86	834	25	895	3/28/1996	Unable to determine
14-E-1	GW	SFR / D	Y	-	558	128	OB	128	430	88	470	3/5/1985	Qpog?
14-Q-1	SW	Irrigation	N	S1-152091CL	544	-	-	-	-	-	-	4/1/1974	NA-Jones Lake and tributaries

Table 5-3
Page 3 of 8

AESI ID	Source	Well Use	DOE Well Log	DOE Ground/Surface Water Right File #	GS Elev. (ft)	Boring Depth (ft)	Completion Type	Completion Depth	Completion Elevation	Static Water Depth (ft)	Static Water Elev. (ft)	Date Recorded	Aquifer
14-Q-2	SW	Irrigation	N	S1-152091CL	544	-	-	-	-	-	-	4/1/1974	NA-Jones Lake and tributaries
14-Q-3	SW	Irrigation	N	S1-131450CL	544	-	-	-	-	-	-	6/5/1974	NA-Jones Lake and tributaries
14-R-1	SW	Irrigation	N	S1-152091CL	544	-	-	-	-	-	-	4/1/1974	NA-Jones Lake and tributaries
14-R-2	SW	Irrigation	N	S1-131450CL	548	-	-	-	-	-	-	6/5/1974	NA-Jones Lake and tributaries
15-A-1	GW	Irrigation	N	G1-060518CL	547	-	-	-	-	-	-	2/4/1974	unknown well depth
15-A-2	GW	SFR / D	N	G1-072339CL	574	-	-	-	-	-	-	3/16/1974	unknown well depth
15-A-3	GW	SFR / D	N	G1-129241CL	570	-	-	-	-	-	-	6/6/1974	unknown well depth
16-F-1	GW	Community (B)	Y	G1-124344CL	520	103	OB	103	417	43	477	6/24/1980	Qpog
16-G-1	GW	SFR / D	Y	-	540	110	OB	110	430	55	485	3/27/2006	Qpog
16-G-2	GW	SFR / D	Y	-	540	98	OB	98	442	40	500	4/18/2007	Qpog
16-J-1	GW	SFR / D	N	G1-086917CL	602	-	-	-	-	-	-	2/7/1974	unknown well depth
16-J-2	GW	SFR / D	N	G1-087261CL	569	-	-	-	-	-	-	5/9/1974	unknown well depth
16-J-3a	GW	SFR / D	Y	-	525	63	OB	63	462	43	482	6/9/1976	Deepened See 16-J03b
16-J-3b	GW	SFR / D	Y	-	525	99	OB	99	426	65	460	12/20/1976	Qpog
16-K-1	GW	Community (B)	Y	-	540	117	OB	117	423	93	447	1/10/1984	Qpog
16-Q-1	GW	SFR / D	Y	-	525	60	OB	60	465	42	483	4/15/1981	Qpog
16-Q-2	GW	Likely SFR / D	N	-	525	79	-	-	-	-	-	-	Qpog
17-A-1	GW	SFR / D	Y	-	600	160	OB	157	443	100	500	4/22/1999	Qpog
17-A-2	GW	SFR / D	Y	-	605	138.1	OB	138.1	466.9	111	494	11/23/1998	Qpog?
17-A-3	GW	SFR / D	Y	-	607	235	OB	232	375	100	507	8/28/1997	bedrock?
17-B-1	GW	SFR / D	Y	-	595	118.5	OB	118	477	78	517	11/20/1998	Qpog
17-B-2	GW	SFR / D	Y	-	550	91	OB	91	459	65	485	6/16/1999	Qpog
17-B-3	GW	SFR / D	Y	-	550	242	OB	242	308	96	454	6/9/1999	bedrock
17-B-4	GW	SFR / D	Y	-	550	180	S	170-180	380-370	125	425	12/5/2001	Qpon?
17-B-5	GW	SFR / D	Y	-	465	120	OB	119	346	49	416	5/7/1999	Qpog
17-C-1	GW	SFR / D	Y	-	495	107	S	94-104	401-391	45	450	1/19/2004	Qpon
17-C-2	GW	SFR / D	Y	-	475	220	OB	220	255	DRY	DRY	3/17/1978	NA-dry well
17-C-3	GW	SFR / D	Y	-	470	110	OB	110	360	54	416	10/9/1997	Qpon
17-C-4	GW	SFR / D	Y	-	525	54	OB	54	471	ART	ART	2/13/1976	Qpog?
17-D-1	GW	SFR / D	Y	-	535	124	OB	124	411	49	486	2/12/1976	Qpog?
17-E-1	GW	SFR / D	N	G1-091175CL	462	-	-	-	-	-	-	5/24/1974	unknown well depth
17-E-2	Spring	SFR / D	N	S1-16514CWRIS	459	-	-	-	-	-	-	12/11/1963	NA-Covington Creek Spring
17-E-3	Spring	SFR / D	N	S1-18839CWRIS	446	-	-	-	-	-	-	4/3/1968	NA-Covington Creek Spring
17-G-1	GW	SFR / D	Y	-	542	189	OB	189	353	88	454	6/1/1999	Qpog?
17-G-2	GW	SFR / D	Y	-	542	133	OB	133	409	76.5	466	7/27/1999	Qpog?
17-G-3	GW	SFR / D	Y	-	542	95	OB	94.75	447	59	483	7/28/1999	Qpog?
17-G-4	GW	SFR / D	Y	-	542	90	S	82.75-87.75	559.5-554.5	4	538	7/29/1999	Qpog?
17-J-1	GW	SFR / D	Y	-	575	32	S	22-32	553-543	10.5	565	9/16/2004	Qvr?
17-J-2	GW	SFR / D	Y	-	580	107	S	87-107	493-473	76	504	12/13/2000	Qpog?
17-J-3	GW	SFR / D	Y	-	570	100	OB	96	474	36	534	3/18/2002	Qpog?
17-J-4	GW	SFR / D	Y	-	550	159	OB	159	391	119	431	3/11/2003	Qpon?
17-J-5	GW	SFR / D	Y	-	535	98	S	79-84	456-451	26	509	3/18/2005	Qpog?
17-J-6	GW	Community (B)	Y	-	545	260	OB	236	309	115	430	8/20/1985	Qpon (deep)
17-J-7	GW	Community (B)	Y	-	545	92	OB	92	453	60	485	3/30/1999	Qpon?
17-J-8	GW	SFR / D	Y	-	545	95	S	75-95	470-450	57	488	12/7/2000	Qpon?
17-K-1	GW	SFR / D	Y	-	575	105	S	98-103	477-472	75	500	6/18/2007	Qpog

Table 5-3
Page 4 of 8

AESI ID	Source	Well Use	DOE Well Log	DOE Ground/Surface Water Right File #	GS Elev. (ft)	Boring Depth (ft)	Completion Type	Completion Depth	Completion Elevation	Static Water Depth (ft)	Static Water Elev. (ft)	Date Recorded	Aquifer
20-A-1	GW	SFR / D	Y	-	470	300	P	243-253	227-237	210	260	12/22/1997	Qpon
20-A-2	GW	Irrigation	Y	-	469	77	OB	77	392	40	429	1/8/1998	Qpon?
20-A-3	GW	SFR / D	Y	-	472	240	OB	240	232	85	387	6/12/1996	Qpog?
20-A-4	GW	SFR / D	N	G1-164086CL	468	-	-	-	-	-	-	2/8/1974	unknown well depth
20-A-5	GW	Likely SFR / D	N	-	465	103	-	-	-	-	-	-	Qpon?
20-B-1	GW	SFR / D	Y	G1-002244CL	470	45	P	35-45	435-425	27	443	9/1/1966	Qpog?
20-B-2	GW	Irrigation	N	G1-074777CL	461	-	-	-	-	-	-	-	unknown well depth
20-B-3	GW	SFR / D	N	G1-144840CL	465	-	-	-	-	-	-	6/25/1974	unknown well depth
20-B-4	GW	SFR / D	N	G1-054256CL	465	-	-	-	-	-	-	1/14/1974	unknown well depth
20-E-01	GW	SFR / D	Y	-	456	94	OB	94	362	74	382	6/13/2001	Qpog?
20-E-02	GW	SFR / D	Y	-	486	220	OB	220	266	157	329	10/12/1987	Qpon
20-E-03	GW	SFR / D	Y	-	476	200	P	100-120	376-356	100	376	10/15/1990	Qpog?
20-E-04	GW	SFR / D	Y	-	469	173	OB	173	296	140	329	12/3/2002	Qpon
20-E-05	GW	SFR / D	N	G1-066617CL	473	-	-	-	-	-	-	3/1/1974	unknown well depth
20-E-06	GW	Irrigation	N	G1-070957CL	490	-	-	-	-	-	-	3/2/1974	unknown well depth
20-E-07	GW	SFR / D	N	G1-084663CL	496	-	-	-	-	-	-	4/10/1974	unknown well depth
20-E-08	GW	SFR / D	N	G1-065969CL	473	-	-	-	-	-	-	-	unknown well depth
20-E-09	GW	SFR / D	N	G1-059887CL	495	-	-	-	-	-	-	2/5/1974	unknown well depth
20-E-10	GW	SFR / D	N	G1-089386CL	439	-	-	-	-	-	-	5/11/1974	unknown well depth
20-E-11	GW	Likely SFR / D	N	-	472	80	-	-	-	-	-	-	Qpog?
20-F-1	GW	SFR / D	Y	-	530	187	OB	187	343	127	403	3/5/1976	Qpon
20-F-2	GW	SFR / D	N	G1-001222CL	465	94	-	-	-	-	-	9/3/1970	Qpog?
20-G-1	GW	SFR / D	Y	-	465	136	S	131-136	334-329	18.5	447	4/8/1987	Qpon?
20-G-2	GW	Community (B)	N	G1-054255CL	461	-	-	-	-	-	-	1/14/1974	unknown well depth
20-G-3	GW	Community (B)	Y	-	465	58	OB	58	407	43	422	8/11/1982	Qpog?
20-G-4	GW	SFR / D	Y	-	460	290	OB	274	186	225	235	12/10/1979	Qpon (deep)
20-G-5	GW	SFR / D	Y	-	460	240	OB	240	220	145	315	12/4/1978	Qpon (deep)
20-G-6	GW	SFR / D	N	G1-020140CL	466	-	-	-	-	-	-	11/28/1972	Qpon (deep)?
20-J-1	GW	SFR / D	Y	-	225	76	OB	76	149	10	215	8/1/1997	Qal or Qmw
20-J-2	Spring	Fish Propagation, SFR / D	N	S1-22989CWRIS	318	-	-	-	-	-	-	9/29/1977	Qpog spring
20-J-3	Spring	SFR / D	N	S1-23733CWRIS	310	-	-	-	-	-	-	12/5/1980	Qpog spring
20-J-4	Spring	Community (B)	N	S1-22591CWRIS	233	-	-	-	-	-	-	10/5/1979	Qpog/Qpon spring
20-L-1	GW	Community (B)	Y	-	500	105	S	95-105	405-395	87	413	2/5/1977	Qpog?
20-L-2	Spring	Likely SFR / D	N	-	430	-	-	-	-	-	-	-	Qpog/Qpon spring
20-M-1	GW	Community (B)	Y	-	495	120	S	113-118		83	412	9/3/1999	Qpog?
20-M-2	Spring	Community (B)	N	-	438	-	-	-	-	-	-	-	Qpog/Qpon spring
20-N-1	GW	SFR / D	Y	-	154	38	S	31.5-36.5	122.5-117.5	15.3	138	11/11/1999	Qal
20-N-2	GW	SFR / D	Y	-	150	40	OB	40	110	10	140	11/2/1995	Qal
20-N-3	GW	SFR / D	Y	-	152	40	OB	40	112	12	140	6/25/1979	Qal
20-P-1	GW	Likely SFR / D	N	-	155	21	-	-	-	-	-	-	Qal
20-P-2	Spring	Irrigation	N	S1-14672CWRIS	194	-	-	-	-	-	-	9/22/1958	Qpog/Qpon spring
20-Q-1	GW	SFR / D	N	-	159.1	34	-	-	-	7.19	152	9/7/1993	Qal
20-Q-2	GW	SFR / D	Y	-	162	43	OB	40	122	5		6/14/1988	Qal
20-Q-3	GW	Likely SFR / D	N	-	172.7	348	-	-	-	5.86	167	5/12/1980	Qpon (deep)?
20-Q-4	GW	Likely SFR / D	N	-	159.5	37	-	-	-	6.95	153	5/12/1981	Qal

Table 5-3
Page 5 of 8

AESI ID	Source	Well Use	DOE Well Log	DOE Ground/Surface Water Right File #	GS Elev. (ft)	Boring Depth (ft)	Completion Type	Completion Depth	Completion Elevation	Static Water Depth (ft)	Static Water Elev. (ft)	Date Recorded	Aquifer
20-Q-5	GW	Unknown	N	-	158.8	21	-	-	-	8.33	150	7/14/1981	Qal
20-Q-6	GW	Likely SFR / D	N	-	158.8	52	-	-	-	-	-	-	Qal
20-Q-7		Likely SFR / D	N	-	155	-	-	-	-	-	-	-	unknown well depth
20-R-1	GW	SFR / D	Y	-	163	20	OB	20	143	8	155	5/21/1980	Qal
20-R-2	SW	Fish Propagation	N	S1-23839CWRIS	163	-	-	-	-	-	-	3/30/1981	NA-Crisp Creek
20-R-3	SW	Fish Propagation	N	S1-24508CWRIS	164	-	-	-	-	-	-	7/27/1984	NA-Crisp Creek
20-R-4	GW	Likely SFR / D	N	-	162.3	12	-	-	-	-	-	-	Qal
20-R-5	GW	Likely SFR / D	N	-	164.8	11	-	-	-	-	-	-	Qal
20-R-6	GW	SFR / D	Y	-	165.6	23	OB	23	142.6	11	155	10/2/1979	Qal
20-R-7	SW	SFR / D	N	S1-06792CWRIS	165	-	-	-	-	-	-	10/27/1952	NA-Green River
20-R-8	GW	SFR / D	N	-	162.4	11	-	-	-	8.37	154	7/14/1981	Qal
21-M-1	Spring	Munincipal (A)	N	S1-043384CL	365.9	-	-	-	-	-	-	10/12/1973	Qpog/Qpon spring
21-M-2	Spring	Munincipal (A)	N	S1-043383CL	335.4	-	-	-	-	-	-	10/12/1973	Qpog/Qpon spring
21-M-3	GW	SFR / D	N	G1-23628CWRIS	325	-	-	-	-	-	-	5/27/1980	Qpog/Qpon spring
21-M-4	SW	Irrigation	N	S1-043382CL	255	-	-	-	-	-	-	10/12/1973	NA-Crisp Creek
21-M-5	SW	Fish Propagation, Irrigation	N	S1-040920CL	194	-	-	-	-	-	-	9/6/1973	NA-Crisp Creek
21-M-6	GW	Unknown	Y	-	165.6	12	-	-	-	-	-	-	Qal
21-M-7	Spring	Likely SFR / D	N	-	300	-	-	-	-	-	-	-	Qpon/Qmw Spring
21-N-1	GW	SFR / D	Y	-	175	100	OB	100	75	-	-	5/20/1980	NA-dry well
21-N-2	GW	Communtiy (B)?	Y	-	185	60	OB	20	165	8	177	1/12/1981	Qal
21-N-3	SW	Fish Propagation	N	S1-22503CWRIS	186	-	-	-	-	-	-	5/29/1975	NA-Crisp Creek
21-N-4	GW	SFR / D	N	-	173	200	-	-	-	-	-	-	Qal or Qpon
21-P-1	GW	SFR / D	Y	-	205	140	P	39-42	166-163	30	175	1/23/1976	Qal or Qmw
21-P-2	GW	SFR / D	Y	-	220	38	P	20-23	200-197	9	211	5/29/1979	Qal or Qmw
21-P-3	GW	SFR / D	N	-	165.8	18	-	-	-	5.39	160	7/14/1981	Qal
22-A-1	GW	SFR / D	Y	-	600	90	OB	90	510	18	582	3/21/1990	Qpog2?
22-A-2	GW	SFR / D	N	G1-063413CL	599	-	-	-	-	-	-	2/16/1974	unknown well depth
22-A-3	GW	Likely SFR / D	N	-	555	65	-	-	-	-	-	-	Qpog2?
22-R-01a	GW	SFR / D	Y	-	685	28	OB	28	657	10	675	10/17/1978	NA-deepened well
22-R-01b	GW	SFR / D	Y	-	685	200	P	25-28 80-180	660-657 605-505	50	635	10/7/1979	bedrock
22-R-02	GW	SFR / D	Y	-	685	77	OB	77	608	62	623	7/24/2000	Qpog2
22-R-03	GW	SFR / D	Y	-	670	68	OB	68	602	46	624	10/17/1980	Qpog2
22-R-04	GW	SFR / D	Y	-	665	140	OB	140	525	60	605	11/21/1978	bedrock
22-R-05	GW	SFR / D	N	G1-062152CL	615	102	-	-	-	-	-	-	Qpog2?
22-R-06	GW	SFR / D	Y	G1-015468CL	670	95	OB	60	610	54	616	6/27/1983	Qpog2
22-R-07	GW	Community (B)	Y	G1-077438CL	655	89	OB	89	566	60	595	10/19/1978	Qpog2
22-R-08	GW	Likely SFR / D	N	-	655	60	-	-	-	-	-	-	Qpog2?
22-R-9	GW	SFR / D	Y	-	625	62	OB	62	563	45	580	7/5/1978	Qpog2
23-B-1	GW	Community (B)	Y	-	570	128	OB	128	442	102	468	5/23/1984	Qpog?
23-B-2	GW	SFR / D	N	G1-055720CL	558	-	-	-	-	-	-	1/21/1974	unknown well depth
23-B-3	GW	SFR / D	N	G1-101814CL	551	-	-	-	-	-	-	6/10/1974	unknown well depth
23-B-4	GW	SFR / D	N	-	591	-	-	-	-	-	-	-	unknown well depth
23-B-5	GW	SFR / D	N	-	650	128	-	-	-	99.53	550	6/20/1990	Qpog2?
23-C-1	GW	SFR / D	N	-	680	-	-	-	-	-	-	-	unknown well depth
23-D-1	GW	SFR / D	Y	-	640	130	S	125-130	515-510	50	590	8/18/1981	Qpog2c

Table 5-3
Page 6 of 8

AESI ID	Source	Well Use	DOE Well Log	DOE Ground/Surface Water Right File #	GS Elev. (ft)	Boring Depth (ft)	Completion Type	Completion Depth	Completion Elevation	Static Water Depth (ft)	Static Water Elev. (ft)	Date Recorded	Aquifer
23-H-1	GW	SFR / D	Y	-	700	235	OB	235	465	120	580	6/28/2000	Qpon2?
23-H-2	GW	SFR / D	Y	-	700	232	S	222-232	478-468	120	580	7/17/2001	Qpon2?
23-Q-1	GW	SFR / D	Y	-	675	200	P	140-155	535-520	130	545	5/25/1995	Qpog2
23-Q-2	GW	SFR / D	Y	-	645	350	OB	350	295	50	595	11/15/2005	bedrock
23-Q-3	GW	SFR / D	Y	-	645	370	OB	370	275	120	525	10/16/2006	bedrock
23-Q-4	GW	SFR / D	Y	-	655	215	P	205-215	450-440	30	625	5/2/1975	bedrock
23-Q-5	GW	Community (B)	Y	-	645	120	OB	120	525	92	553	3/23/1983	Qpon2?
23-Q-6	GW	SFR / D	N	G1-125374CL	675	-	-	-	-	-	-	6/24/1974	unknown well depth
23-Q-7	GW	SFR / D	N	G1-161686CL	671	-	-	-	-	-	-	3/5/1971	unknown well depth
23-Q-8	GW	Community (B)	Y	-	645	300	OB	300	345	80	565	7/26/2005	bedrock
23-Q-9	GW	SFR / D	N	-	625	213	-	-	-	-	-	-	bedrock?
23-R-1	GW	SFR / D	Y	-	670	140	OB	140	530	111	559	3/31/1995	Qpog2
23-R-2	GW	SFR / D	Y	-	680	100	P	80-92	600-588	43	637	9/16/1977	Qpog?
23-R-3	GW	SFR / D	Y	-	680	75	OB	75	605	25	655	10/24/1980	Qpog?
23-R-4	GW	SFR / D	Y	-	680	177	OB	177	503	120	560	5/17/1990	Qpog2
23-R-5	GW	SFR / D	N	G1-107743CL	678	-	-	-	-	-	-	6/19/1974	unknown well depth
24-E-1	GW	SFR / D	Y	-	730	253	OB	253	477	170	560	10/9/1998	Qpog2
24-E-2	GW	SFR / D	Y	-	730	186	OB	186	544	170	560	1/23/1986	Qpog2
24-E-3	GW	SFR / D	Y	-	720	195	OB	195	525	173	547	1/17/1986	Qpog2
24-F-1	GW	SFR / D	Y	-	752	260	S	240-260	512-492	190	562	4/14/2001	bedrock
24-F-2	GW	SFR / D	Y	-	735	260	S	247-257	488-478	175	560	8/2/2004	bedrock
24-M-1	GW	SFR / D	Y	-	716	180	OB	180	536	160	556	8/1/1977	Qpog2
24-M-2	GW	SFR / D	Y	-	700	192	OB	192	508	168	532	9/20/1978	Qpog2
24-M-3	GW	SFR / D	Y	-	716	178	OB	178	538	151	565	9/19/1977	Qpog2
24-M-4	GW	Community (B)	Y	-	680	140	OB	140	540	107	573	3/30/1975	Qpog2?
24-N-1	GW	Munincipal (A) ?	N	G1-001167CL	670	117	-	-	-	-	-	8/25/1970	Unable to determine
24-N-2	GW	SFR / D	Y	-	675	150	S	130-150	545-525	114	561	5/25/2001	Qpog2?
24-N-3	GW	Industrial	Y	-	659	359	OB	359	300	DRY	DRY	4/1/1988	NA-dry well
24-P-1	GW	SFR / D	N	G1-079635CL	668	-	-	-	-	-	-	3/28/1974	unknown well depth
25-C-1	GW	SFR / D	Y	-	626	107	OB	107	519	70	556	2/6/2007	Qpog2?
25-C-2	GW	SFR / D	Y	-	637	132	OB	130	507	70	567	3/23/2006	Qpog2?
25-C-3	GW	SFR / D	Y	-	628	130	OB	123	505	58	570	3/6/2006	Qpog2?
25-C-4	GW	SFR / D	Y	-	618	128	OB	124	494	60	558	2/28/2006	Qpog2?
25-C-5	GW	SFR / D	Y	-	617	124	OB	120	497	60	557	3/20/2006	Qpog2?
25-C-6	GW	SFR / D	Y	-	614	290	P	230-290	384-324	80	534	2/2/2007	bedrock
25-D-1	GW	Irrigation	Y	-	646	360	OB	360	286	151	495	7/27/2000	bedrock
25-D-2	GW	Irrigation	Y	-	651	351	OB	334	317	DRY	DRY	8/17/2000	bedrock
25-D-3	SW	Industrial	N	S1-126126CL	643	-	-	-	-	-	-	4/30/1974	NA-surface water pond
25-E-1	GW	SFR / D	Y	-	389	318	P	290-305	99-84	175	214	4/1/1984	bedrock
26-A-1	GW	SFR / D	Y	-	635	140	OB	140	495	91	544	4/12/1998	Qpog2
26-B-01	GW	SFR / D	Y	-	635	216	P	205-212	430-423	73	562	11/30/1988	bedrock
26-B-02	GW	Community (B)	N	G1-001072CL	635	105	-	-	-	-	-	8/25/1970	Unable to determine
26-B-03a	GW	SFR / D	Y	-	650	180	P	160-180	490-470	70	580	6/26/1997	bedrock
26-B-03b	GW	SFR / D	Y	-	650	220	OB	220	430	120	530	11/20/1997	bedrock
26-B-04	GW	SFR / D	Y	-	665	305	S	295-305	370-360	138	527	12/20/2000	bedrock
26-B-05	GW	SFR / D	Y	-	615	250	P	210-250	405-365	150	465	7/26/1996	bedrock

Table 5-3
Page 7 of 8

AESI ID	Source	Well Use	DOE Well Log	DOE Ground/Surface Water Right File #	GS Elev. (ft)	Boring Depth (ft)	Completion Type	Completion Depth	Completion Elevation	Static Water Depth (ft)	Static Water Elev. (ft)	Date Recorded	Aquifer
26-B-06	GW	SFR / D	Y	-	605	30	OB	30	575	17	588	7/28/1981	Qt
26-B-07	GW	SFR / D	Y	-	605	207	P	130-207	475-398	60	545	4/14/1999	bedrock
26-B-08	GW	SFR / D	Y	-	605	290	OB	142	463	DRY	DRY	8/23/1989	bedrock
26-B-09	GW	SFR / D	N	G1-108237CL	609	-	-	-	-	-	-	6/24/1974	unknown well depth
26-B-10	GW	SFR / D	Y	-	600	213	OB	213	387	181	419	3/7/1984	Qpog2?
26-B-11	GW	SFR / D	Y	-	609	199	OB	199	410	173	436	8/18/1998	Qpog2?
26-B-12	GW	SFR / D	Y	-	612	340	P	260-340	352-272	250	362	1/28/1990	bedrock
26-B-13	GW	SFR / D	Y	-	611	115	OB	115	496	85	526	5/4/1999	Qpog2?
26-B-14	GW	SFR / D	Y	-	605	109	OB	109	496	80	525	5/1/1984	Qpog2?
26-B-15	GW	SFR / D	Y	-	600	240	P	160-225	440-375	80	520	4/12/1993	bedrock
26-B-16	GW	SFR / D	Y	G1-083741CL	604	204	OB	83	521	65	539	3/1/1973	bedrock
26-B-17	GW	SFR / D	Y	-	577	300	P	180-300	397-277	120	457	2/8/1990	bedrock
26-B-18	GW	SFR / D	N	-	608	-	-	-	-	-	-	-	unknown well depth
26-B-19	GW	SFR / D	N	G1-111514CL	661	-	-	-	-	-	-	6/17/1974	unknown well depth
26-B-20	GW	SFR / D	N	G1-111515CL	659	-	-	-	-	-	-	6/17/1974	unknown well depth
26-B-21	Spring	SFR / D	N	G1-158834CL	610	-	-	-	-	-	-	5/28/1974	Qt Spring
26-B-22	GW	SFR / D	N	G1-054033CL	602	-	-	-	-	-	-	1/14/1974	unknown well depth
26-C-1	GW	SFR / D	Y	-	665	300	P	280-300	385-365	90	575	6/24/1988	bedrock
26-C-2	GW	SFR / D	Y	-	675	300	P	160-180 280-300	515-495 395-375	145	530	6/4/1989	bedrock
26-C-3	GW	SFR / D	Y	-	685	330	P	40-330	645-355	290	395	4/2/1991	bedrock
26-C-4a	GW	SFR / D	N	G1-107152CL	652	-	-	-	-	-	-	6/13/1974	Deepened See 26-C-4b
26-C-4b	GW	SFR / D	Y	-	655	230	P	180-230	475-425	150	505	5/24/2004	bedrock
26-C-5	GW	SFR / D	Y	-	655	487	P	250-460	405-195	240	415	9/12/1995	bedrock
26-C-6	GW	SFR / D	Y	-	665	620	P	400-610	265-55	410	255	11/14/1986	bedrock
26-C-7	GW	SFR / D	Y	-	595	56	OB	51.5	543	43	552	7/17/1997	bedrock?
26-D-1	Spring	Community (B)	N	-	685	-	-	-	-	-	-	-	Qor Spring
26-D-2	Spring	SFR / D	N	S1-073452CL	653	-	-	-	-	-	-	3/19/1974	Qor Spring
26-D-3	Spring	SFR / D	N	S1-090999CL	686	-	-	-	-	-	-	5/22/1974	Qor Spring
26-F-1	GW	SFR / D	Y	-	593	342	P	320-340	273-253	232	361	5/16/2005	bedrock
26-F-2	GW	SFR / D	Y	-	486	79	S	68-78	418-408	43	443	1/26/1998	bedrock
26-F-3	GW	SFR / D	N	G1-010886CL	599	-	-	-	-	-	-	4/10/1972	unknown well depth
26-F-4	Spring	SFR / D	N	S1-057297CL	567	-	-	-	-	-	-	1/27/1974	Qt Spring
26-F-5	Spring	SFR / D	N	S1-155579CL	443	-	-	-	-	-	-	6/29/1974	Qt Spring
26-G-01	GW	SFR / D	Y	-	572	250	P	215-250	357-332	140	432	12/3/1997	bedrock
26-G-02	GW	SFR / D	N	G1-137731CL	571	-	-	-	-	-	-	-	unknown well depth
26-G-03	GW	SFR / D	Y	-	570	220	P	60-215	510-355	60	510	8/14/1979	bedrock
26-G-04	GW	SFR / D	Y	-	571	345	P	285-325	286-246	62	509	12/11/2000	bedrock
26-G-05	GW	SFR / D	Y	-	587	300	P	200-300	387-287	120	467	12/11/2002	bedrock
26-G-06	GW	SFR / D	Y	-	575	280	P	220-275	355-300	210	365	9/20/1979	bedrock
26-G-07	GW	SFR / D	Y	-	535	220	P	90-184	445-351	85	450	12/14/1979	bedrock
26-G-08	Spring	SFR / D	N	S1-20857CWRIS	495	-	-	-	-	-	-	8/22/1973	Qt Spring
26-G-09	GW	SFR / D	Y	-	499	200	P	120-200	379-299	60	439	1/23/1998	bedrock
26-G-10	GW	SFR / D	Y	-	499	300	P	270-300	229-199	120	379	1/26/2007	bedrock
26-G-11	Spring	SFR / D	N	S1-20857CWRIS	495	-	-	-	-	-	-	8/22/1973	Qt Spring
26-G-12	GW	SFR / D	N	G1-131370CL	485	-	-	-	-	-	-	6/24/1974	unknown well depth
26-G-13	Spring	SFR / D	N	S1-21237CWRIS	478	-	-	-	-	-	-	2/7/1974	Qt Spring

Table 5-3
Page 8 of 8

AESI ID	Source	Well Use	DOE Well Log	DOE Ground/Surface Water Right File #	GS Elev. (ft)	Boring Depth (ft)	Completion Type	Completion Depth	Completion Elevation	Static Water Depth (ft)	Static Water Elev. (ft)	Date Recorded	Aquifer
26-G-14	GW	SFR / D	Y	-	565	220	OB	70	495	?	?	4/28/1975	bedrock
27-A-1	GW	Community (B)	Y	-	650	400	P	320-380	330-270	285	365	6/26/1996	bedrock
27-A-2	GW	SFR / D	Y	-	625	200	P	40-72	585-553	50	575	9/3/1985	Qpon
27-A-3	GW	SFR / D	Y	-	605	500	OB	500	105	190	415	11/18/1983	bedrock
27-A-4	GW	SFR / D	Y	-	605	105	OB	105	500	96	509	9/29/1987	Qpog?
27-A-5	GW	SFR / D	N	G1-039632CL	639	-	-	-	-	-	-	10/12/1973	unknown well depth
27-A-6	GW	SFR / D	N	G1-076261CL	657	-	-	-	-	-	-	5/25/1974	unknown well depth
27-B-1	GW	Community (B)	Y	-	605	151	OB	151	454	134	471	2/8/1978	bedrock?
27-B-2	GW	SFR / D	Y	-	465	235	OB	235	230	170	295	7/12/1982	Qpon/top of rock
27-B-3	Spring	SFR / D	N	G1-138265CL	516	-	-	-	-	-	-	6/28/1974	Qpon Spring?
27-B-4	Spring	SFR / D	N	S1-18176CWRIS	288	-	-	-	-	-	-	7/6/1966	Qpon/Qmw
27-C-1	GW	SFR / D	Y	-	209	37	P	21-24	188-185	10	199	9/13/1988	bedrook/Qmw
27-D-1	SW	SFR / D	N	S1-11162CWRIS	305	-	-	-	-	-	-	8/7/1953	NA-Green River
27-E-1	Spring	SFR / D	N	S1-117694CL	289	-	-	-	-	-	-	6/21/1974	Qpon/Qmw Spring
27-F-1	Spring	SFR / D	N	G1-059022CL	236	-	-	-	-	-	-	2/2/1974	Qpon/Qmw Spring
27-F-2	SW	SFR / D	N	S1-12433CWRIS	213	-	-	-	-	-	-	4/20/1955	NA-Green River
28-A-1	GW	SFR / D	Y	-	570	158.5	OB	158.5	411.5	121	449	6/18/1999	Qpog
28-A-2	GW	SFR / D	Y	-	510	400	P	80-90 110-115	430-420 400-395	80	430	3/26/1976	Qpog
28-A-3	GW	SFR / D	Y	-	525	160	OB	144	381	130	395	1/9/2004	Qpon/top of rock
28-A-4	GW	SFR / D	Y	-	515	520	P	360-520	155- -5	240	275	6/14/1995	bedrock
28-A-5	Spring	SFR / D	N	S1-22852CWRIS	514	-	-	-	-	-	-	4/25/1977	Qpon/Qmw Spring
28-A-6	Spring	Likely SFR / D	N	-	365	-	-	-	-	-	-	-	Qpon/Qmw Spring
28-A-7	GW	SFR / D	Y	G1-054590CL	400	345	OB	340	60	220	180	9/1/1975	bedrock
28-A-8	Spring	SFR / D	N	S1-054577CL	509	-	-	-	-	-	-	1/17/1974	Qpon/Qmw Spring
28-B-1	Spring	Community (B)	N	S1-23057CWRIS	325	-	-	-	-	-	-	2/17/1978	Qpog/Qpon Spring
28-B-2	Spring	SFR / D	N	S1-046134CL	303	-	-	-	-	-	-	11/9/1973	Qpog/Qpon Spring
28-B-3	GW	SFR / D	N	-	180	93	-	-	-	-	-	-	Unable to determine
28-C-1	GW	SFR / D	N	-	225	40	-	-	-	-	-	-	Qal?
28-C-2	GW	SFR / D	Y	-	176	25	OB	25	151	15	161	1/2/1990	Qal
28-C-3	GW	SFR / D	Y	-	170	27	OB	27	143	14	156	10/23/1978	Qal
28-C-4	SW	SFR / D	N	S1-09244CWRIS	183	-	-	-	-	-	-	11/6/1952	NA-Green River
28-D-1	GW	SFR / D	N	G1-124975CL	172	-	-	-	-	-	-	6/26/1974	Qal?
28-D-2	GW	Unknown	N	-	163.8	16	-	-	-	6.77	157	6/29/1981	Qal
28-D-3	GW	Likely SFR / D	N	-	164	-	-	-	-	-	-	-	unknown well depth
28-D-4	GW	SFR / D	N	G1-025506CL	170	-	-	-	-	-	-	3/18/1973	Qal?
28-F-1	GW	Unknown	N	-	173.4	25	-	-	-	9.5	164	6/26/1981	Qal
28-F-2	GW	Unknown	N	-	177.6	19	-	-	-	12.42	165	7/14/1981	Qal
28-F-3	GW	Unknown	N	-	174.2	23	-	-	-	13.37	161	7/14/1981	Qal
28-H-1	Spring	SFR / D	N	S1-20796CWRIS	273	-	-	-	-	-	-	12/16/1968	Qpon/Qmw Spring
28-H-2	SW	Industrial	N	S1-04987CWRIS	197	-	-	-	-	-	-	12/20/1941	NA-Green River
28-L-1	GW	SFR / D	Y	-	182	30	OB	30	152	11	171	1/27/1982	Qal
28-M-1	GW	SFR / D	Y	-	177	20	OB	20	157	9	168	6/14/1979	Qal
28-M-2	GW	SFR / D	Y	-	190	21	OB	21	169	9	181	3/27/1981	Qal

5.6 Pre-Developed Condition Water Balance

5.6.1 General

A water balance analysis was conducted to evaluate the ground water recharge impacts associated with development of The Villages. A water balance analysis is an accounting of water within each of the elements of the hydrologic cycle. The hydrologic cycle refers to the continuous circulation of water between the atmosphere, ocean, and land. During this circulation, water is temporarily stored in streams, lakes, wetlands, vegetation, soil, and ground water. The water balance of the "pre-developed" condition was used to estimate recharge to ground water aquifers.

The primary components of the water balance at The Villages under pre-developed conditions are precipitation (PPT), evapotranspiration (ET), infiltration or ground water recharge (RCH), and runoff (RO). The following equation was used to define the water balance for the pre-developed condition:

Equation 1. PPT – ET – RCH – RO = 0

Where: PPT = Precipitation
ET = Evapotranspiration
RCH = Recharge
RO = Runoff

The above equation is considered to be adequate to describe the water balance at the site under the pre-developed condition because there are no other sources of input other that PPT. Results of the pre-developed condition water balance for the Main Property and the North Property of The Villages are presented in Tables 5-4 and 5-5. Water balance calculations were performed separately for the Main Property and the North Property to better evaluate any probable significant impacts resulting from the Proposed Action (described in Chapter 7). Details of the water balance calculations are presented in Appendix 10. Water balance components are described in the following sections.

5.6.2 Precipitation

Average annual precipitation for the site is based on data recorded at Western Washington Regional Climate Center's (WRCC's) Landsburg rain gauge, which is averaged from January 1931 to June 2007. A regional scale factor of 0.95 was used, as defined in the *King County Surface Water Design Manual* (2005). As shown in Table 5-6, the adjusted average annual precipitation for the site is about 54 inches per year. A summary of this data is provided in Appendix 10. The mean monthly rainfall distribution shows that approximately 84 percent of the average annual precipitation occurs between the months of October through May.

Table 5-6
Average Monthly Rainfall and Forest Evapotranspiration

Month	Precipitation (inches)	Forest Evapotranspiration (inches)
October	5.03	1.15
November	7.39	0.69
December	7.47	0.58
January	7.13	0.81
February	5.38	0.83
March	5.29	1.73
April	4.23	2.49
May	3.27	3.79
June	2.94	4.18
July	1.39	3.73
August	1.63	1.82
September	2.90	1.56
Average Annual	**54.05**	**23.36**

5.6.3 Evapotranspiration

Evapotranspiration (ET) is water lost to the atmosphere from plant transpiration and evaporation from the soil surface and surface water features. For ground water recharge analysis of the pre-developed condition, the project was assumed to be entirely forested, including existing cleared areas, gravel roads, and wetland areas. As shown in Table 5-6, ET amounts were estimated from monthly average ET data obtained from a Hydrologic Simulation Program – Fortran (HSPF) model used for a site at a similar latitude to The Villages, with a similar annual rainfall (Goldsmith, 2006). For that project, ET was estimated assuming forested conditions from monthly average potential ET data obtained from the Washington State University (WSU) Puyallup station for the period from June 1995 through February 2002.

Booth and May (1999) offer a gross summary of existing data from the Pacific Northwest that suggests 35 to 40 percent of precipitation is lost to interception in the forest canopy, approximately 25 percent lost to shallow subsurface flow, and approximately 35 to 40 percent recharges deeper ground water. Under forested conditions, direct surface water runoff (Horton overland flow) accounts for less than 1 percent of the water budget due to the buffering effect of the forest canopy, forest duff, and relatively high permeability of the soil horizon. These factors, combined with a predominant storm pattern of long duration and low intensity (commonly <1 inch per hour), result in the limited direct surface water runoff percentage (Booth and May, 1999).

According to a recharge study by the USGS (Bauer and Mastin, 1997) of till-mantled catchments in the Puget Sound Lowland, interception loss in evergreen-forested areas "*can be the largest single water-budget component (excluding precipitation) and was measured to be almost one-half of the annual precipitation during this investigation.*" Removal of the forest canopy means a significantly greater percentage of the total precipitation can reach the ground surface increasing the potential recharge and runoff components of the water budget. The interception loss reported by Bauer and Mastin (1997) is slightly higher than the estimate of interception loss reported by Booth and May (1999), but both estimates demonstrate the importance of interception losses under forested conditions to the total water budget.

5.6.4 Runoff

For the purposes of our analysis, we have included interflow in our runoff term. Interflow commonly accumulates seasonally in areas underlain by lodgement till. It consists of surface water that percolates down through the relatively permeable, surficial weathered till soils and becomes perched on the underlying, low-permeability, unweathered till surface. Ground water flow direction in the interflow zone is largely controlled by the topography of the underlying, unweathered till surface, which usually corresponds to surface topography.

For those summer months where average monthly ET exceeded PPT, the excess ET is interpreted to represent ET loss from interflow storage or soil moisture where shallow till was not present. This was carried through our equations as a negative and appears as negative runoff during those summer months.

Surface water runoff and interflow from the till-covered uplands was assumed to infiltrate along the base of the upland margins where permeable outwash sediments were present. This runoff was incorporated into the total recharge to the shallow aquifer.

In order to calculate the average monthly runoff and recharge for these portions of the site, runoff from the till-mantled portions of Basins 2, 3, and 4 that would flow onto outwash was assumed to completely infiltrate in the surrounding outwash areas. Runoff from the till-mantled portion of Basin 5 into the wetland-filled outwash channel was not assumed to recharge the shallow aquifer. Instead, the recharge analysis assumed that runoff from the till-mantled uplands would encounter saturated sediments or standing water, and thus would continue to flow as surface water towards Rock Creek. Existing drainage basins are shown on Figure 3.

5.6.5 Recharge

Recharge can vary significantly depending on the near-surface geologic and soil conditions. Low-permeability sediments, such as Vashon lodgement till, result in perched water and relatively low recharge rates. Permeable soils, including sand and gravel deposits typical of recessional outwash, have higher recharge rates. In this water balance analysis, recharge

calculations examine flux of water under two scenarios: (1) through the Vashon lodgement till into the underlying deeper sediments, such as Vashon advance outwash or pre-Olympia deposits, or (2) directly into the Vashon recessional outwash (Qvr) or Vashon ice-contact deposits (Qvic) where present at the ground surface. For water balance purposes, surficial Vashon lodgement till, $Qpog_2$ and wetlands were modeled as till surfaces, and Vashon recessional outwash and Vashon ice-contact deposits were modeled as outwash surfaces.

For till-covered surfaces, ground water recharge under forested conditions was estimated using Equation 1 in combination with the USGS methodology described in Bidlake and Payne (2001). For outwash-covered surfaces, because the infiltration capacity of the outwash greatly exceeds rainfall intensities, ground water recharge under forested conditions was estimated using a re-arrangement of Equation 1 as follows:

$$\mathbf{RCH = PPT - ET}$$

Infiltration of surface water runoff from the till-mantled portions of the site was also incorporated into the recharge calculation, as described above in the "Runoff" section of this report.

Main Property Ground Water Recharge

For purposes of ground water recharge calculations, the Main Property surface water subbasins were grouped into four ground water recharge areas, as shown on Figure 31:

- Shallow Aquifer in Horseshoe Lake Recharge Basin
  - Shallow aquifer recharge to Vashon recessional outwash (Qvr) in Basins 1, 2, and 3N and runoff from till-mantled uplands in Basins 2 and 3N that flows into Qvr ultimately discharges to Horseshoe Lake or through windows into the pre-Olympia aquifer.
- Shallow Aquifer (Qvic) Recharge Basin in Basin 4
  - Shallow aquifer recharge to Vashon ice-contact deposits (Qvic) and runoff from a small portion of the till-mantled upland in Basin 4 flows westerly eventually discharging to the steep slopes of the Green River valley.

- Pre-Olympia Aquifer Recharge Basin

  - Recharge through till-mantled surfaces within Basins 2, 3N, 3S, portions of Basin 4 and Basin 5 recharges the pre-Olympia aquifer and flows southwesterly, discharging as spring flow to Crisp Creek and springs east of Crisp Creek along the Green River valley slope.

  - The component of recharge from the shallow aquifer systems to the pre-Olympia aquifer system would occur where the shallow aquifer is in direct connection with the pre-Olympia sediments or from diffuse recharge through fine-grained units separating the upper shallow systems from the pre-Olympia aquifer.

  - The shallow aquifer recharge component to the pre-Olympia aquifer was not added to the recharge from till-mantled portions of the basins described above. The ground water recharge analysis assumes that if the pre-developed condition recharge is matched under the mitigated developed conditions, that the component of recharge from the shallow systems to the deeper system will remain unchanged.

- $Qpog_2$ Aquifer Recharge Basin

  - Recharge through till-mantled surfaces within Basin 6 and eastern portions of Basin 4 recharges the deeper pre-Olympia ($Qpog_2$) aquifer.

Results of the forested condition water balance for the Main Property are presented in Table 5-4. Average annual pre-developed recharge volumes for the Main Property are as follows:

- Shallow Aquifer in Horseshoe Lake Recharge Basin: 695 ac-ft/year
- Shallow Aquifer (Qvic) Recharge Basin in Basin 4: 400 ac-ft/year
- Pre-Olympia Aquifer Recharge Basin: 855 ac-ft/year
- $Qpog_2$ Aquifer Recharge Basin: 411 ac-ft/year

Table 5-4
Main Property Water Balance Under Forested Conditions

Recharge Basin	Acres	PPT (ac-ft)	ET (ac-ft)	RCH from OW (ac-ft)	RCH from TILL (ac-ft)	RCH from TILL RO onto OW (ac-ft)	Total RCH (ac-ft)	RO (ac-ft)
Horseshoe Lake Shallow Aquifer	179.4	808.0	349.2	523	-	178.8	701.8	(64.1)
Qvic Shallow Aquifer	133.3	600.4	259.5	388.6	-	11.9	400.5	(47.7)
Pre-Olympia Aquifer	509.2	2,293.5	991.2	134.1	644.6	69.6	848.3	275.1
Qpog$_2$ Aquifer	295.0	1,328.7	574.3	-	410.5	-	410.5	332.0
Total	1,116.9	5,030.7	2,174.2	1,045.6	1,055.2	260.3	2,361.1	495.4

PPT = Precipitation
ET = Evapotranspiration
RCH = Recharge
OW = Outwash
RO = Runoff
ac-ft = acre-feet
Minor differences in sum total line occur due to rounding.

North Property Ground Water Recharge

Ground water recharge for the North Property was calculated for the shallow aquifer and for the flux through the lodgement till. As shown on Figure 9, a small area of outwash is located in the northwest corner of the North Property. All runoff from the till-mantled uplands in Basin 7N under the pre-developed condition would runoff and infiltrate into this portion of outwash. A large wetland is located in the southwest corner of the North Property, and is assumed to be hydrologically connected to the outwash in the Ravensdale Creek swale. All runoff from the till-mantled uplands in Basin 7S would run off and discharge to this wetland, and eventually recharge the outwash.

Results of the forested condition water balance for the North Property are presented in Table 5-5. Average annual pre-developed recharge volumes for the North Property are as follows:

- Shallow Aquifer: 140 ac-ft/year
- Flux through Till: 98 ac-ft/year

Table 5-5
North Property Water Balance Under Forested Conditions

Recharge Basin	Acres	PPT (ac-ft)	ET (ac-ft)	RCH from OW (ac-ft)	RCH from TILL (ac-ft)	RCH from TILL RO onto OW (ac-ft)	Total RCH (ac-ft)	RO (ac-ft)
Shallow Aquifer	11.5	51.8	22.4	33.5		106.8	140.3	(4.1)
Flux through Till	70.1	315.7	136.5		97.6		97.6	81.7
Total	81.6	367.5	158.8	33.5	97.6	106.8	237.9	(29.2)

PPT = Precipitation
ET = Evapotranspiration
RCH = Recharge
OW = Outwash
RO = Runoff
ac-ft = acre-feet
Minor differences in sum total line occur due to rounding.

6.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES: GEOLOGIC HAZARDS

The following sections of this report describe our evaluation of unmitigated probable significant environmental impacts relative to geologic hazards that might result from development of The Villages. A No Action Alternative was also evaluated with respect to geologic hazard impacts. Our analysis of probable significant impacts associated with geologic hazards includes the following: erosion hazards, including stream erosion, landslide hazards, and seismic hazards. Geotechnical development impacts are also discussed. To the extent The Villages Main and North Properties are defined, appropriate mitigation measures are described for each of the identified geologic hazards. Table 6-1 summarizes the probable significant impacts and mitigation measures discussed in this chapter.

Table 6-1
Geologic Hazards:
Summary of Impacts and Mitigations Under the Proposed Action

Hazard	Probable Significant Impacts	Proposed Mitigation Measures Designed into the Proposal	Unavoidable Impacts
Erosion Hazard			
Sheet Erosion	Erosion Zone: Zone 1: Low Zone 2: Severe Zone 3: Severe to Very Severe	• Cover exposed soils of areas not actively worked within 48 hours. • Establish and implement erosion and sedimentation control plan utilizing applicable BMPs from Volume II, Chapter 4 in the Ecology Manual (2005) pertaining to wet season requirements, subject to approval by Ecology, for any earthwork construction during the wet season, defined as October 1 to April 30. • Establishment of post-development landscaping. • Direct stormwater into stormwater facilities.	• Some short-term soil loss during construction. Stabilized developed conditions similar to pre-developed condition.
Concentrated Erosion	Erosion Zone: Zone 1: Low Zone 2: Severe Zone 3: Severe to Very Severe	• Control runoff and reduce velocities (rock dams, revegetate). • Trap sediments (silt fences, ponds). • Erosion control inspector on-site during construction. • Incorporate BMPs per Ecology Manual (2005). • Some Zone 2 and 3 erosion hazard areas can be mitigated by clearing and grading.	None.

Hazard	Probable Significant Impacts	Proposed Mitigation Measures Designed into the Proposal	Unavoidable Impacts
Stream Erosion	• Change in duration and frequency of flows – potential stream incision or aggradation.	• Stormwater release to on-site headwater wetlands designed to mimic natural conditions. Stormwater to be metered to release matching durations from ½ of 2-year to 50-year flows in Stream S4 per Ecology BMPs.	• None.
Landslide Hazards			
	• Landslide Class: Class 1: Low Class 2: Moderate Class 3: High	• Site-specific geotechnical evaluation for stormwater facilities. No mitigation required for Class 1 landslide hazards. • Appropriate setback distances from landslide Classes 2 and 3, per City of Black Diamond standards or site-specific geotechnical analysis.	• None.
Seismic Hazards			
Surficial Ground Rupture	• Low	• None required.	• None.
Seismically Induced Landslide	• Low	• Control cut and fill slope gradients. • Setback distance from slopes.	• None.
Liquefaction	• Nil for natural sediments in developable areas.	• None required.	• None.
Ground Motion	• Potential risk of structural damage.	• Construct per IBC standards for Seismic Zone 3 or site-specific geotechnical analysis.	• Based on 100-year event; non-structural damage anticipated.
Coal Mine Hazards			
	• Nil for all areas except southeast corner of North Property. Coal mine hazards in southeast corner of North Property not anticipated, but possible.	• In southeast corner of North Property, if sinkholes or ground openings related to mine workings are observed, notify City of Black Diamond and Office of Surface Mines.	• None.

BMPs – Best Management Practices
Ecology – Washington State Department of Ecology
Ecology Manual – Washington State Department of Ecology 2005 *Stormwater Management Manual of Western Washington*
IBC – 2006 *International Building Code*

Integral to mitigating geologic hazards for The Villages will be the development of a coordinated stormwater management plan. The proposal for the Main and North Properties includes developing The Villages into eight stormwater subbasins for drainage management. The stormwater management concept is described in detail in Triad Associates (Triad, 2008), and a map showing the developed stormwater basins is included as Figure 30. Figure 30 also shows the proposed approximate locations of stormwater ponds and infiltration points.

According to Triad, proposed drainage management for The Villages includes the following for each developed basin:

- Basins 1, 2 and 3: Basin 1 is located on Vashon recessional outwash, and Basins 2 and 3 are located on a mixture of Vashon lodgement till and Vashon recessional outwash. In the developed condition, all runoff from these basins is proposed to be infiltrated to the upper Vashon recessional outwash soils (Qvr), infiltrated to deeper coarse-grained pre-Olympia-age outwash ($Qpog_{lc}$), or discharged via level spreaders to wetlands to maintain wetland recharge. Infiltration into the Qvr deposits would occur via Low Impact Development (LID) techniques or through conventional infiltration ponds. Infiltration into the $Qpog_{lc}$ deposits would occur via an infiltration pond in the south-central portion of Basin 3.

- Basin 4: Surficial geology in Basin 4 consists predominantly of a mixture of Vashon lodgement till and permeable Vashon ice-contact deposits (Qvic). The Qvic deposits are similar to Qvr from an infiltration standpoint. In the developed condition, runoff from Basin 4 is proposed to be infiltrated into either permeable Vashon ice-contact sediments (Qvic) or into $Qpog_{lc}$, or discharged via level spreaders to Black Diamond Lake (clean water from rooftops only) and wetlands to maintain wetland recharge. Infiltration into the Qvic deposits would occur via LID techniques or through conventional infiltration ponds. Concentrated infiltration into $Qpog_{lc}$ is proposed for in an infiltration gallery located in a stormwater easement to the north of the northwest corner of Basin 4, via underground injection control (UIC) wells.

- Basin 5: Surficial geology in development areas of Basin 5 is comprised of Vashon lodgement till. In the developed condition, a detention pond is proposed to meet discharge requirements per the 2005 Washington State Department of Ecology (Ecology) *Stormwater Management Manual for Western Washington* (Ecology Manual, 2005). The detention pond will discharge to the large wetland associated with Rock Creek through level spreaders. Rooftop runoff is proposed to provide recharge via level spreaders to Wetlands E7, E8, and E10 within Basin 5. No concentrated flow will be generated.

- Basin 6: Surficial geology in Basin 6 is comprised of Vashon lodgement till. Wetlands cover a large percentage of this basin in the pre-developed condition. In the developed condition, a detention pond is proposed for the developed portion of Basin 6 to meet discharge requirements per the 2005 Ecology Manual. Water from the detention pond will be introduced as concentrated discharge to Stream S4 at the north property boundary. Wetland hydrology will be maintained through the use of level spreaders along the eastern margin of Basin 4 for wetlands in Basin 6.

- Basin 7: The northwest corner of Basin 7 is located on Vashon recessional outwash, while the remainder of development areas are located on Vashon lodgement till. In the developed condition, stormwater runoff from the northern portion of Basin 7 will be infiltrated into the outwash in the northwest corner of the basin via LID techniques or conventional infiltration facilities. Stormwater runoff from the southern portion of the basin will be managed with two detention ponds to meet discharge requirements per the 2005 Ecology Manual. Water from the detention ponds will be dispersed to wetlands via level spreaders.

- Basin 8: Basin 8 will remain unchanged in both the existing and developed conditions.

6.1 Erosion Hazards

6.1.1 Erosion Hazard Impacts

Without proper mitigation measure implementation, erosion is considered to be both a long- and short-term hazard for both the proposed North and Main Properties; although, the risks are greatest during the construction phase. Once buildings and roadways are completed and landscaping and other vegetative cover have been re-established, the risk of erosion would be similar to existing conditions. If allowed to occur, uncontrolled stormwater runoff from impervious surfaces (roads, roofs, driveways, patios) or from drainage conveyance systems (pipes, swales, outfalls) could pose a risk after development, particularly on steep slopes.

In order to evaluate the impacts that The Villages would have on the existing three erosion hazard zones (described in Section 4.4.1 and shown on Figure 19), an analysis of probable significant impacts was conducted for the Proposed Action and the No Action Alternative. This analysis reviewed the probable significant impacts if mitigation measures described in Section 6.1.2 were not implemented in an attempt to determine the effectiveness of The Villages conceptual design and to provide additional mitigation measures, if necessary. From this analysis, unmitigated erosion impacts from the Proposed Action and the No Action Alternative were considered to be possible under three primary activities: (1) clearing and grading activities, (2) increase in spring flows, and (3) changes in streamflow. Activities 1 and 2 are discussed further below. Activity 3 is discussed in detail under Section 6.2.

1. Clearing and grading activities during construction will increase the erosion potential through the removal of vegetation and the exposure of soil directly to precipitation and runoff. The most significant increase in erosion hazard potential would be during the construction phase when earthwork activity commences. Where development is occurring on slopes, uncontrolled gully and sheet erosion along slopes or in stream channels could lead to oversteepening of the slopes and subsequent slope instability hazards. Any unmitigated erosion would produce sediment that could then be transported to on-site wetlands, and to off-site receiving waters. Uncontrolled raindrop erosion will suspend fine-grained particles into the runoff flow. Silt and clay particles,

once mobilized during the earthwork activities, can be difficult to trap and can be discharged into streams through the stormwater control facilities unless additional measures are implemented.

2. The construction of temporary or permanent infiltration, temporary collection systems, or unlined detention systems could cause ground water mounding. Where this occurs near steep slopes, such as the off-site steep Green River valley wall, new springs could form, or flow at existing springs could be increased, resulting in erosion along the slope. Erosion from these areas could enter drainage channels or cause the oversteepening of the slope and trigger landslides.

3. Uncontrolled stormwater runoff from development could cause erosion in the on-site stream channels. Increase in wetland discharge and/or uncontrolled discharge into stream channels from development could cause erosion in stream channels, such as Stream S4 in Basin 6. A detailed description of potential stream erosion impacts and mitigation measures is discussed under Section 6.2 of this report.

Under the No Action Alternative, the potential erosion hazards described above would be applicable. Site development would likely occur on an incremental basis according to market demands. The development density would be less, and impervious surface areas, grading, and stormwater runoff are anticipated to be less. Correspondingly less land would be open to grading at any one time; thus the risk of erosion could be somewhat less under the No Action Alternative than under the Proposed Action. It is estimated that the time required for full buildout for the No Action Alternative would be much greater than for the Proposed Action (Triad, 2008). A coordinated stormwater management system would be unlikely.

6.1.2 Erosion Hazard Mitigation Measures

Proper control of surface water runoff and domestic discharge will be important in alleviating potential erosion hazards, and subsequently potential slope stability hazards on the steeper portions of the Main and North Properties. To mitigate and reduce the sheet and channel erosion hazard potential on the sites, The Villages will employ Best Management Practices (BMPs) outlined in the Ecology Manual (Ecology, 2005). As per Ecology's guidelines, the following erosion BMPs could be implemented during development. Specific BMPs to be implemented during construction will be outlined in the geotechnical engineering reports and the temporary erosion and sediment control (TESC) plans for each project element.

- Source control measures are practices that are used to reduce erosion risks before they occur. These measures typically involve cover practices and drainage control. It is extremely more effective and efficient, both physically and economically, to employ source control methods to prevent erosion rather than to establish repairs to erosion features or to trap and remove sediment once it is in motion. Temporary source-control BMP mitigation measures for the Main and North Properties for disturbed areas should

include the proper placement of cover measures on exposed ground surfaces. Appropriate cover measures will vary with topographic and soil type constraints, but may include straw mulch, plastic sheeting, grass, rolled erosion blankets, and clean crushed rock. During the wet season, no exposed soil should remain uncovered for more than 2 days unless actively being worked. The exposed subgrade should be mulched and seeded, covered with plastic sheeting, or otherwise protected by an erosion method approved by the erosion and sediment control (ESC) inspector. In addition, exposed construction slopes should be trackwalked (up and down) in order to roughen the ground surface and reduce runoff velocities. Surface water runoff should be directed away from exposed subgrades or into approved temporary or permanent stormwater conveyance systems, such as tightlined drains or rock-lined swales.

- Stockpiled soils to be used as backfill material should be stored in such a manner as to minimize sheet erosion, rilling, or gully erosion. Protective measures may include, but are not necessarily limited to, hydroseeding, covering the stockpiled soils with plastic sheeting, the use of low stockpiles in flat areas to reduce the risk of sediment transport from the area, or the use of silt fences around the perimeter of the stockpiles to trap eroded sediment.

- Temporary sedimentation traps or ponds should be installed to control sediment transport during construction. These facilities are designed to slow the water flow in order for sediment to settle out of the water column prior to the material entering surface water features, infiltration systems, detention ponds, or other sensitive areas. Permanent water quality ponds or detention ponds may be used as temporary sediment ponds. Geotechnical review, design, and oversight will be required for any proposed temporary sediment pond or trenches located at a permanent infiltration facility. The permanent detention facilities must be cleaned of all accumulated sediment after the completion of construction activities.

- Rock check dams are utilized to reduce water velocities and trap transported sediment. Rock check dams should be established as warranted by open channel or swale conveyance during the earthwork phase of construction. In addition, rock check dams should also be used within drainage ditches constructed along sloping ground to reduce the water energy and the subsequent risk of channel incision.

- Filter fences are temporary structures utilized to trap sediment transported from sheet erosion while allowing some conveyance of water through the filter fabric. Filter fences are not designed for concentrated flows, but are most effective in retaining sediment transported from sheetflow in relatively small catchment areas. Filter fences should be used as a perimeter sediment interception measure, as warranted, adjacent to wetlands, stream and river corridors, open space areas, and other sensitive areas located in or adjacent to construction zones to reduce the risk of sediment transport into these features.

- Proposed stormwater discharge points include infiltration to underground receptor sediments, level spreaders to recharge wetlands, and a concentrated discharge point in Basin 6 to Stream S4. Point discharge for stormwater release, including emergency overflow outfalls, should be provided with an energy dissipater to reduce the risk of erosion. These features may consist of gabion blocks, concrete aprons, or riprap. Site-specific studies may be required to locate the exact discharge points and the type of erosion measure to be employed.

- All turbid construction runoff must be collected and treated by sediment ponds, sand filters, temporary filtration, or other approved methods before release to any surface waters. Surface discharge should not exceed 5 nephelometric turbidity units (NTU) above background in the receiving water and be free of construction waste or its influences, as required by Washington State water quality standards (*Washington Administrative Code* [WAC] Chapter 173-201A). Water quality mitigation measures are described in detail in the "Water Quality Analysis" (A.C. Kindig & Co. [A.C. Kindig], 2008).

- Clean water should not be allowed to enter construction areas or mix with construction water. All intercepted clean water should either be routed around construction areas to discharge into the original receiving waters or discharge separately into stormwater facilities. Energy dissipaters may be required at discharge points depending on the site conditions.

- A TESC plan should be established for the development during the design phase. An ESC inspector should be on-site during construction to assist in maintaining the integrity of the erosion control structures and to provide further site-specific erosion recommendations, as necessary. The ESC inspector should be independent of the contractor and have the authority to stop work, if necessary, to facilitate implementation of erosion control measures during construction.

- TESC measures should commence at the same time as the clearing activities and be operating properly prior to beginning grading activities.

- Surface water and domestic discharge, either during or after construction, should not be directed onto sloping areas or randomly daylight on the site. All temporary or permanent devices used to collect surface runoff should be directed into tightlined systems that discharge into approved stormwater control facilities, such as temporary infiltration systems, detention ponds, or dispersion facilities. Uncontrolled discharge on slopes would promote erosion, and subsequently, slope instability hazards.

In addition to the above BMPs, the following erosion mitigation measures should also be considered during the design and development of the Main and North Properties:

- The Erosion Hazard Zone 2 and 3 areas, which are not located within wetlands or wetland buffers (Figure 19), should be identified on the ground prior to construction. The areas may be graded out to lesser slopes during construction, or development plans should be designed to incorporate the sloped areas into the design. Plans should be reviewed by the geotechnical engineer during the design process to evaluate the erosion risks, slope instability risks, and to provide specific mitigation recommendations designed to minimize erosion hazard potential.

- The geotechnical engineer should review the grading, erosion, and drainage plans prior to final plan design to further assist in mitigating erosion hazards during development. Additional erosion mitigation measures might be offered at that time to address site-specific issues.

6.1.3 Erosion Hazard Conclusions

With the proper implementation of BMPs described above, the probable significant erosion hazard impacts for the Proposed Action or the No Action Alternative can be mitigated to non-significant levels, even in areas where a high erosion hazard risk is present.

6.2 Stream Erosion Hazards

On-site watercourses include S2 through S7 and Rock Creek, and are described in detail in the "Fisheries Technical Report" for this project (Cedarock Consultants, Inc. [Cedarock], 2008). As described in "The Villages Stormwater Concept" (Triad, 2008) and "Fisheries Technical Report" (Cedarock, 2008), Rock Creek will receive diffuse discharge via level spreaders from a detention facility located in Basin 5. Stream S4, located in Basin 6, has its headwaters off-site to the south, and flows off-site to the north, discharging into Jones Lake. In the developed condition, Stream S4 will receive concentrated stormwater discharge from a detention pond in Basin 6. Development of The Villages is not anticipated to affect the erosion potential in the remaining streams, S2, S3, S5, S6, and S7, which are described in detail in the "Fisheries Technical Report" (Cedarock, 2008), and briefly summarized below in Section 6.2.1.

Without proper implementation of mitigation measures, primary streams that have the potential to be affected by development of The Villages sites include on-site Streams S4 and Rock Creek, and off-site streams Ravensdale Creek, Crisp Creek, and the Green River. Unmitigated probable significant impacts could include:

1. Increase/decrease in total volume of surface water runoff;
2. Increase in peak discharge of a drainage basin during storms; and
3. Increase/reduction in spring flow.

Probable significant impacts from changes in volume of surface water runoff and peak discharge of a drainage basin during a storm are discussed below. Probable significant impacts to springs that discharge to off-site streams Ravensdale Creek, Crisp Creek, and the Green River are discussed in Chapter 7.

6.2.1 Stream Erosion Hazard Impacts

Typically, during development, the impervious surface areas of a site are increased with compaction of the ground surface by construction equipment and the construction of roads, parking areas, and buildings. If mitigation were not provided, potential drainage erosion hazard impacts as a result of development could include uncontrolled stormwater runoff from the impervious surface areas and stormwater facilities to the on-site drainage channels and the wetlands forming the headwaters of the off-site channels. Uncontrolled stormwater runoff could increase the duration and peak flow discharges of the drainages resulting in an increase in stream incision, particularly where stream channels are poorly developed. Stormwater discharge, or natural-occurring high flows from storm events, can cause erosion of the sidebanks and trigger landslides. Both sidebank erosion and landslide activity could result in an increase in the bed load transport rate. An increase in sediment transport could result in the plugging of the downstream culverts and related flooding. In addition, subsequent high flows could result in the erosion of previously deposited sediments and creek meandering.

Conversely, revisions to the natural drainage patterns during and after development could result in a reduction of discharge to the drainages under un-mitigated conditions. A reduction of flow in the streams could also result in a buildup of sediment within the channels and lead to plugging of culverts and flooding. Fine-grained sediment could also accumulate in the channel from detention pond discharge if proper water quality treatment is not maintained, particularly during the earthwork phase of development. Impacts to stream water quality are described in the "Water Quality Technical Analysis" (A.C. Kindig, 2008).

In should be noted that streams are dynamic and changes in stream morphology are a natural phenomena. It is expected that the ongoing stream erosion and sediment transport will continue to occur in these streams regardless of development of The Villages. The amount of sediment (bedload) transported by on-site streams under existing conditions is considered minor under normal baseflow conditions. During storm events, however, significant erosion and sediment transport can occur.

Based on field observations of similar small, steep, headwater streams draining a plateau, these storm events are of relatively short duration with the peak flows generally lasting less than 30 minutes. The majority of the bedload transported occurs during the more frequent 1- to 2-year storm events (Dunn and Leopold, 1978; Booth, 1989; Gordon et al., 1992; Lepp et al., 1993; Rosgen, 1996). Although a large storm event can carry a greater amount of bedload than a small storm event, the more frequently occurring, moderate storms account for the largest percentage of transported bedload.

To evaluate the potential of stream channel erosion, a stream impact analysis was conducted, as described in Appendix 6. This study included performing a geologic reconnaissance of Stream S4, Crisp Creek, and an unnamed tributary to the Green River, as shown on Figure 4, and qualitatively documenting stream channel geomorphology conditions.

Streams S2, S5, S7, and Rock Creek, based on information presented in the "Fisheries Technical Report" (Cedarock, 2008) are either buffered or located within wetland buffers/Sensitive Area Tracts. The streams are either formed by wetland discharge (S2, S5, and S7) or flow through a large wetland complex on-site (Rock Creek), and would be susceptible to erosion as a result of uncontrolled stormwater discharge. Existing condition wetland hydrology will be maintained, as discussed in Wetland Resources (2008) and Triad (2008). No direct discharge is planned to Watercourses S2, S5, S6, S7, and Rock Creek. Therefore, no stream erosion impacts are anticipated.

Watercourse S3 is a man-made channel that dewaters wetlands. The portion of channel within the wetland will be preserved, and the remainder of channel will be eliminated.

Areas of potential stream erosion hazards for Stream S4 and off-site Crisp Creek and unnamed tributary to Green River are described further below.

Stream S4

Stream S4 was relatively stable along the channel length between on-site wetlands and the southern property boundary. Stream channel reconnaissance is described in Appendix 6. The channel would be susceptible to stream incision, sidebank destabilization, and channel degradation as a result of uncontrolled stormwater discharge.

Stormwater runoff to Stream S4 from The Villages would be discharged to the stream at controlled rates per the 2005 Ecology Manual from a detention facility located near the northern property boundary. The exact location of the discharge points will be determined by a site-specific study. Stream S4 would also receive discharge from headwater wetlands via dispersal methods to the wetland buffer. As described in the stormwater management concept (Triad, 2008), dispersion to wetlands is designed to mimic pre-developed condition wetland hydrology.

Under the Proposed Action for The Villages, as allowed by the Ecology Manual and per Black Diamond Code (Triad, 2008), releases from the detention pond will match flows from half of the 2-year flows to the 50-year flows. Peak flows within Stream S4 at the property boundary for these flow events would remain unchanged or likely be somewhat decreased. There would likely be an general overall reduction in the magnitude of the storm flow after development for longer recurrence interval flow events. For the Proposed Action, the flow durations at this location would likely be reduced under developed conditions for flow volumes above ½ of the 2-year event. In most cases, a stream that is at equilibrium could experience channel

aggradation by a decrease in peak flow. Because the headwaters for Stream S4 are located in on- and off-site wetlands, much of the natural hydrology will remained unchanged. The likely decrease in peak flows as allowed by code is not considered to be an adverse impact to stream erosion.

Off-Site Crisp Creek and Unnamed Tributary to Green River

Crisp Creek and the unnamed tributary to the Green River do not receive any direct surface water runoff under existing conditions from The Villages; however, both receive ground water contributions to baseflow from the pre-Olympia aquifer proposed to receive stormwater infiltration. Impacts to aquifers and spring flow are described in Chapter 7.

Both channels were relatively stable in the upper portion of the channel. Downstream of the pre-Olympia aquifer spring discharge zone at approximately elevation 370 to 400 feet mean sea level (fmsl) in Crisp Creek and approximately elevation 460 fmsl in the unnamed tributary to the Green River, several landslides and other erosion features were present. Both channels would be susceptible to stream incision, sidebank destabilization, and channel degradation as a result of significant increases in baseflow from elevated spring flow.

Under the Proposed Action for The Villages, a portion of the stormwater runoff from Basins 1 through 4 will be treated and infiltrated into $Qpog_{lc}$ sediments. This infiltrated water will flow vertically downward to the pre-Olympia aquifer water table, and eventually re-emerge as spring flow within Crisp Creek and the unnamed tributary to the Green River (shown on Figure 4). Any mounding from the infiltrated water will disperse due to: (1) the distance from the nearest infiltration point and the spring discharge zones, and (2) the vertical and lateral ground water flow components, any change in spring flow within Crisp Creek and the unnamed tributary to the Green River would be unlikely. Therefore, no probable significant impacts to erosion within Crisp Creek and the unnamed tributary to the Green River have been identified.

6.2.2 Stream Erosion Hazard Mitigation Measures

As part of the stormwater management plans for development of the Main and North Properties, existing condition wetland hydrology will be maintained and the only surface water drainage from the site to off-site surface water drainages will be from existing on-site wetland systems and the direct discharge to Stream S4 (Triad, 2008). Rock Creek will receive recharge from a stormwater detention pond in Basin 5 via level spreaders. The discharge from these wetland systems to either Rock Creek or off-site streams or Black Diamond Lake will closely match existing condition rates and volumes of flow, which would mitigate potential stream erosion hazard impacts. These mitigation measures would be applicable to the Proposed Action and the No Action Alternative.

Releases from the detention pond to Stream S4 will match flows from half of the 2-year flows to the 50-year flows. The discharge point for stormwater release into Stream S4 will be provided with an energy dissipater to reduce the risk of erosion. These features may consist of gabion blocks, riprap aprons, or a dispersal system. A site-specific study (performed at the time of facility design) will be required to locate the exact discharge point and the type of erosion measures to be employed.

No other mitigation measures are warranted.

6.3 Landslide Hazards

6.3.1 Landslide Hazard Impacts

Most of the proposed development areas of the Main and North Properties are underlain by areas that are classified as having a low potential for landslide formation. This is due primarily to the low slope gradients across the majority of The Villages, and the presence of glacially consolidated sediments. Basin 4 contains moderate (Class 2) and high (Class 3) landslide hazard areas. Basins 7 and 8 contain moderate (Class 2) landslide hazard areas. All other basins are a low landslide hazard class. Sloping ground has an inherent risk of instability. In some cases, due to the low-slope gradients and geologic and hydrologic conditions, the landslide risks may be considered low. The risk is greater where ongoing or historic landslide activity has occurred. Landslides are natural occurring phenomena; however, the risk of a landslide could be increased as a result of land-use practices.

Depending on the characteristics of a slide, avoidance of the hazard zone may be the most economic and prudent mitigation alternative. This is generally the case for large or deep-seated landslides. Buildings and other structures would be set back from the zone of influence. For other landslide areas, the risk of slope movement can be reduced to an acceptable level by proper grading, drainage control, and/or the use of retaining structures.

In order to evaluate the impacts that development of The Villages would have on the existing landslide hazard zones, as described in Section 4.4.2, an analysis of potential landslide impacts was conducted. This analysis reviewed the probable significant impacts if mitigation measures were not implemented in an attempt to determine the effectiveness of the proposed design and to provide additional measures, if necessary. From this analysis, landslide impacts from and to the proposed project were considered to be possible under three primary activities. These include: (1) stormwater management, (2) clearing, and (3) grading (earthwork). These impacts would be applicable to the Proposed Action and to a lesser extent under the No Action Alternative.

1. Stormwater Management

Uncontrolled stormwater discharge onto sloping areas or into streams could cause erosion, undermining steep slopes and causing landslides. Concentrating stormwater on uplands above steep slopes could increase infiltration and cause spring discharge to increase, triggering landslides. To avoid these impacts, stormwater on the Main and North Properties under the Proposed Action will be directed into infiltration or detention facilities. The proposed stormwater management plan for each basin is summarized at the beginning of this chapter, and is described in Triad (2008). For detention facilities, where stormwater is discharged to streams or wetlands, the discharge rate will match pre-developed conditions. For infiltration facilities, the infiltration facilities will be designed and located specifically to avoid landslide hazard impacts. Small LID infiltration facilities and two large-scale infiltration facilities are proposed for The Villages. Under unmitigated conditions, ground water mounding could occur under the infiltration facilities, or in some cases, beneath unlined detention ponds. In the unmitigated condition, the existing landslide hazards risk could be increased by creating a higher, localized ground water table. The ground water table could recharge the slopes and trigger slope instability, resulting in an impact to Crisp Creek and the Green River valley walls.

The Basin 3 large infiltration facility will be located in a low-lying area in the southern portion of Basin 3, approximately 4,500 feet north-northeast of the nearest off-site Class 3 landslide hazard area (Crisp Creek). The Basin 4 large infiltration facility will be located in an off-site stormwater easement north of the northwest corner of Basin 4, approximately 2,500 feet north of the nearest off-site Class 3 landslide hazard area (unnamed tributary to Green River). Recharge into the $Qpog_{lc}$ through the two large infiltration areas described above will be conducted far enough from the slopes, and have infiltration rates low enough so that ground water mounding at the slope face of the Green River valley and/or the steep slopes of Crisp Creek will be avoided, and there would be no increased landslide hazard to these slopes.

LID techniques are proposed for areas of The Villages underlain by Qvr (Basins 1, 2, and 3) and Qvic (Basin 4) surficial sediments. The area proposed for LID infiltration in Basins 1, 2, and 3, at its closest point, is 3,300 feet from the nearest off-site Class 3 landslide hazard area (Crisp Creek). The LID infiltration facilities will disperse stormwater across the Qvr sediments and will be designed to match pre-developed condition recharge amounts. No net increase in recharge to the Qvr is anticipated; therefore, no increased risk to the steep slopes within the Green River valley and/or Crisp Creek would be anticipated.

The southern boundary of the area proposed for LID infiltration in Basin 4 is within 150 feet of off-site Class 3 landslide hazard areas along the Green River valley wall. The LID infiltration facilities will disperse stormwater across the Qvic sediments and will be designed to match pre-developed condition recharge amounts. No net increase in recharge

to the Qvic is anticipated. The LID facilities would also set back from the Class 3 landslide hazard areas. The default Draft *Critical Areas Ordinance* (CAO) setback is equal to the height of the slope; in this area of the site, this would equate to roughly 400 feet (total relief from top of steep slope to Green River valley floor). The adequacy of this setback would be evaluated during plat-level facility design. Therefore, no increased risk to the steep slopes along the Green River valley wall would be anticipated.

In some cases, ground water mounding could occur beneath unlined detention ponds. Detention ponds are proposed in Basins 5, 6, and 7. It is anticipated that the detention ponds will be founded in till soils with relatively low permeability, or could alternatively be lined, if necessary. Site-specific exploration and analysis will be necessary to determine liner requirements. While ground water mounding beneath these detention facilities is possible without mitigation, none of the proposed facilities is in the vicinity of areas of high landslide hazard. No increased landslide hazard risk has been identified.

Under the No Action Alternative, development would likely proceed as individual parcels with plats. However, for the No Action Alternative, development could occur incrementally, in which case a comprehensive stormwater system would not be constructed. Without an integrated stormwater management plan, potential impacts to off-site slopes could be higher than the Proposed Action.

2. Uncontrolled clearing on the Main and North Properties for the Proposed Action and the No Action Alternative could increase the existing landslide hazard potential of Landslide Hazard Class 2 and 3 by removing the vegetation that would normally reduce the runoff volume and rates. Concentrated stormwater runoff on cleared slopes could precipitate erosion and oversteepening of the hillside and result in slope instability.

3. For both the Main and North Properties, uncontrolled grading (earthwork) activities could also increase the existing landslide hazard risks. These risks would be higher under the Proposed Action than the No Action Alternative, as the amount of land open to grading at any one time would likely be greater under the Proposed Action. It is estimated that the time required for full buildout for Alternative 2 would be much greater than for the Proposed Action (Triad, 2008). Fill soils placed on or adjacent to steep slopes might increase the driving forces of the soil column and result in slope failures. Grading typically alters surface drainage patterns. In addition, improperly placed fill soils could fail due to inadequate compactive effort, use of organic material or soft, fine-grained soils, placement of material at oversteepened gradients, or other factors. Cut slopes could also fail due to removing the toe support for a slope, or from improper drainage control. If the new drainage pattern resulted in an increase in either surface or subsurface water flow on or near a slope, landslides could develop.

Under the No Action Alternative, the potential erosion hazards described above would be applicable. Site development would likely occur on an incremental basis according to market

demands. The development density would be less, and impervious surface areas, grading, and stormwater runoff are anticipated to be less. However, a coordinated stormwater management system would be unlikely, and potential impacts to off-site slopes could be higher than the Proposed Action.

6.3.2 Landslide Hazard Mitigation Measures

The majority of the proposed development area on the Main and North Properties are underlain by Landslide Hazard Class 1, which is considered to possess a low risk of landslide hazards under existing conditions. Landslide Hazard Class 2 areas are considered to have a moderate slope instability risk. Landslide Hazard Class 2 areas are located along the western and southern margins of the Black Diamond Lake swale in Basin 4, and along the slope in the northern portion of Basin 7 and in Basin 8. Landslide Hazard Class 3 is considered to have a high slope instability risk and occurs along the slope immediately east the Black Diamond Lake swale in Basin 4. Nearby off-site Landslide Hazard Class 3 areas are present immediately south of the Main Property along the Green River valley wall. Landslide hazard mapping is shown on Figure 20.

The following BMPs should be considered to reduce impacts to landslide hazard zones on the proposed development or adjacent properties:

- Draft CAO Section 19.10.130.E.3 specifies that for geologically hazardous areas, a critical area report shall be completed for specific project areas that contain an assessment of geological hazards, including the following erosion and landslide hazard-related elements:

    - Extent of and limits of fill and clearing;

    - A description of the surface and subsurface geology, hydrology, soils, and vegetation found in the project area and in all hazard areas addressed in the report;

    - The height of slopes, slope gradients, and a cross section of the project area;

    - Location and description of surface runoff features, springs, seeps, and other indications of ground water;

    - A detailed overview of the field investigations, published data and references, data and conclusions from past assessments of the project, and site-specific measurements, tests, investigations, or studies that support the identification of geologically hazardous areas;

- A description of the vulnerability of the project to erosion, seismic, and other geologic events;

- A hazards analysis, including a detailed description of the project, its relationship to the geologic hazard(s), and its potential impact upon the hazard area, the subject property, and affected adjacent properties; and

- A geotechnical engineering report that contains parameters for design of site improvements, including appropriate foundations and retaining structures, recommendations for drainage and subdrainage improvements, earthwork and erosion control recommendations for site preparation and construction activities, and mitigation of adverse site conditions, if applicable.

- In development areas proximal to Landslide Hazard Class 2 and 3 areas, site-specific studies performed as part of the plat-design process should be required to determine building setback distances from the Landslide Hazard Class 2 and 3 areas. The Draft CAO requires that buffers be established from all edges of landslide hazard areas. The default Draft CAO buffer is equal to the height of the slope. Building setbacks could be revised (reduced) by City reviewers if future geotechnical investigations during plat design indicate that a reduction in setback would not adversely impact landslide hazards. Conversely, the buffer could be increased, if warranted. Because of the low-slope gradients, no setback distances are required in Landslide Hazard Class 1.

- Water from the proposed infiltration facilities or unlined detention facilities could migrate through the ground and recharge steeply sloping areas. No Class 2 or 3 landslide hazard areas are located in the immediate vicinity of the proposed large infiltration facilities; however, off-site steep slopes are located approximately 2,500 feet south of the Basin 4 infiltration facility and 4,500 feet south-southwest of the Basin 3 infiltration facility. Site-specific geotechnical recommendations for detention and infiltration ponds will be made at the time of plat-level design. To avoid adverse impacts to off-site steep slopes, the proposed comprehensive stormwater management plan includes a combination of: (1) dispersed LID infiltration designed to mimic existing ground water recharge volumes in shallow Qvr and Qvic deposits, and (2) deep infiltration at sites located far from steep slopes. Facility locations are described specifically below.

    - The southern portion of Basin 4 will incorporate LID infiltration techniques in areas underlain by permeable Qvic sediments. Off-site Landslide Hazard Area 3 slopes are present within approximately 100 to 200 feet of the southern property boundary. Water from the proposed LID infiltration facilities could migrate through the ground and recharge steeply sloping areas. However, there are two key factors that mitigate the potential for adverse impacts. 1) The unsaturated interval thickness in the Qvic, as documented by on-site exploration

borings. The unsaturated interval will provide an extensive storage "reservoir" for stormwater infiltration, and would attenuate flow peaks and avoid ground water mounding and concentrated flow at the slope face. 2) For Basin 4 LID facilities, total stormwater recharge volumes will be designed to disperse stormwater and mimic pre-developed conditions. The default Draft CAO buffer is equal to the height of the slope; in this area of the site, this would equate to roughly 400 feet (total relief from top of steep slope to Green River valley floor). During plat level design, the buffer setback should be evaluated through ground water mounding and slope stability analyses/modeling. No adverse impacts to slope stability would be anticipated due to the combined effects of small-scale infiltration, attenuation in the unsaturated zone, and implementation of the proposed stormwater management plan that is designed to mimic pre-developed condition recharge volumes in the Qvic sediments.

- Two large infiltration facilities are proposed and both would infiltrate stormwater into the unsaturated $Qpog_{1c}$ sediments, eventually recharging the pre-Olympia aquifer. Infiltrated water could migrate through the ground and recharge steeply sloping areas. Based on a comparison of the stormwater management concept (Triad, 2008) with topography, the facility for Basins 1 through 3 is located a minimum of 4,500 feet from off-site steep slopes. The facility for Basin 4 is located a minimum of 2,500 feet from off-site steep slopes. Detailed hydrogeologic mapping was performed for The Villages to determine ground water flow direction in the pre-Olympia aquifer. Infiltrated water would flow vertically through unsaturated $Qpog_{1c}$ sediments down to the pre-Olympia aquifer water table, and then would flow to the southwest. Ground water mounding would attenuate over the distance from the proposed ponds to the steep slopes, resulting in insignificant increases in the water levels at the slope faces. No adverse impacts to slope stability would be anticipated.

- All stormwater runoff from The Villages should be either directed into tightlined systems that discharge into approved stormwater facilities or dispersed into native/forested buffers at rates designed not to exceed pre-developed conditions. Erosion control measures outlined in this report would also apply for all discharge points. In particular, uncontrolled discharge in areas draining to Landslide Hazard Class 2 and Class 3 areas could cause erosion, oversteepening of the slope, and subsequent slope instability hazards.

- No fill, topsoil, or other debris should be placed over the top of Landslide Hazard Class 2 or 3 areas unless appropriate keying or other stabilizing methods are conducted on the slope prior to fill being placed. Uncontrolled material placed on steep sloping ground is susceptible to movement. Any fill planned for slopes steeper than 5H:1V (Horizontal:Vertical) should be benched and compacted into the hillside as per the

geotechnical engineer's recommendations. Depending on the proposed slope gradients, the use of retaining or erosion control structures may be required in these areas.

- No cuts should be made on or at the toe of Landslide Hazard Class 2 or 3 unless approved by the geotechnical engineer or through review of a grading plan by a geotechnical engineer. Only one area of Landslide Hazard Class 2 is within a development area; this Class 2 area is located on the northern portion of the North Property. All other Landslide Hazard Class 2 and 3 areas are located within buffers. Any proposed cuts elsewhere on The Villages should also be reviewed by the geotechnical engineer during the design process to evaluate the risk of slope instability and to provide specific mitigation recommendations designed to minimize landslide hazard potential.

- No vegetation should be removed from Landslide Hazard Class 2 or 3, with the exception of dead or diseased trees, unless approved by the geotechnical engineer or managed as part of an overall grading plan that would remove the landslide hazard. Only one area of Landslide Hazard Class 2 is within a development area; this Class 2 area is located on the northern portion of the North Property. All other Landslide Hazard Class 2 and 3 areas are located within buffers. The removal of vegetation could reduce the protective canopy on slopes and increase the risk of landslides unless otherwise mitigated. Vegetation removed from elsewhere on The Villages should follow the recommendations for erosion presented in this report.

- For both the Main and North Properties, the geotechnical engineer should be given the opportunity to review all grading, erosion, and drainage control plans prior to construction to assist in reducing the landslide hazard risks from and to the development.

6.3.3 Landslide Hazard Conclusions

Provided the mitigation measures presented in this report were implemented, construction of the Proposed Action would not increase the existing landslide hazard risks on or immediately adjacent to the Main and North Properties of The Villages. The No Action Alternative could result in increased off-site landslide hazard risks without design and implementation of a comprehensive stormwater management plan.

6.4 Seismic Hazards

6.4.1 Seismic Hazard Impacts

The effects of an earthquake can result in more damage in areas that are converted from an undeveloped condition to a more developed condition, thereby increasing the risk of seismic hazards. As described in Section 4.4.5, the Main and North Properties are located in an area

of moderate to high historical seismicity. As discussed previously in Section 4.4.5, the hazards associated with seismic events felt at The Villages include ground rupture, ground motion, liquefaction, and seismically induced landslides. These impacts would be applicable to the Proposed Action, Alternative 1, and Alternative 2 (No Action).

Surface Ground Rupture

No evidence of surface ground rupture was observed on The Villages at the time of our fieldwork. Consequently, it is our opinion that the potential of a ground surface rupture impacting The Villages as a result of seismic activity is low.

Ground Motion

Large earthquakes with magnitudes of up to magnitude 7.1 have occurred in the Puget Sound in the past. Significant ground motion caused by an earthquake of sufficient intensity could result in damage to buildings, roadways, and other structures, including utilities.

Liquefaction

Soils susceptible to liquefaction during larger seismic events were not observed during our field study. Liquefiable soils may be present in areas of The Villages underlain by shallow, saturated cohesionless soils, such as soils underlying wetland areas and streams. However, the liquefiable soils are likely relatively thin, and likely do not extend beyond the limits of delineated buffer zones that encompass individual wetlands and stream corridors. By far, the majority of the natural on-site sediments are considered to possess a low potential for liquefaction and no potential adverse impacts have been identified.

Seismically Induced Landslides

Areas prone to seismically induced landslides would probably correspond to Landslide Hazard Class 2 and 3 (see Figure 20) with or without development of The Villages. A seismic event of significant local intensity might function as a trigger mechanism for landslides and debris flows to occur on Landslide Hazard Class 2 and 3 and the off-site Class 3 landslide hazard area on the northern wall of the Green River valley, south of the Main Property (Figure 20).

6.4.2 Seismic Hazard Mitigation Measures

Surface Ground Rupture

No evidence of surface ground rupture was observed on The Villages at the time of our fieldwork. Consequently, it is our opinion that the risk of a ground surface rupture beneath The Villages is low, and no mitigation is required.

Ground Motion

All structures under the Proposed Action and the No Action Alternative should be constructed in accordance with the 2006 *International Building Code* (IBC) guidelines. If the IBC is followed, buildings would be designed to be able to sustain some damage from ground motion during the design seismic event without causing life safety concerns.

The guidelines presented in the 2006 IBC Section 1613 should be used in the seismic design of the project. The United States Geological Survey (USGS) Earthquake Hazards Program web site (http://earthquake.usgs.gov/hazmaps/) and the USGS Ground Motion Program were used to determine interpolated probabilistic ground motion values in percent of gravity (g) for an event with a return period of 2 percent exceedance in 50 years. Using the program, The Villages location was submitted using latitude and longitude for mapped spectral accelerations of S_S = 1.164 for short periods (0.2 seconds) and S_1 = 0.388 for a 1-second period. Based on the results of our subsurface exploration and our estimation of soil properties at depth utilizing available geologic data, Site Class "C", in conformance with Table 1613.5.2 of the IBC, may be used. These values correspond to site coefficients F_a = 1.0 and F_v = 1.412 in conformance with IBC Tables 1613.5.3(1) and 1613.5.3(2), respectively.

Liquefaction

The natural sediments in the proposed development areas on The Villages are considered to have a low potential for liquefaction, and no mitigations are recommended.

Seismically Induced Landslides

Mitigation measures for reducing potential landslide impacts from earthquakes include establishing slope setback distances from steep slopes, as outlined under Section 6.3.2 "Landslide Hazard Mitigation Measures." The Draft CAO requires that buffers be established from all edges of landslide hazard areas. The default Draft CAO buffer is equal to the height of the slope. Building setbacks could be revised (reduced) by City reviewers if future geotechnical investigations during plat design indicate that a reduction in setback would not adversely impact landslide hazards. It is our opinion that construction of the Proposed Action would not increase the existing seismic-induced landslide hazard risks on or immediately adjacent to the Main or North Properties provided the mitigation measures presented in this report were implemented. The No Action Alternative could result in increased off-site seismically induced landslide hazard risks without design and implementation of a comprehensive stormwater management plan.

6.5 Coal Mine Hazards

The mine hazard study performed by Golder Associates (Golder, 2006) identified three areas of The Villages that are underlain by mine workings, and did not document any sinkholes or

subsidence areas. Only the workings of Mine B under the North Property would be classified as a potential hazard area. Due to the depth of the other mine workings, the study recommended declassification of a hazard designation. The depth and extent of Mine B workings under the North Property would warrant a moderate hazard classification. Mine B had a mined thickness of about 4.5 feet and extends under the North Property at a depth of about 350 to 420 feet. For all areas of the Main and North Properties except for the extreme southeast corner of the North Property, the delineated mine hazards are very low, thus no mitigation is warranted.

For the Mine B workings area, in the southeast corner of the North Property, mine hazards, such as sinkholes, subsidence features, and collapse features were not observed, and are not anticipated. If a sinkhole or ground opening is observed during construction, the City of Black Diamond, as well as the Office of Surface Mines (OSM), should be contacted so an investigation can be completed. The remediation of any ground openings is the responsibility of OSM who will coordinate local resources to investigate, develop, and implement appropriate mitigation. Mitigation measures might include filling of sinkholes, injection grouting, or steel-reinforced concrete plugs for ground openings and collapse features. No other mitigation is warranted.

6.6 Geotechnical

6.6.1 Geotechnical Impacts

The Proposed Action for the Main and North Properties will include development of commercial and residential development areas, roads, civic areas, schools, and associated infrastructure, and will implement stormwater infiltration where feasible. The Proposed Action will require grading to achieve desired roadway, driveway, and building pad elevations. Potential geotechnical impacts could include construction-related elements, such as site preparation, structural fill placement, and foundations. Examples of potential adverse impacts could include sloughing of oversteepened temporary or permanent cut slopes, failure of fill soils due to improper placement and compaction, seepage from stormwater facilities, which could promote landslides or erosion, or excessive foundation settlement if natural bearing sediments are disturbed. However, since geotechnical oversight is an integral part of the project design and construction, no adverse impacts are considered likely. General geotechnical mitigations and considerations are presented in the following section.

6.6.2 Geotechnical Mitigation Measures and Considerations

The exploration and analysis completed for the Main and North Properties indicates that, from a geotechnical standpoint, the property is suitable for the proposed development provided the mitigation recommendations contained herein are properly followed. Medium dense to dense natural sediments are present at relatively shallow depths, and conventional spread footing foundations could generally be utilized for structural support. The construction of interior

roadway and parking areas may utilize standard construction techniques in most areas. Geotechnical design recommendations should be provided at the time design plans are finalized. As with any large-scale project, detailed geotechnical review must be performed throughout the design phase and construction process to verify that geotechnical issues/considerations have been adequately understood and the recommendations properly implemented. Site-specific geotechnical engineering recommendations must be provided as development plans and construction methods are determined during engineering design. The geotechnical recommendations presented in this section are preliminary and subject to revision as project designs evolve.

Soils Management

Portions of The Villages may be used as select borrow and on-site fill sources for construction under the Proposed Action. Outwash soils (Qvr) observed in development Basins 1, 2, and 3, and the ice-contact deposits (Qvic) observed in the southern portion of Basin 4, are likely considered to be moderate to high quality borrow material. The lodgement till deposits beneath much of The Villages typically would be composed of 25 to 45 percent material passing the No. 200 sieve (fines). Placement of the till as structural fill may be difficult if the till borrow material has a high moisture content at the time of placement.

The most critical geotechnical criteria for consideration will be: (1) establishing stable excavation sidewalls and appropriate setback limits from buildings, roadways, and other structures, (2) controlling ground water seepage from zones of perched water in the lodgement till, (3) controlling or avoiding ground water contained within the Qvr and Qvic sediments, and (4) development of acceptable settlement mitigation criteria with respect to future use of any borrow sites.

Specific recommendations regarding pit excavation and surface drainage, safety, settlement evaluation and mitigation, backfill, surcharge, and final grading should be developed during engineering design when borrow pit configurations are proposed.

Site Preparation

Site preparation of planned building, roadway, and parking areas should include removal of all trees, brush, debris, and any other deleterious material. Additionally, the upper organic topsoil should be removed and the remaining roots grubbed. Areas where loose surficial soils exist due to grubbing operations should be considered as fill to the depth of disturbance and treated as subsequently recommended for structural fill placement.

Loose natural soils and existing fill soils should be stripped down to the underlying medium dense to dense natural deposits. Since small portions of the site have been graded in the past, random soft pockets could exist, and the depth and extent of stripping can best be determined in the field by the geotechnical engineer at the time of construction. Road and parking areas

should be proof-rolled with a loaded dump truck to identify any soft spots; soft areas should be overexcavated and backfilled with structural fill.

Stable construction slopes should be the responsibility of the contractor and should be determined during construction. For estimating purposes, however, we anticipate that temporary, unsupported cut slopes in dense sand or lodgement till could be made at a maximum slope of 1H:1V. Temporary cut slopes in medium dense soil should not exceed a maximum slope of 1.5H:1V. Permanent cut slope angles must be determined once the specific design process is undertaken. As is typical with earthwork operations, some sloughing and raveling may occur, and cut slopes may have to be adjusted in the field. In addition, WISHA/OSHA regulations should be followed at all times.

Areas of The Villages are lodgement till soils which contain a high percentage of fine-grained material, making them moisture-sensitive and subject to disturbance when wet. The contractor must use care during site preparation and excavation operations in till areas so that the underlying soils are not softened. If disturbance occurs, the softened soils should be removed and the area brought to grade with structural fill. Consideration should be given to protecting access and staging areas with an appropriate section of crushed rock or asphalt treated base (ATB).

Recessional outwash and ice-contact soils encountered on The Villages typically contain lower percentages of fine-grained material than do lodgement till soils, and therefore are somewhat less moisture-sensitive than till soils. Similar softening processes can occur. Therefore, the contractor must use care during site preparation and excavation operations so that underlying soils are not compromised. Similar steps to lodgement till soil areas as described above should be considered.

Structural Fill

Structural fill will be necessary to establish desired grades in some areas on The Villages. All references to structural fill in this report refer to subgrade preparation, fill type, placement, and compaction of materials, as discussed in this section. Percent compaction in other applications, such as wall backfill, could be different than the values reported in this section and must be evaluated by the geotechnical engineer, as appropriate. The compaction specifications identified for specific applications should be used as described.

As discussed previously, if fill is to be placed on slopes steeper than 5H:1V, the base of the fill should be tied to firm, stable subsoil by appropriate keying and benching, which would be established in the field to suit the particular soil conditions at the time of grading. Generally, the keyway for hillside fills should be at least 8 feet wide and cut into firm, unyielding natural sediments. Level benches should then be cut horizontally across the hill, following the contours of the slope. No specific width is required for the benches, although they are usually

a few feet wider than the dozer being used to cut them. Any fills proposed over a slope should be reviewed by the geotechnical engineer prior to construction.

After overexcavation/stripping has been performed to the satisfaction of the geotechnical engineer/engineering geologist, the upper 12 inches of exposed ground should be recompacted to 90 percent of the modified Proctor maximum density using *American Society for Testing and Materials* (ASTM):D 1557 as the standard. If the subgrade contains too much moisture, adequate recompaction could be difficult or impossible to obtain, and should probably not be attempted. In lieu of recompaction, the area to receive fill should be blanketed with washed rock or quarry spalls to act as a capillary break between the new fill and the wet subgrade. Where the exposed ground remains soft and further overexcavation is impractical, placement of an engineering stabilization fabric could be necessary to prevent contamination of the free-draining layer by silt migration from below.

After recompaction of the exposed ground is tested and approved, or a free-draining rock course is laid, structural fill could be placed to attain desired grades. Structural fill is defined as non-organic soil, acceptable to the geotechnical engineer, placed in maximum 8-inch loose lifts, with each lift being compacted to 95 percent of the modified Proctor maximum density using ASTM:D 1557 as the standard. The top of the compacted fill should extend horizontally outward a minimum distance of 3 feet beyond the locations of the perimeter footings or roadway edge before sloping down at an angle no steeper than 2H:1V. If steeper gradients are required, an approved retaining structure or geogrid-reinforced structural fill faced with a rockery may be used.

Proposed fill soils must be evaluated by the geotechnical engineer prior to their use in fills. This requires a Proctor test on a sample of the material be performed to determine its field compaction standard. Soils in which the amount of fine-grained material (smaller than the No. 200 sieve) is greater than approximately 5 percent (measured on the minus No. 4 sieve size) should be considered moisture-sensitive. Use of moisture-sensitive soil in structural fills should be limited to favorable dry weather conditions. Much of the on-site soils generally contained significant amounts of silt and are considered moisture-sensitive. In addition, construction equipment traversing the site when the soils are wet can cause considerable disturbance. If fill is placed during wet weather or if proper compaction cannot be obtained, a select import material consisting of a clean, free-draining gravel and/or sand should be used. Free-draining fill consists of non-organic soil with the amount of fine-grained material limited to 5 percent by weight when measured on the minus No. 4 sieve fraction.

The geotechnical engineer's representative must inspect the stripped subgrade and be present during placement of structural fill to observe the work and perform a representative number of in-place density tests. In this way, the adequacy of the earthwork could be evaluated as filling progresses and any problem areas may be corrected at that time.

Foundations

Spread footings could be used for building support when founded on medium dense to dense natural soils or structural fill placed as previously described. All footings must penetrate to the prescribed bearing stratum, and no footing should be founded in or above loose, organic, or existing fill soils. Allowable foundation soil bearing pressures can be determined once detailed project plans are available.

It should be noted that the area bounded by lines extending downward at 1H:1V from any footing must not intersect another footing or intersect a filled area that has not been compacted to at least 95 percent of ASTM:D 1557. In addition, a 1.5H:1V line extending down from any footing must not daylight because sloughing or raveling could eventually undermine the footing. Thus, footings should not be placed near the edge of steps or cuts in the bearing soils.

Disturbed soil not removed from footing excavations prior to footing placement could result in increased settlements. All footing areas should be inspected by the geotechnical engineer prior to placing concrete to verify that the design bearing capacity of the soils has been attained and that construction conforms with the geotechnical recommendations. Perimeter footing drains should be provided as recommended by the geotechnical engineer.

Detention Ponds/Sand Filters

Stormwater seepage from these facilities could result in increased landslide and erosion hazard potential; therefore, specific geotechnical engineering recommendations must be incorporated into the final design. These facilities must be constructed in a way that will restrict seepage potential. Alternatives include: (1) clay liners, 2) geosynthetic liners, (3) scarification and recompaction in fine-grained (i.e., till) soils, and 4) geotechnical design of any berms. Additional measures or alternatives may be identified by the geotechnical engineer as design plans are finalized.

7.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES: GROUND WATER

The ground water analyses included in this report are focused primarily on unmitigated probable significant impacts to interflow, ground water levels in the aquifers identified as underlying The Villages, and flow in springs located along the northern wall of the Green River valley. Table 7-1 summarizes the unmitigated probable significant impacts and mitigation measures discussed in this chapter.

Table 7-1
Summary of Impacts and Mitigations

Hazard	Unmitigated Probable Significant Impacts	Proposed Mitigation Measures Designed into the Proposal	Unavoidable Impacts
Ground Water			
Interflow	• Disruption of interflow regimes and recharge to deeper aquifers.	• Typical wetland buffers and maintenance of interflow pathways with free-draining material beneath roadways.	• None.
Aquifers	• Change in recharge rates in some locations.	• Stormwater concept includes infiltration to maintain ground water recharge.	• None.
		Main Property • Insignificant change in recharge (increase to pre-Olympia aquifer, decrease to $Qpog_{2c}$).	• None.
		North Property • Insignificant change in recharge (increase to shallow aquifer).	• None.
Springs	• Change in recharge rates in some locations.	Main Property • Insignificant change in recharge (increase to pre-Olympia aquifer, decrease to $Qpog_{2c}$)	• None.
		North Property • Insignificant change in recharge (increase to shallow aquifer).	• None.

7.1 Interflow

7.1.1 Interflow Impacts

Unmitigated development may impact the drainage basin hydrology where ground water movement is dominated by interflow. Since interflow occurs at relatively shallow depths, commonly 2 to 4 feet on The Villages, based on exploration pits (Appendix 2), regrading activities may disrupt existing interflow pathways and create new pathways. Roads, utility, and drainage trenches could intercept this shallow subsurface water and rapidly pipe the water to a surface water discharge location. Reduction of natural recharge to the interflow zone, if not replaced from other sources, could reduce wetland hydrology. Reduction of recharge to interflow could also reduce recharge to underlying aquifers. To avoid impacts, the proposal generally includes maintenance of buffers around wetlands and maintenance of interflow drainage pathways under roadways, as described in Section 7.1.2 of this report.

7.1.2 Interflow Mitigation

Impacts to wetland hydrology have been largely avoided by locating development areas outside of wetlands and wetland buffers. One of the largest impacts to the interflow network and on-site wetlands may be caused by road construction, where cutting and filling can change interflow drainage pathways. The roadway alignments for the Proposed Action largely avoid probable significant impacts to wetlands since they are located beyond wetland buffers. However, under the Proposed Action, in order to access developable areas, the following road crossings will be necessary: Wetlands B1 and B6 on the North Property, wetland complexes on Parcel F, and Wetlands G and 103 within Basin 4 on the BDA Parcel. Where feasible, the proposed road crossing uses an existing road trapezoid, and reduces the width of right-of-way to the greatest extent possible to minimize wetland impact. Roadways for these crossing areas may encounter subsurface drainage pathways upslope of the wetlands. For these segments of roadway, the existing water-bearing and/or subgrade soils could be overexcavated and replaced with a well-graded, "free-draining" material, such that a minimum of 2 feet of free-draining material is maintained above the bearing stratum. This 2-foot drain layer would be constructed such that the near-surface ground water may continue to flow through the roadway corridor. It may be desirable to construct this drain layer with a well-graded, crushed rock under certain field and construction conditions. This would be determined in the field at the time of construction. This free-draining material prevents the interception and diversion of interflow, and the net effect is that the interflow regime is maintained downslope from the roadway.

Wetland Resources (2008) and Triad Associates (Triad, 2008) describe routing of roof runoff to various wetland buffers to maintain wetland hydrology.

7.2 Ground Water

As described by Triad's stormwater concept and exhibits, the control of stormwater under the Proposed Action for The Villages proposes detention or infiltration of all stormwater runoff. For the Main Property, stormwater in Basin 1 will be infiltrated into Qvr using Low Impact Development (LID) techniques. Stormwater in Basins 2 and 3 will be either: (1) infiltrated into Qvr through LID techniques (volumes to match pre-developed condition), (2) collected in a water quality pond and then infiltrated into $Qpog_{lc}$ through a large infiltration facility, or (3) discharged to wetland buffers to maintain wetland hydrology (roof water only). Stormwater in Basin 4 will be either: (1) infiltrated into Qvic through LID techniques (volumes to match pre-developed condition), (2) collected in a water quality pond and then infiltrated into $Qpog_{lc}$ through a large infiltration facility, or (3) discharged to wetland buffers to maintain wetland hydrology (roof water only). Stormwater in Basin 5 will be either collected in a detention pond or discharged to wetland buffers to maintain wetland hydrology (roof water only). Stormwater in Basin 6 will either be collected in a detention pond or discharged to wetland buffers to maintain wetland hydrology (roof water only). For the North Property in the developed condition, stormwater runoff from the northern portion of Basin 7 will be infiltrated into the outwash in the northwest corner of the basin via LID techniques or conventional infiltration facilities. Stormwater runoff from the southern portion of the basin will be managed with two detention ponds to meet discharge requirements per the 2005 Washington State Department of Ecology (Ecology) *Stormwater Management Manual for Western Washington* (Ecology Manual). Water from the detention ponds will be dispersed to wetlands via level spreaders. Stormwater control is described in the "Stormwater Concept and Exhibits" (Triad, 2008).

The ground water analyses included in this report are focused primarily on probable significant impacts to ground water recharge beneath The Villages. Unmitigated probable significant impacts to ground water recharge identified during our analysis of the proposal include:

1. Gain or loss of ground water recharge resulting from the conversion of undeveloped land to residential land;

2. Impacts to underlying aquifers and downgradient ground water usage as a result of change in recharge; and

3. Impacts to springs as a result of change in recharge.

Our analysis included comparing the relative timing and magnitude of the various hydrologic components (water balance) that might affect existing ground water flows and volumes as a result of development of The Villages. Probable significant impacts, potential mitigation measures, and unavoidable adverse impacts to ground water flow are also described in this section of the report.

7.2.1 Developed Conditions Water Balance

Development has the potential to change the amount of surface water runoff and ground water recharge. Clearing of the forest and replacing it with suburban landscaping (such as lawns) reduces evapotranspiration, increasing the amount of water available for both ground water recharge and/or runoff. Depending upon how stormwater is managed, the increase in ground water recharge may be counteracted by an increase in impervious surfaces (building and pavement areas), and other factors. The primary factors that could increase the amount of ground water recharge relative to pre-developed conditions are: 1) infiltration of stormwater runoff, 2) infiltration of imported water, such as that used for irrigation or discharged to septic systems, and 3) conversion of existing forestland to cleared, pervious surfaces (lawns, shrubbery, etc.). The primary factors that would decrease the amount of ground water recharge are: 1) compacted soil or the addition of impervious surfaces that generate stormwater runoff that exits the site as overland flow, 2) diverting stormwater runoff to off-site locations, and 3) removal or compaction of soils forming the interflow network.

Of the Proposed Action and the No Action Alternative, the Proposed Action would include the largest impervious surface acreage, and would have the largest effect on ground water recharge. The Main Property of The Villages would convert 494 acres to impervious surfaces. The North Property of The Villages would convert 38 acres to impervious surfaces. Water balance calculations were performed separately for the Main Property and the North Property.

The primary components of the water balance at The Villages under developed conditions include: ground water recharge (RCH), precipitation (PPT), stormwater infiltration (INF), evapotranspiration (ET), and transported stormwater runoff (RO). These components are related by the following equation:

$$\mathbf{RCH = PPT + INF - ET - RO}$$

Precipitation rates are expected to remain the same under developed conditions (approximately 54.1 inches per year). The conversion of forested land to residential land by the proposed development will increase the amount of PPT that will be available to recharge through the surficial sediments or runoff because forested land has a higher ET rate than residential land.

Monthly ET values for cleared, pervious areas under developed conditions were estimated using the Washington State University (WSU) penman data for a grass cover. Recharge and runoff estimates for the grass-covered areas were then calculated using the revised ET data, as described in detail in Appendix 10. Recharge in impervious areas was assumed to be zero.

Water balance results for the Main Property and the North Property are summarized separately in Tables 7-2 and 7-3, respectively.

Discussion of Results – Main Property

As described in Section 5.6.5, recharge calculations for the pre-developed condition examine flux of water under two scenarios: (1) through the Vashon lodgement till into the underlying deeper sediments, such as pre-Olympia deposits, or (2) directly into the Vashon recessional outwash (Qvr) or Vashon ice-contact deposits (Qvic) where present at the ground surface. Unmitigated ground water recharge under the developed condition assumes that stormwater runoff is unavailable for recharge. Mitigated ground water recharge incorporates provisions in the "Stormwater Concept" (Triad, 2008), including stormwater infiltration (INF), where constructed infiltration facilities allow treated stormwater runoff to be discharged into the subsurface. Under the mitigated conditions, this infiltrated water flows vertically downward to the underlying aquifer and contributes to ground water recharge.

Water balance results for the pre-developed condition and unmitigated developed condition are compared to runoff available for infiltration in Table 7-2 for the Main Property Qvr shallow aquifer, Qvic shallow aquifer, pre-Olympia aquifer, and $Qpog_{2c}$ aquifer.

Review of recharge results indicates that, without mitigation, the proposed development would result in ground water recharge losses to the aquifers underlying the Main Property. As discussed above, to mitigate for lost recharge and maintain wetland hydrology, the "Stormwater Concept" (Triad, 2008) for The Villages incorporates:

1. Infiltration of stormwater into Qvr or Qvic through several small shallow dispersed LID infiltration facilities (volumes to match pre-developed condition);

2. Infiltration of stormwater collected in two water quality ponds and then infiltrated into $Qpog_{1c}$ through two large infiltration facilities, located in areas where $Qpog_{1c}$ sediments are relatively near the ground surface, and infiltrated water would provide recharge to the pre-Olympia aquifer; and

3. Discharge of clean roof runoff and possibly limited treated runoff from residential areas to wetland buffers to maintain wetland hydrology.

The approximate volume of runoff directed to stormwater infiltration was calculated by Associated Earth Sciences, Inc. (AESI) and is summarized in Appendix 10.

Direct infiltration of stormwater runoff will provide water for aquifer recharge. Suitable soils for infiltration, including Vashon recessional outwash and Vashon ice-contact deposits (Figure 9), are present at ground surface over all of Basin 1, most of Basin 2, a small portion of Basin 3, and the southwestern portion of Basin 4 (see Figure 30 for developed basin locations). Access to shallow $Qpog_{1c}$ soils for deeper ground water recharge is limited to scattered windows through the till, as shown on Figure 27.

After accounting for additional recharge from stormwater infiltration, the mitigated developed condition recharge in the shallow Qvr and Qvic aquifers will closely match pre-developed condition recharge by using LID small-scale dispersed infiltration. Because the pre-developed condition recharge will be closely matched, no probable significant impacts to the shallow Qvr and Qvic aquifers would result from development of The Main Property under the Proposed Action.

Additional runoff from Basins 1 through 4 will be routed to large infiltration facilities in Basin 3 and in an off-site stormwater easement west of the Main Property. The additional stormwater will recharge the pre-Olympia aquifer. The mitigated developed condition recharge in the pre-Olympia aquifer will increase about 650 acre-feet/year. The calculated recharge reduction to the $Qpog_{2c}$ aquifer is about 144 acre-feet/year.

Pre-Olympia Aquifer

The calculated increase in recharge of about 650 acre-feet/year to the pre-Olympia aquifer amounts to approximately 2.2 percent of the total volume of the pre-Olympia aquifer tributary to the Crisp Creek springs and springs along the Green River slope between Crisp Creek and the southwest corner of the Main Property. The volume of the pre-Olympia aquifer in this calculation was 30,000 acre-feet, and assumed an area of approximately 2,500 acres, an average thickness of 60 feet, and a porosity of 0.20. This volume is considered to be a conservative estimate. In the project monitoring wells completed in the pre-Olympia aquifer, during low aquifer conditions in November 2007, the saturated aquifer thickness ranged from 43 to 131 feet. The average thickness during the low aquifer conditions in November 2007, excluding the high value of 131 feet, was about 60 feet. Hydrographs demonstrating seasonal fluctuations are presented in Appendix 5. A thicker aquifer interval corresponds to an overall smaller percent relative increase.

The calculated recharge increase to the pre-Olympia aquifer is not considered to be a probable significant impact due to following:

- The calculated recharge increase is small relative to the total volume of the pre-Olympia aquifer tributary to the Crisp Creek springs and springs along the Green River slope between Crisp Creek and the southwest corner of the Main Property, at about 2.2 percent; and

- The infiltrated water will be introduced into the subsurface far enough upgradeint from steep slopes that any measureable ground water mounding will be attenuated prior to discharge to Crisp Creek springs and springs along the Green River slope between Crisp Creek and the southwest corner of the Main Property.

Because of the above factors, no probable significant impacts to the pre-Olympia aquifer would result from development of the Main Property under the Proposed Action.

$Qpog_{2c}$ Aquifer

The reduction in recharge to the $Qpog_{2c}$ aquifer amounts to approximately 4.8 percent of the portion of the $Qpog_{2c}$ aquifer in the vicinity of The Villages. The volume of the $Qpog_{2c}$ aquifer in this calculation assumed an aquifer area of approximately 600 acres and a thickness of 25 feet (based on low aquifer conditions in well MW-14, located near the northwestern edge of upland, near an aquifer discharge zone). This volume is considered to be a conservative estimate because the areal distribution of the $Qpog_{2c}$ aquifer likely extends east-southeast-ward and the aquifer thickness likely increases toward the center of the upland. However, due to limited deep subsurface information, the change in recharge was compared to the conservative estimate of aquifer volume to provide context to qualitatively describe impacts. Hydrographs demonstrating seasonal fluctuations are presented in Appendix 5.

The water balance calculations suggest that under developed-mitigated conditions, site development will result in a reduction in recharge to the $Qpog_{2c}$ aquifer beneath the Section 27 upland of 144 acre-feet. However, this value is interpreted to be a maximum estimate of recharge losses, in that they neglect recharge from several other, difficult to quantify sources, including:

- The conversion of forested cover to a developed condition significantly reduces the interception losses associated with the forest canopy allowing precipitation to fall through to the ground surface. As previously described, a United States Geological Survey (USGS) study that focused on ground water recharge in till-mantled catchments (Bauer and Mastin, 1997) stated interception loss in evergreen-forested areas *"can be the largest single water-budget component (excluding precipitation) and was measured to be almost one-half of the annual precipitation during this investigation."* The additional precipitation falling through to the ground surface combined with a reduction in ET is interpreted to allow for extended periods of soil moisture, providing opportunities for ground water recharge. The rate of ground water flow through an aquitard (low-permeability unit), such as the till, is controlled primarily by the hydraulic conductivity of the formation. The saturated thickness of the overlying "aquifer" (interflow zone) has very little influence on the rate of flow through the aquitard. Under developed conditions, the soil horizon will be subject to more frequent wetting due to the throughfall of precipitation and reduced ET providing opportunities for recharge to underlying aquifers.

- Irrigation/watering of lawns, parks, and other landscape features. Since the public water supply will be imported from off-site sources, any recharge from excess irrigation/watering will be a new recharge source. There is limited information available on irrigation return flows (as recharge) from residential densities similar to that proposed for The Villages. Due to the number of variables involved, our analysis does not try to estimate excess irrigation/watering for The Villages, but estimates can range from zero to 3 inches per year. This is described in more detail in Appendix 10.

- Some water will run off the edges of impervious surfaces (roofs, pavement, sidewalks) onto pervious ground, with local recharge through the underlying soil column.

- Backfill along utility trenches in low-permeability parent material typically has a higher permeability than the unweathered native soil and can provide a pathway for some additional recharge.

The USGS published a report (Konrad and Booth, 2002) summarizing the results of a study that had been initiated, in part, under the assumption that development-related reductions in ground water recharge would be identified in urban area streamflows. Instead, the study stated *"Changes in hydrologic processes, such as infiltration and recharge, resulting from urban development apparently do not have a general influence on annual low flows...."* This finding means that aquifer water levels are not being adversely impacted by urban development, otherwise low flows in the streams should have been quantifiably reduced.

The calculated recharge deficit to the $Qpog_{2c}$ aquifer is not considered to be a probable significant impact because:

- The calculated deficit is small relative to the total volume of the $Qpog_{2c}$ aquifer beneath The Villages project, at about 4.8 percent;

- Additional, non-quantifiable recharge will occur.

Because of the above factors, no probable significant impacts to the $Qpog_{2c}$ aquifer would result from development of the Main Property under the Proposed Action.

Discussion of Results – North Property

Under the Proposed Action for the North Property, runoff conveyed to the stormwater collection system will be: (1) discharged back into on-site wetland buffers to maintain wetland hydrology, and (2) routed to infiltration systems and infiltrated into coarse-grained Vashon recessional outwash sediment. The majority of the North Property is underlain at depth by the Vashon lodgement till over relatively shallow bedrock, as shown on Figure 9. In the northwestern corner of the North Property, Vashon recessional outwash is present at the ground surface. In the southwestern corner of the North Property, a large wetland complex extends off-site. Recharge in these areas eventually discharges to Ravensdale Creek baseflow and/or flows to Lake Sawyer.

Water balance results for the pre-developed condition and unmitigated developed condition are compared to runoff available for infiltration in Table 7-3 for the North Property.

Review of recharge results indicates that, without mitigation, the proposed development of the North Property will result in a net ground water recharge loss of 166 acre-feet per year. As

discussed above, to mitigate for lost recharge and maintain wetland hydrology, the "Stormwater Concept" (Triad, 2008) for the North Property incorporates infiltration of stormwater into Qvr through either LID infiltration facilities or conventional infiltration ponds and discharge of runoff to wetland buffers to maintain wetland hydrology.

Direct infiltration of stormwater runoff will provide water for aquifer recharge. Suitable soils for infiltration, including Vashon recessional outwash (Figure 9), are present at ground surface over the northwest corner of Basin 7 North (see Figure 30 for developed basin locations).

Because of the conversion of forested land to developed surfaces, the ET will be reduced under the developed condition, allowing more rainfall to reach the ground surface. The developed condition impervious surfaces will generate significant runoff, as shown in Table 7-3. A component of the runoff will be routed to wetlands to maintain wetland hydrology. Runoff in excess of what is necessary to maintain wetland hydrology will be routed to infiltration facilities in the northwest corner of Basin 7. The excess stormwater will recharge the recessional outwash. The mitigated developed condition recharge to the shallow aquifer contained in the recessional outwash will increase. The non-quantifiable, diffuse sources of recharge described in the preceding section ("Discussion of Results – Main Property") also apply to the North Property.

No probable significant impacts to the Vashon recessional aquifer would result from development of the North Property under the Proposed Action.

7.2.2 Aquifer Impacts Under the Proposed Actions

Bedrock Aquifer, $Qpon_{lf}$ Aquifer, and Qva Aquifer

Probable significant impacts to the bedrock aquifer, $Qpon_{lf}$ aquifer and Qva aquifer could occur if development of The Villages resulted in a significant reduction in recharge.

Generally, the bedrock aquifer and $Qpon_{lf}$ aquifer are separated from The Villages by Vashon lodgement till, Vashon advance outwash, Olympia nonglacial deposits, and/or the pre-Olympia till, and a long sequence of unsaturated, coarse-grained, pre-Olympia-age deposits. An exception to this occurs on the easternmost portion of the Main Property where Vashon lodgement till directly overlies the $Qpog_{2c}$ sediments (see Figure 9). As described in the water balance analysis section of this report, no significant reduction in ground water recharge will occur as a result of the Proposed Action.

Therefore, no probable significant adverse impacts to the bedrock aquifer or water-bearing zones within the $Qpon_{lf}$ deposits, or yields to neighboring wells completed in the bedrock aquifer or water-bearing zones within the $Qpon_{lf}$ deposits, have been identified.

Pre-Olympia Aquifer

The pre-Olympia aquifer is of regional importance to drinking water users and hatchery production. The pre-Olympia aquifer is comprised of both coarse-grained glacial ($Qpog_{lc}$) and nonglacial ($Qpon_{lc}$) sediments, and is interpreted to underlie the majority of the Main Property. Ground water flowing in the pre-Olympia aquifer discharges to lower elevation portions of Crisp Creek, to a number of springs along the northern Green River valley slope, and to many area water wells north and west of the Main Property of The Villages. The pre-Olympia aquifer is separated from the ground surface across most of the Main Property by Vashon lodgement till, except for areas where the overlying till is absent, as described in Section 5.4.3. Distribution of the pre-Olympia aquifer is illustrated on Figure 27.

Probable significant impacts to the pre-Olympia aquifer could occur if development of The Villages resulted in a significant reduction in recharge. However, as described in the water balance analysis section of this report, a small increase in ground water recharge will occur as a result of the Proposed Action. Therefore, no probable significant impacts to the pre-Olympia aquifer, or yields to neighboring wells completed in the pre-Olympia aquifer have been identified.

As described in the "Developed Conditions Water Balance," Section 7.2.1, under the Proposed Action, the additional stormwater runoff from Basins 1 through 4 (Figure 30) will be infiltrated into the pre-Olympia outwash deposits. Potential water quality impacts from stormwater infiltration were evaluated for domestic wells downgradient of the infiltration pond completed in the pre-Olympia aquifer (A.C. Kindig & Co. [A.C. Kindig], 2008). No domestic wells completed in the pre-Olympia aquifer were identified downgradient of the proposed $Qpog_{lc}$ infiltration facilities. Downgradient springs from the pre-Olympia aquifer provide baseflow to Crisp Creek and a number of springs between Crisp Creek and western property boundary of the Main Property. At least one of the pre-Olympia aquifer springs is used for domestic supply (Appendix 9). No wells completed in the pre-Olympia aquifer were identified downgradient of the Basin 3 and Basin 4 $Qpog_{lc}$ infiltration facilities.

Ground water elevations measured in observation wells completed in the pre-Olympia aquifer indicate the direction of ground water flow is west-southwest (Figure 27), as described in Section 5.4.3 of this report. The travel time to pre-Olympia springs along the Green River slope and within Crisp Creek from the proposed infiltration facilities was calculated using a Darcy velocity ($v = Ki/n_e$). The hydraulic conductivity (K) used in our analysis was a conservative value based on aquifer characteristics determined during field infiltration testing (AESI, 2008), and applicable aquifer testing conducted by Golder Associates (Golder) (Appendix 7). Hydraulic gradient (i) was calculated using site-wide ground water elevations. The effective porosity (n_e) was estimated based on the soil descriptions for the pre-Olympia outwash sediments (Appendices 2 and 3). A conservative K value of 100 feet/day (ft/day), a gradient of 0.005, and effective porosity of 0.20 yielded a velocity of 2.5 ft/day. Based on a distance of approximately 3,000 feet, the calculated travel time from the nearest proposed

infiltration facility to pre-Olympia springs along the Green River slope and within Crisp Creek is approximately 3.3 years.

The existing ground water quality for the portions of the pre-Olympia aquifer providing the source of water to pre-Olympia springs along the Green River slope and within Crisp Creek would not be adversely impacted by infiltrated storm water at The Villages based on the storm water treatment system and travel time (approximately 3.3 years) from the nearest infiltration facility pond to pre-Olympia springs along the Green River slope and within Crisp Creek.

Additional analyses of potential ground water quality impacts resulting from stormwater infiltration were performed by A.C. Kindig (2008). From this analysis, water quality modeling identified a 30-day degradation for predicted fecal coliform concentrations in the infiltrated stormwater. The 30-day time of travel would extend about 75 feet west-southwest from the $Qpog_{lc}$ infiltration points.

Shallow Aquifer

The aquifer contained in the Qvr and Qvic deposits is the shallowest aquifer beneath The Villages, and is most susceptible to development-related impacts. Distribution of the shallow aquifer is illustrated on Figure 28.

Probable significant impacts to the shallow aquifer could occur if development of The Villages resulted in a significant reduction in recharge. However, as described in the water balance analysis section of this report, developed condition recharge for the Proposed Action will be managed to mimic pre-developed condition recharge. Therefore, no probable significant impacts to the shallow aquifer have been identified.

As described in the "Developed Conditions Water Balance," Section 7.2.1, under the Proposed Action, the stormwater runoff from the Main Property will be infiltrated into the Qvr and Qvic deposits at volumes that closely match the pre-developed condition to avoid impacts to Horseshoe Lake or landslide hazards. Stormwater runoff from the North Property will be infiltrated into the Qvr deposits to maintain ground water recharge to the shallow aquifer in the vicinity of Ravensdale Creek and Lake Sawyer. No domestic wells completed in the shallow aquifer were identified downgradient of the proposed shallow aquifer infiltration areas.

Additional analyses of potential ground water quality impacts resulting from stormwater infiltration were performed by A.C. Kindig (2008). From these analyses, water quality modeling identified a 30-day degradation for fecal coliform. Ground water flow within the Qvr and Qvic deposits comprising the shallow aquifer would be generally controlled by the shape of the underlying lodgement till surface and is shown on Figure 28, as described in Section 5.4.3 of this report. Due to flowpaths within the Qvr and Qvic, and infiltration into pre-Olympia deposits, no significant adverse impact to ground water quality would occur.

7.2.3 Spring Impacts

A diffuse spring zone representing discharge from the $Qpog_{2c}$ aquifer is present at approximately elevation 600 to 620 feet mean sea level (fmsl) along the northwestern portion of the upland in Sections 22 and 23 within Basin 4 (Figure 3). Discharge from this spring zone forms the headwaters to Wetlands 401 and 402, which discharge to the Category 1 Wetland 108 contained in the Black Diamond Lake swale. Off-site to the south in Section 27, Mullineaux's Orting Drift is mapped as directly overlying bedrock along the northern slope of the Green River valley. Springs forming at this contact are interpreted to represent discharge from the $Qpog_{2c}$ aquifer. Probable significant impacts to the $Qpog_{2c}$ aquifer springs could occur if development of The Villages resulted in a significant reduction in recharge. However, as described in the "Developed Conditions Water Balance," Section 7.2.1 of this report, no significant reduction in ground water recharge will occur as a result of the Proposed Action. Therefore, no probable significant impacts to the $Qpog_{2c}$ aquifer springs have been identified.

Ground water flowing in the pre-Olympia aquifer discharges to lower elevation portions of Crisp Creek, to a number of springs along the northern Green River valley slope, and to many area water wells north and west of the Main Property of The Villages. A very minor, likely immeasurable, increase in spring flow is anticipated due to increased recharge to the pre-Olympia aquifer under the Proposed Action. However, the calculated increase is small; therefore, no probable significant impacts to the pre-Olympia aquifer springs have been identified.

Because ground water recharge to overlying units will not be adversely impacted by The Villages, springs emanating from deeper aquifer intervals or from bedrock in hydraulic connection with units underlying The Villages along the Green River valley slope would not be impacted by the development of The Villages.

7.2.4 No Action Alternative

Development under the No Action Alternative would have a smaller impervious area footprint; however, no coordinated stormwater management system would be constructed. Impacts to ground water recharge could include an increase in recharge in the shallow aquifer portions of the site if all runoff from developed areas were infiltrated, and potential reduction in recharge to the pre-Olympia aquifer without deep infiltration facilities.

7.2.5 Ground Water Mitigation Measures

No probable significant impacts to aquifers or springs were identified, and no mitigation measures are required.

Table 7-2
Main Property of The Villages
Comparison of Pre-Developed and Developed Condition

Ground Water Basin	Condition	Acres	PPT (ac-ft)	ET (ac-ft)	Unmitigated RCH (ac-ft)	RO (ac-ft)	Proposed Infiltration (ac-ft)	Mitigated Change in RCH (ac-ft)
Horseshoe Lake Shallow Recharge	Pre-Dev	179.4	808.0	349.2	701.8	(64.1)		
	Developed	179.4	808.0	164.5	114.0	529.6	587.8	Nil
change				(184.8)	(587.8)	593.7		
Pre-Olympia Aquifer Recharge	Pre-Dev	509.2	2,293.5	991.2	848.3	275.1		
	Developed	509.2	2,293.5	750.1	512.6	1,030.8	984.4	648.6
change				(241.2)	(335.7)	755.7		
Qvic-LID Shallow Aquifer	Pre-Dev	133.3	600.4	259.5	400.5	(47.7)		
	Developed	133.3	600.4	127.4	121.8	351.2	278.6	Nil
change				(132.1)	(278.6)	398.9		
$Qpog_2$ Deeper Recharge	Pre-Dev	295.0	1,328.7	574.3	410.5	332.0		
	Developed	295.0	1,328.7	418.9	266.4	643.4	NA	(144.2)
change				(155.3)	(144.2)	311.4		

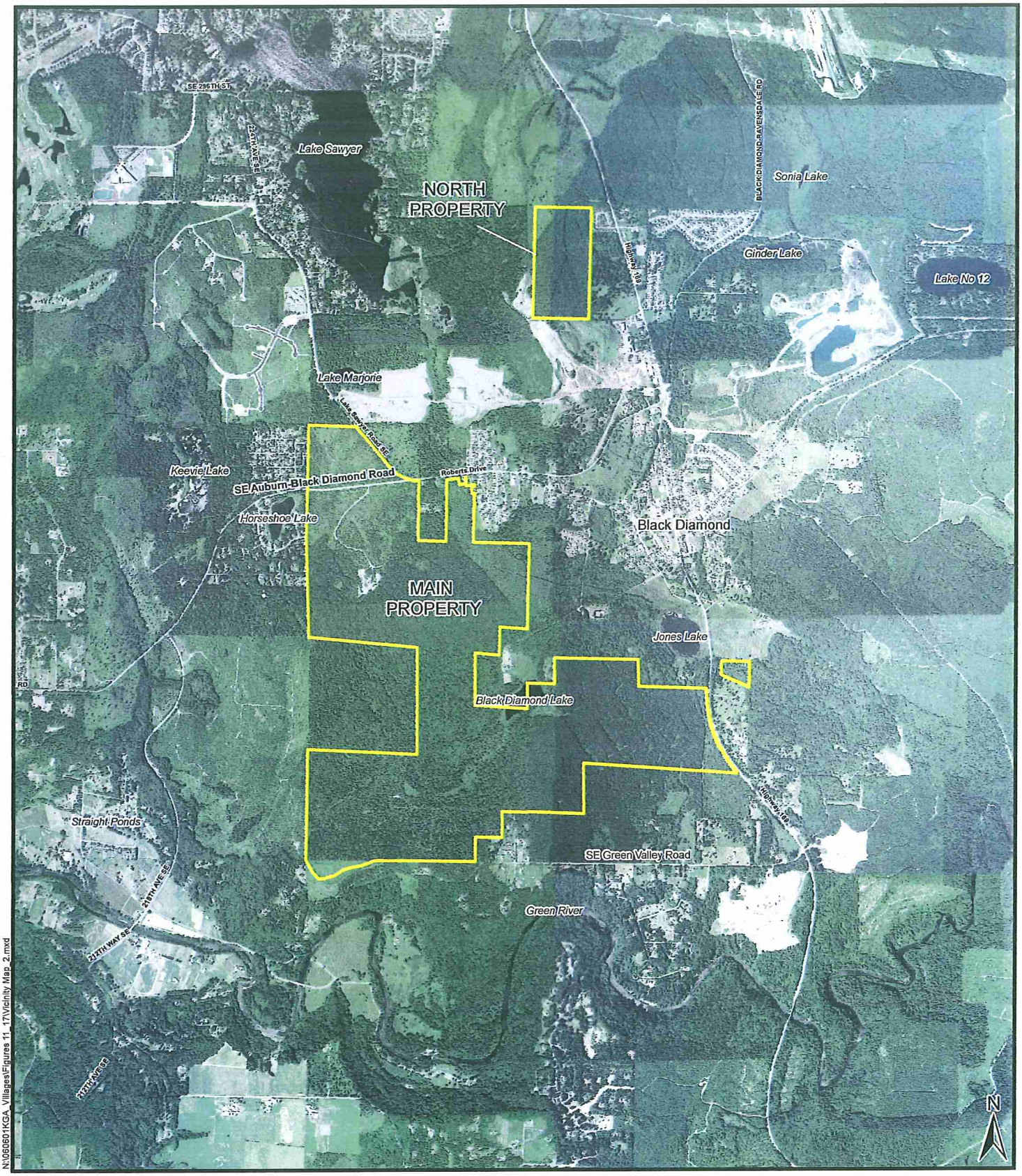
ac-ft = acre-feet
PPT = Precipitation
ET = Evapotranspiration
RCH = Recharge
RO = Runoff
NA = Not Applicable

Table 7-3
North Property of The Villages
Comparison of Pre-Developed and Developed Condition

Basin	Condition	Acres	PPT (ac-ft)	ET (ac-ft)	Unmitigated RCH (ac-ft)	RO (ac-ft)
Basin 7	Pre-Developed	81.6	367.5	158.8	237.9	(29.2)
	Developed	81.6	367.5	107.0	72.1	188.4
change				(51.8)	(165.8)	217.6

ac-ft = acre-feet
PPT = Precipitation
ET = Evapotranspiration
RCH = Recharge
RO = Runoff

8.0 REFERENCES



N:\060601KGA_Villages\Figures 11_17\Vicinity Map_2.mxd

Feet
0 1,500 3,000

References: Air Photo (circa 2002), parcel outline - King County GIS center, acquired 2-08

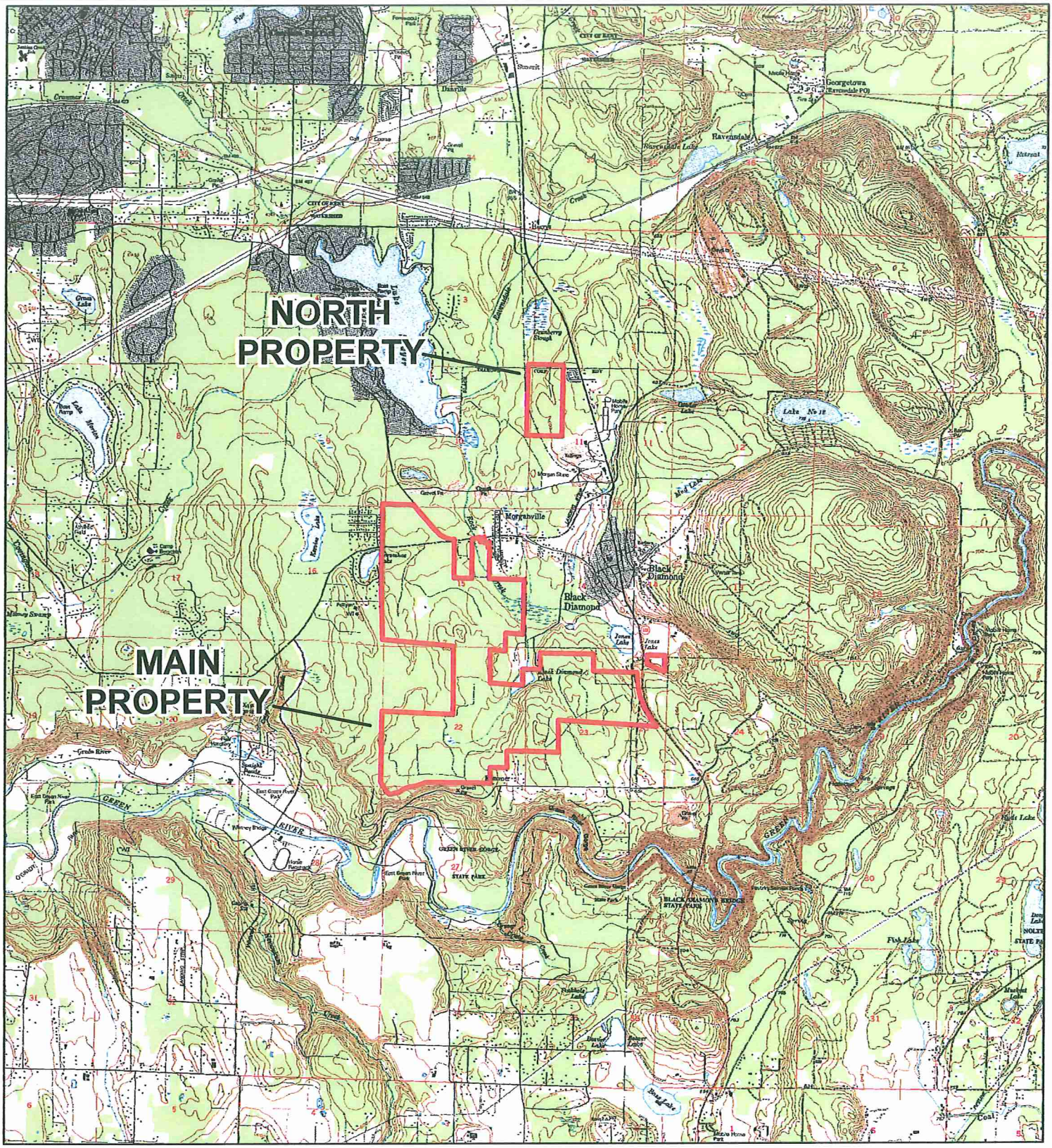
Associated Earth Sciences, Inc.

VICINITY MAP
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 1

DATE 9/08

PROJ. NO. KG060601A



Reference: USGS 250K topographic map, acquired from the University of Washington GIS datacenter 8-08

Associated Earth Sciences, Inc.

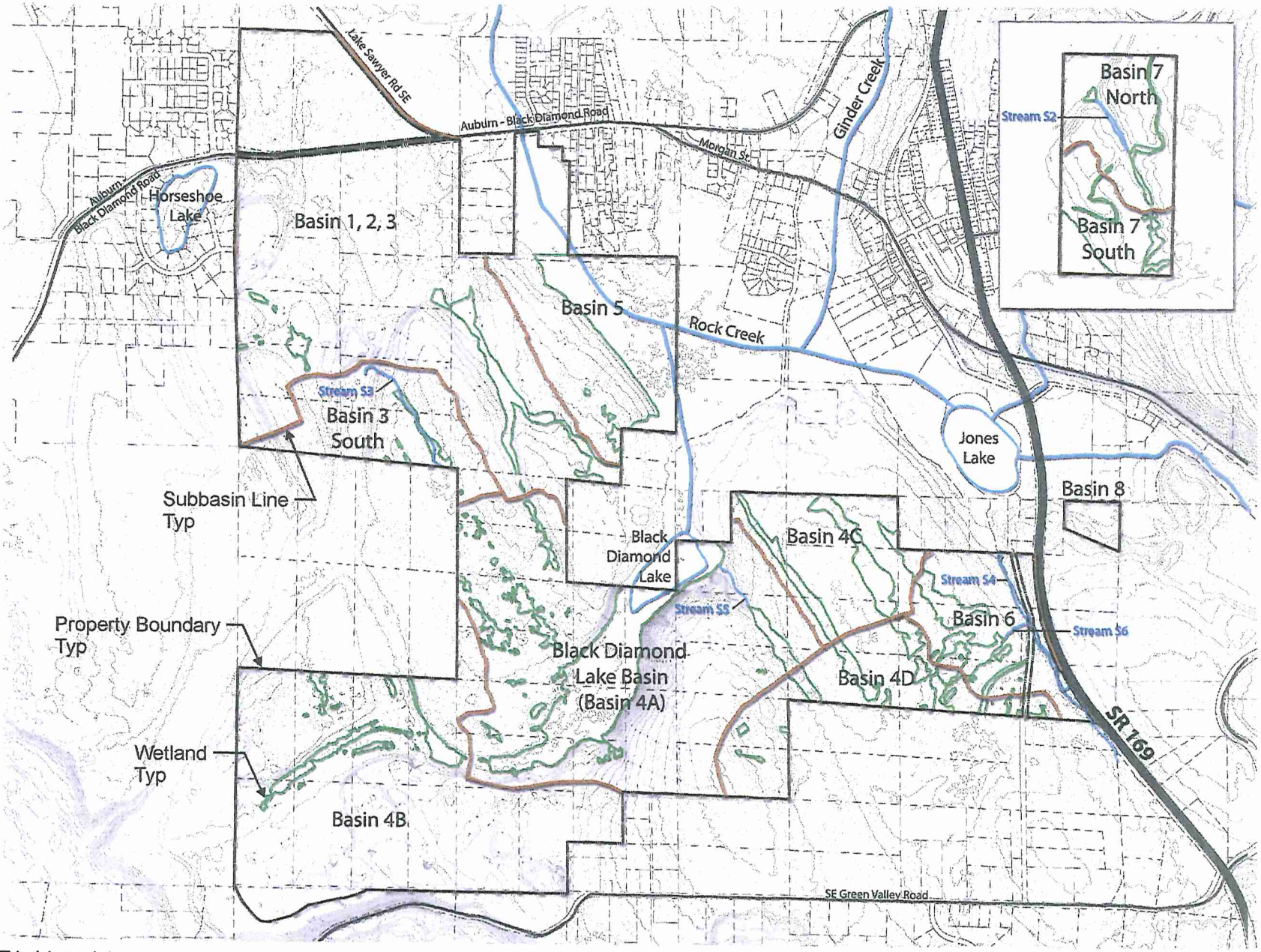
REGIONAL TOPOGRAPHIC SETTING
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 2

DATE 9/08

PROJ. NO. KG060601A

N:\060601KGA_Villages\Figures 11_17\Regional_topo Map



Reference: Triad Associates

Associated Earth Sciences, Inc.

EXISTING DRAINAGE BASINS, STREAMS AND WETLANDS MAP

THE VILLAGES

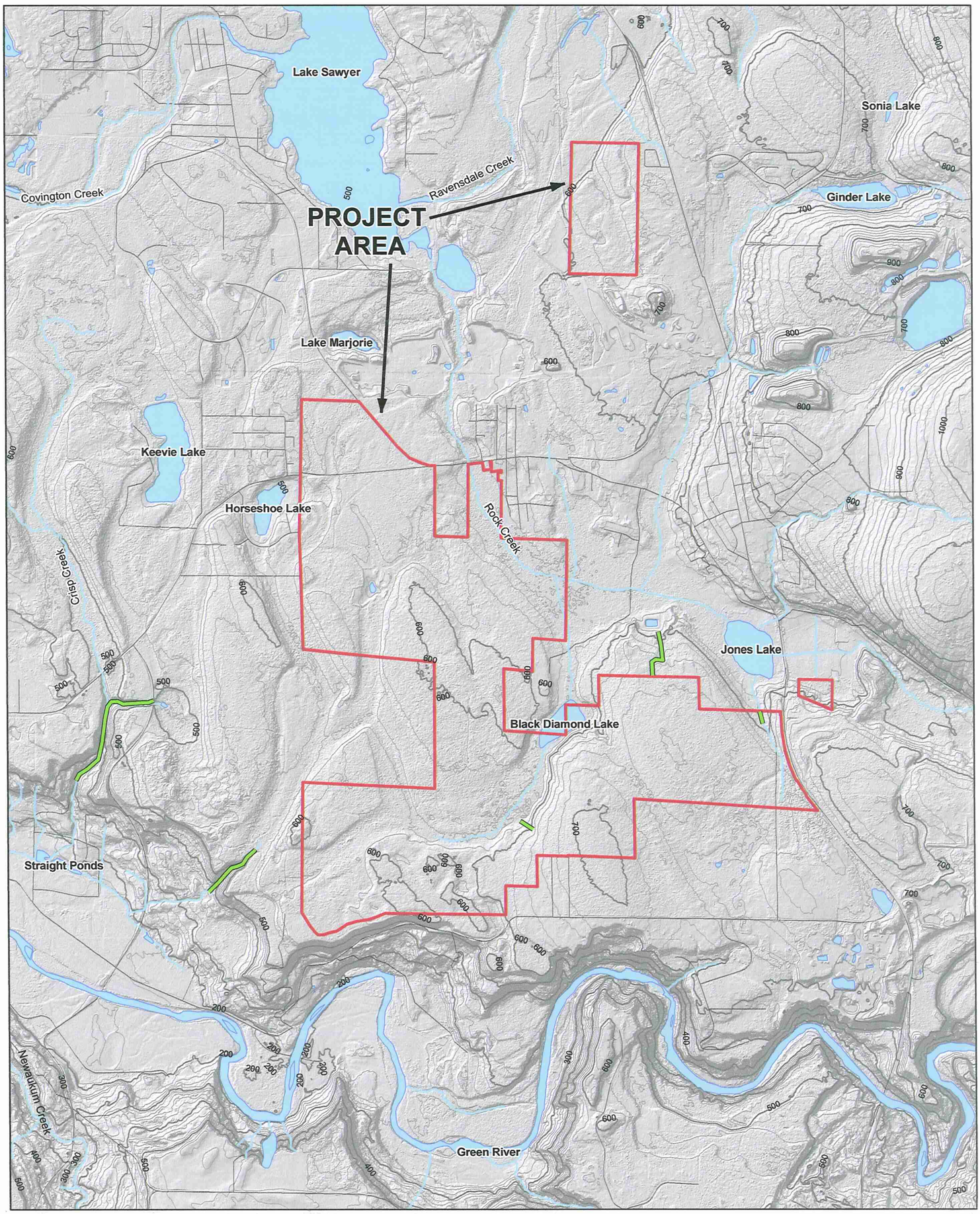
BLACK DIAMOND, WASHINGTON

FIGURE 3

DATE 9/08

PROJ. NO. KG060601A

060601 Villages at Black Diamond \ 060601 Existing Basin Map.cdr



Legend

- Geomorph Reconnaissance Transects
- Site Boundary
- Lakes
- Creek or Rivers
- Streets

N

Feet
0 1,000 2,000

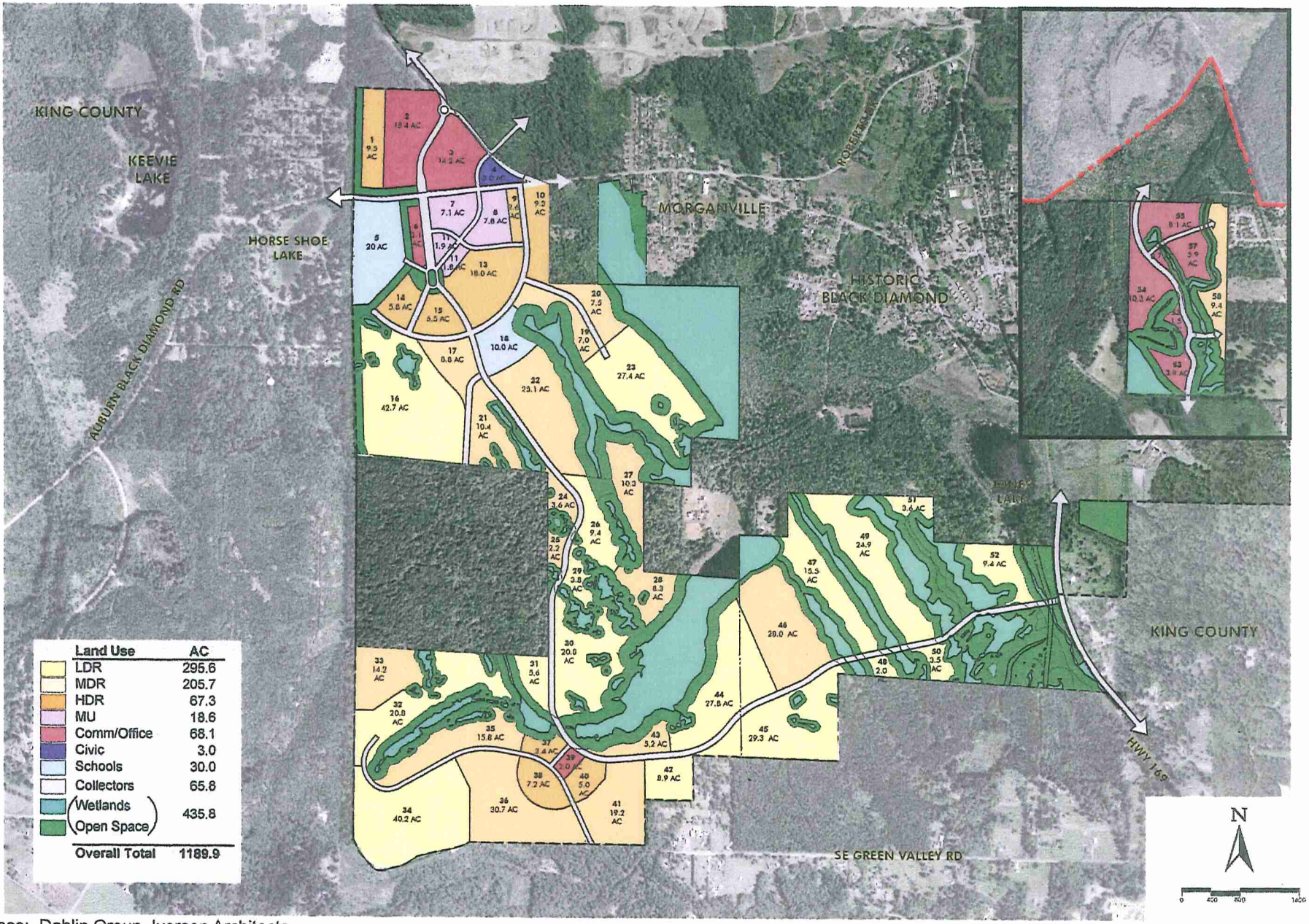
REFERENCE: parcel outlines, waterbodies, King County GIS Center, acquired 2-08; Shaded relief and contours generated from 1 meter DEM acquired from King County GIS center, 2-08

N:\060601KGA_VillagesFigures_3_08\Draft_Regional_Surface Water.mxd

Associated Earth Sciences, Inc.

REGIONAL SURFACE WATER FEATURES
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 4
DATE 9/08
PROJ. NO. KG060601A



Reference: Dahlin Group, Iverson Architects

Associated Earth Sciences, Inc.

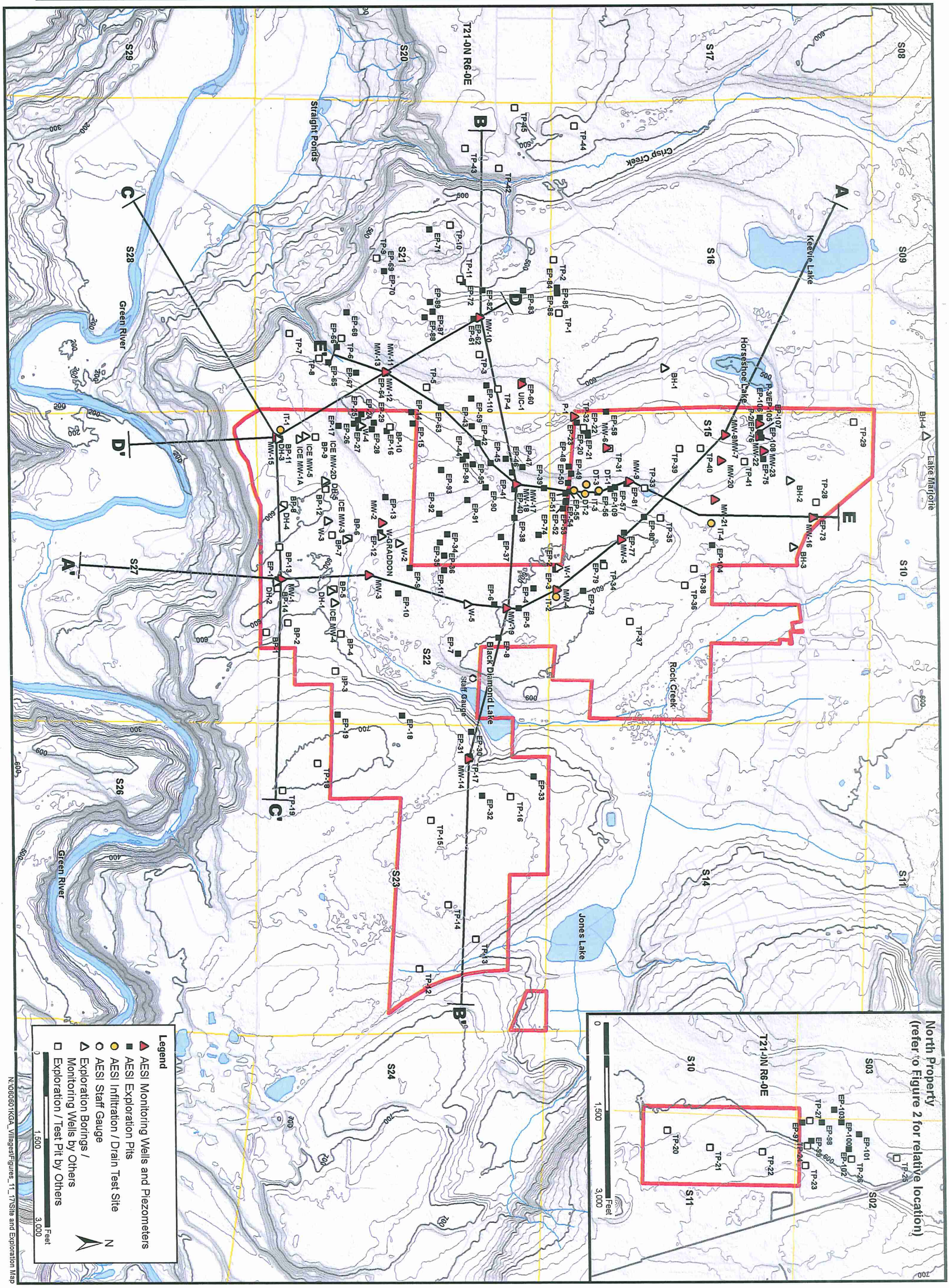
LAND USE PLAN - PROPOSED
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 5

DATE 9/08

PROJ. NO. KG060601A

060601 Villages at Black Diamond \ 060601 Land Use Plan - Proposed.cdr



Reference: Parcel outlines, roads, wetlands, water bodies - King County GIS center; Acquired 2-08,
Shaded relief (simulated sun is assumed to have azimuth and altitude angles of 315 and 45 degrees, respectively) and contours were derived from 1 m DEM - King County GIS center; Acquired 2-08

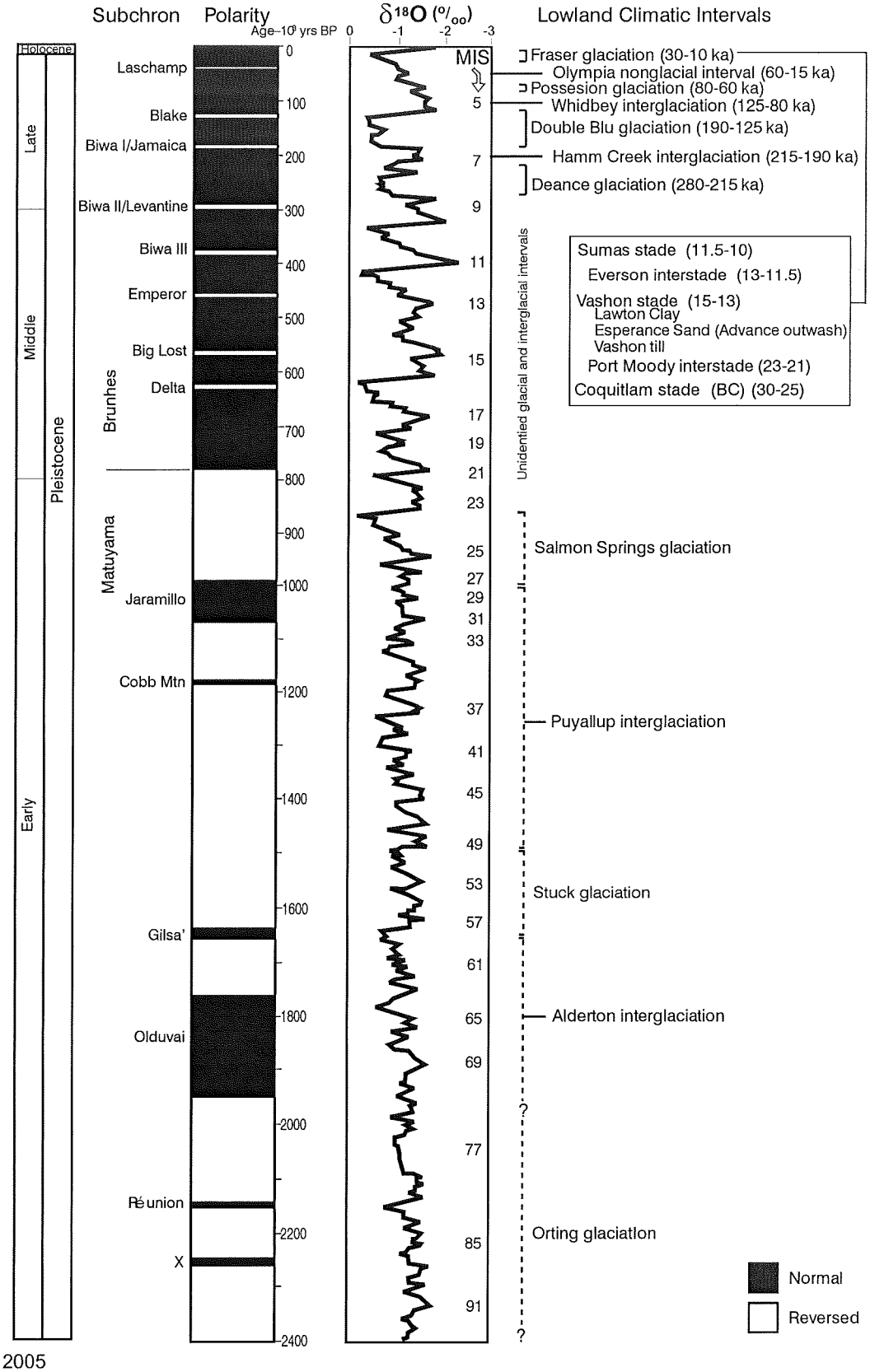
Associated Earth Sciences, Inc.

SITE AND EXPLORATION MAP
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 7
DATE 9/08
PROJ. NO. KG060601A

N:\060601KGA_VillagesFigures_11_17\Site and Exploration Map

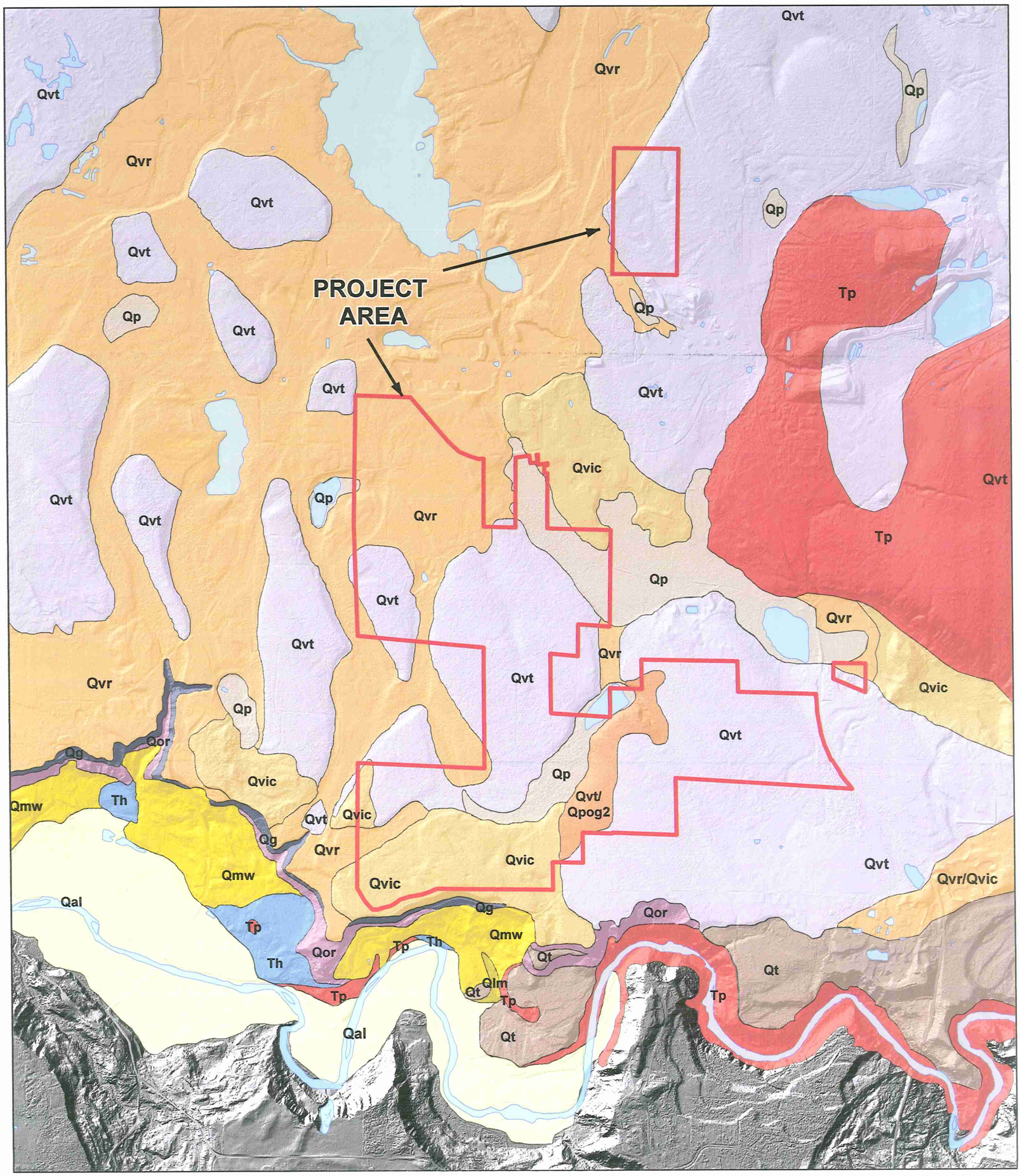
Puget Lowland Quaternary Stratigraphic Column



Comparison of marine oxygen-isotope curve stages (MIS) using the deep-sea oxygen-isotope data for ODP677 from Shackleton and others (1990), global magnetic polarity curve (Barendregt, 1995; Cande & Kent, 1995; Mankinnen & Dalrymple, 1979), and ages of climatic intevals in the Puget and Fraser lowlands.

Ages for deposits of the Possession glaciation through Orting glaciation from Easterbrook et al. (1981), Easterbrook (1986), Blunt et al. (1987), and Easterbrook (1994). Additional ages from deposits of the Puyallup interglaciation from R.J. Stewart (pers. Comm., 1999). Ages for the Olympia nonglacial interval from Armstrong et al. (1965), Mullineaux et al. (1965), Pessl et al. (1989), and Troost (1999). Ages for the Coquitlam stade from Hicock and Armstrong (1985). Ages for the Port Moody interstade from Hicock and Armstrong (1981). Ages for the Vashon stade from Armstrong et al. (1965) and Porter and Swanson (1998). Ages for the Everson interstade from Dethier et al. (1995) and Kovanen and Easterbrook (2001). Ages for the Sumas stade from Clague et al. (1997), Kovanen and Easterbrook (2001), and Kovanen (2002).

Reference: GeoMapNW April 2005



Legend

RECENT/HOLOCENE

- Qal — River alluvium
- Qp — Peat/organic deposits
- Qmw — Mass wasting
- Qlm — Lacustrine deposits
- Qt — Terrace alluvium

VASHON DRIFT

- Qvr — Recessional outwash
- Qvic — Ice Contact
- Qvt — Lodgement till
- Qg — Undifferentiated till and outwash

PRE-OLYMPIA GLACIAL DEPOSITS

- Qvt/Qpog2 — Coarse-grained
- Qor — Orting Drift

TERTIARY

- Th — Hammer Bluff Formation
- Tp — Puget Group

N

Feet
0 1,000 2,000

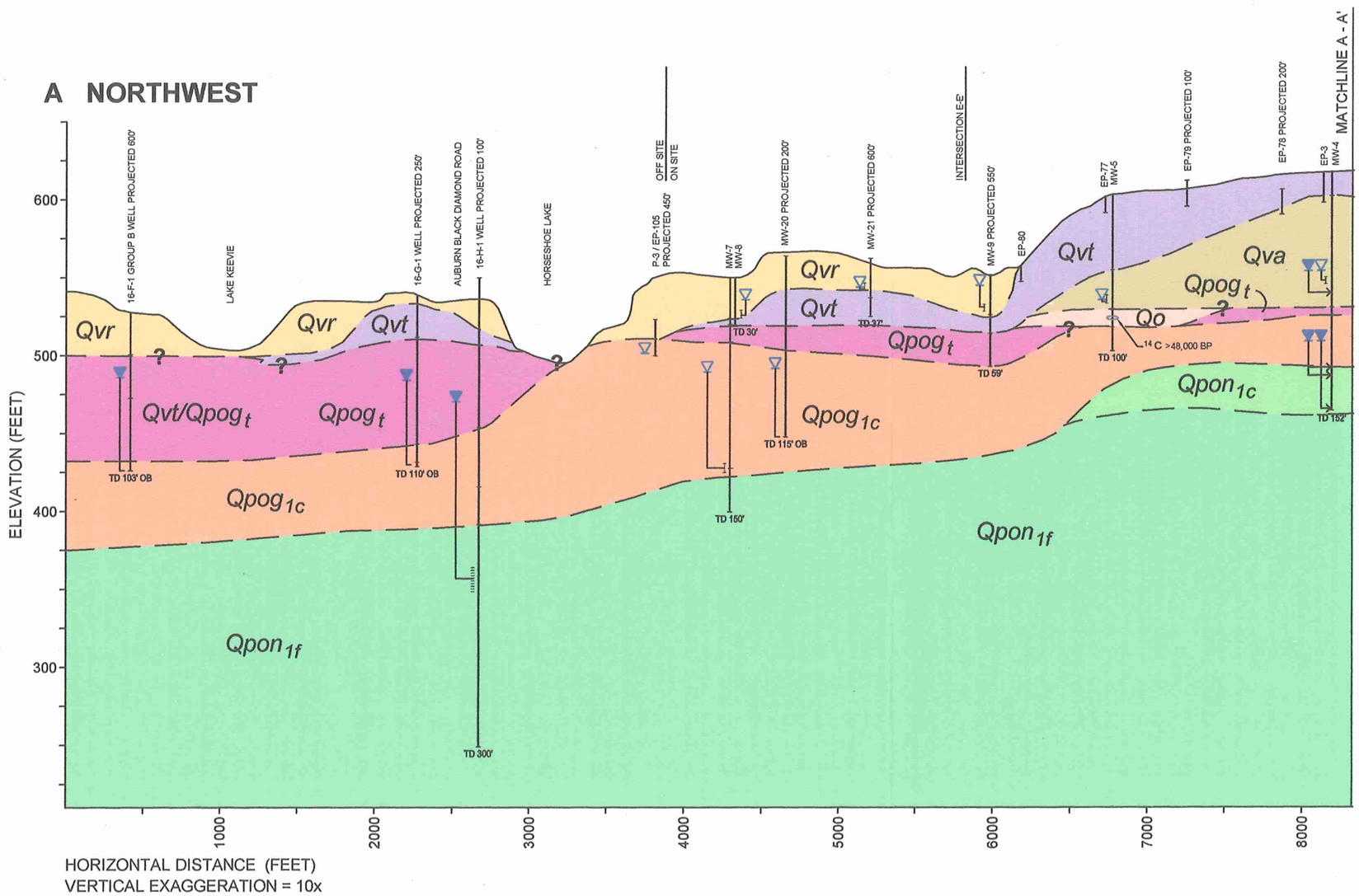
Reference: Geology modified by AESI from Mullineaux, D.R., *Geologic Map of the Black Diamond Quadrangle*, GQ-407, USGS, 1965
Roads, waterbodies, parcel outlines - King County GIS Center, acquired 2-08; Contours and shaded relief generated from 1 meter DEM; King County GIS Center, acquired 2-08;

Associated Earth Sciences, Inc.

GEOLOGY MAP
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 9
DATE 9/08
PROJ. NO. KG060601A

N:\060601KGA_Villages\Figures_11_17\Draft_Geology.mxd



LEGEND:

RECENT/HOLOCENE

Qal	RIVER ALLUVIUM
Qp	PEAT/ORGANIC DEPOSITS
Qmw	MASS WASTING

VASHON

Qvr	RECESSIONAL OUTWASH
Qvic	ICE-CONTACT
Qvt	LODGEMENT TILL
Qva	ADVANCE OUTWASH

OLYMPIA BEDS

Qo	NON-GLACIAL SEDIMENTS

PRE-OLYMPIA DEPOSITS

$Qpog_t$	GLACIAL TILL
$Qpog_{1c}$	GLACIAL OUTWASH
$Qpon_{1c}$	NON-GLACIAL, COARSE-GRAINED
$Qpon_{1f}$	NON-GLACIAL, FINE-GRAINED

OLDER PRE-OLYMPIA DEPOSITS

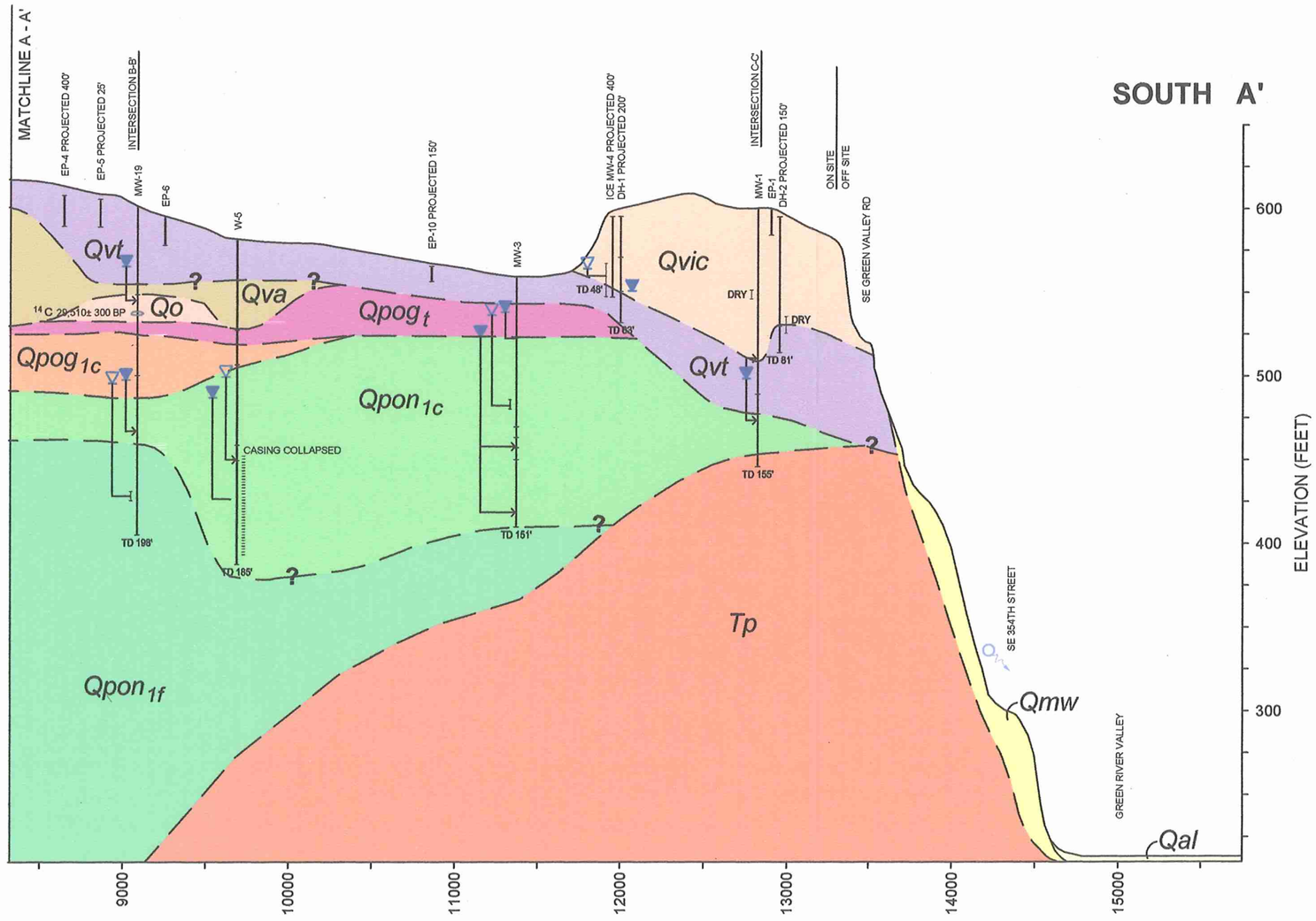
$Qpog_{2c}$	GLACIAL OUTWASH
$Qpon_{2f}$	NON-GLACIAL, FINE-GRAINED

TERTIARY

Th	HAMMER BLUFF FORMATION
Tp	PUGET GROUP

▼	WATER LEVEL AT TIME OF DRILLING (ATD)
▽	STATIC WATER LEVEL MEASURED ON 6/19/08
I	WELL SCREEN
DRY	DRY ON 6/19/08
:::::	PERFORATED WELL CASING
OB	OPEN BOTTOM WELL COMPLETION
~~	SPRING

060601 Villages at Black Diamond \ 060601 Geo Sections REV 7-08.dwg LAYOUT: Sect A-A-1 11x17



LEGEND:

RECENT/HOLOCENE

Qal	RIVER ALLUVIUM
Qp	PEAT/ORGANIC DEPOSITS
Qmw	MASS WASTING

VASHON

Qvr	RECESSIONAL OUTWASH
Qvic	ICE-CONTACT
Qvt	LODGEMENT TILL
Qva	ADVANCE OUTWASH

OLYMPIA BEDS

Qo	NON-GLACIAL SEDIMENTS

PRE-OLYMPIA DEPOSITS

$Qpog_t$	GLACIAL TILL
$Qpog_{1c}$	GLACIAL OUTWASH
$Qpon_{1c}$	NON-GLACIAL, COARSE-GRAINED
$Qpon_{1f}$	NON-GLACIAL, FINE-GRAINED

OLDER PRE-OLYMPIA DEPOSITS

$Qpog_{2c}$	GLACIAL OUTWASH
$Qpon_{2f}$	NON-GLACIAL, FINE-GRAINED

TERTIARY

Th	HAMMER BLUFF FORMATION
Tp	PUGET GROUP

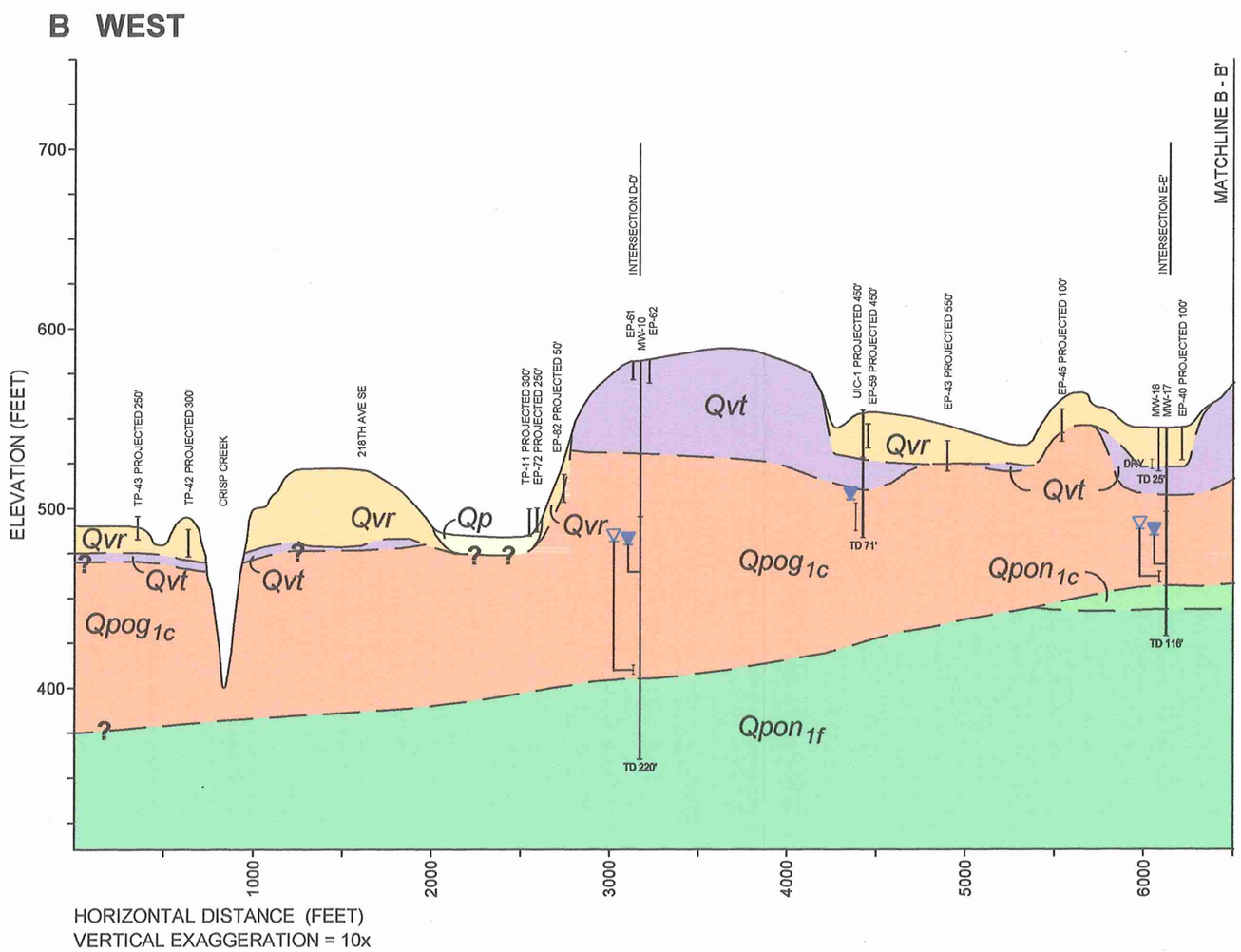
▼	WATER LEVEL AT TIME OF DRILLING (ATD)
▽	STATIC WATER LEVEL MEASURED ON 6/19/08
I	WELL SCREEN
DRY	DRY ON 6/19/08
⁞	PERFORATED WELL CASING
OB	OPEN BOTTOM WELL COMPLETION
~o	SPRING

060601 Villages at Black Diamond \ 060601 Geo Sections REV 7-08.dwg LAYOUT: Sect A-A-2 11x17

Associated Earth Sciences, Inc.

GEOLOGIC CROSS-SECTION A - A'
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 10B
DATE 9/08
PROJECT NO. KG060601A



LEGEND:

RECENT/HOLOCENE

Qal	RIVER ALLUVIUM
Qp	PEAT/ORGANIC DEPOSITS
Qmw	MASS WASTING

VASHON

Qvr	RECESSIONAL OUTWASH
Qvic	ICE-CONTACT
Qvt	LODGEMENT TILL
Qva	ADVANCE OUTWASH

OLYMPIA BEDS

Qo	NON-GLACIAL SEDIMENTS

PRE-OLYMPIA DEPOSITS

$Qpog_{t}$	GLACIAL TILL
$Qpog_{1c}$	GLACIAL OUTWASH
$Qpon_{1c}$	NON-GLACIAL, COARSE-GRAINED
$Qpon_{1f}$	NON-GLACIAL, FINE-GRAINED

OLDER PRE-OLYMPIA DEPOSITS

$Qpog_{2c}$	GLACIAL OUTWASH
$Qpon_{2f}$	NON-GLACIAL, FINE-GRAINED

TERTIARY

Th	HAMMER BLUFF FORMATION
Tp	PUGET GROUP

▼	WATER LEVEL AT TIME OF DRILLING (ATD)
▽	STATIC WATER LEVEL MEASURED ON 6/19/08
I	WELL SCREEN
DRY	DRY ON 6/19/08
⁞⁞⁞	PERFORATED WELL CASING
OB	OPEN BOTTOM WELL COMPLETION
	SPRING

060601 Villages at Black Diamond \ 060601 Geo Sections REV 7-08.dwg LAYOUT: Sect B-B-1 11x17

Associated Earth Sciences, Inc.

GEOLOGIC CROSS-SECTION B - B'

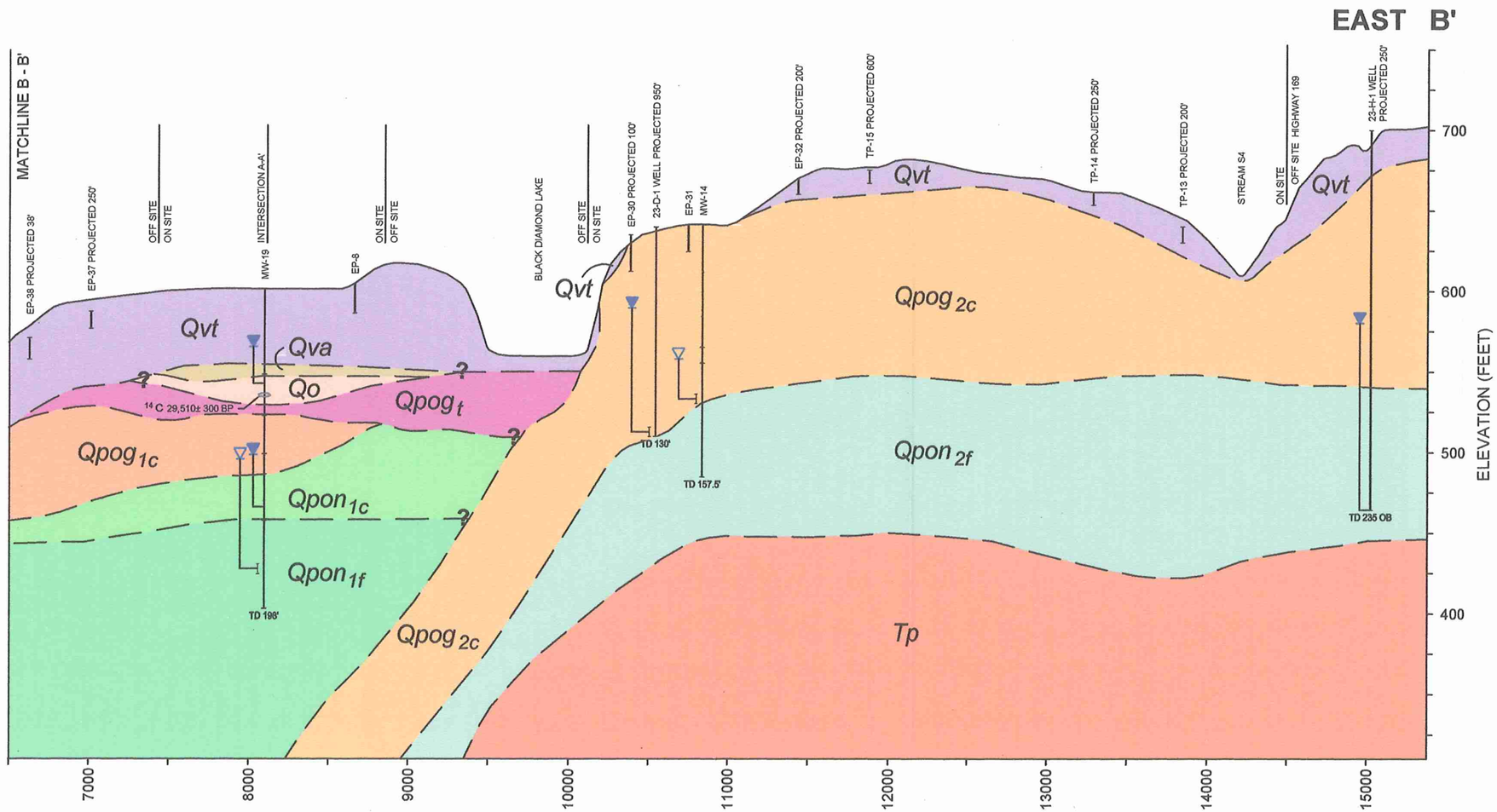
THE VILLAGES

BLACK DIAMOND, WASHINGTON

FIGURE 11A

DATE 9/08

PROJECT NO. KG060601A



LEGEND:

RECENT/HOLOCENE

Qal	RIVER ALLUVIUM
Qp	PEAT/ORGANIC DEPOSITS
Qmw	MASS WASTING

VASHON

Qvr	RECESSIONAL OUTWASH
Qvic	ICE-CONTACT
Qvt	LODGEMENT TILL
Qva	ADVANCE OUTWASH

OLYMPIA BEDS

Qo	NON-GLACIAL SEDIMENTS

PRE-OLYMPIA DEPOSITS

Qpog $_t$	GLACIAL TILL
Qpog $_{1c}$	GLACIAL OUTWASH
Qpon $_{1c}$	NON-GLACIAL, COARSE-GRAINED
Qpon $_{1f}$	NON-GLACIAL, FINE-GRAINED

OLDER PRE-OLYMPIA DEPOSITS

Qpog $_{2c}$	GLACIAL OUTWASH
Qpon $_{2f}$	NON-GLACIAL, FINE-GRAINED

TERTIARY

Th	HAMMER BLUFF FORMATION
Tp	PUGET GROUP

▼	WATER LEVEL AT TIME OF DRILLING (ATD)
▽	STATIC WATER LEVEL MEASURED ON 6/19/08
I	WELL SCREEN
DRY	DRY ON 6/19/08
⁞⁞⁞	PERFORATED WELL CASING
OB	OPEN BOTTOM WELL COMPLETION
⌒	SPRING

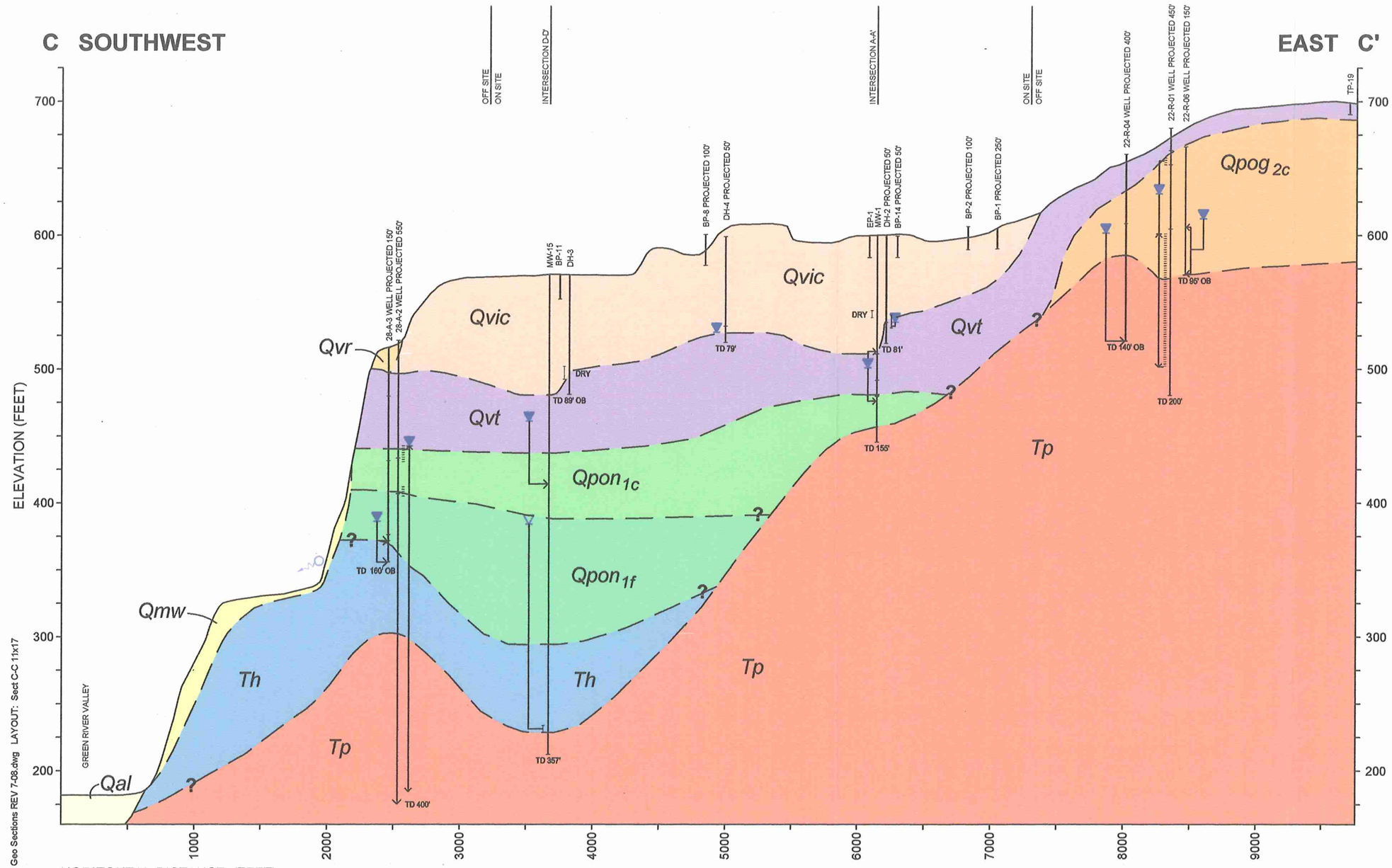
060601 Villages at Black Diamond \ 060601 Geo Sections REV 7-08.dwg LAYOUT: Sect B-B-2 11x17

Associated Earth Sciences, Inc.

GEOLOGIC CROSS-SECTION B - B'

THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 11B
DATE 9/08
PROJECT NO. KG060601A



LEGEND:

RECENT/HOLOCENE
- *Qal* RIVER ALLUVIUM
- *Qp* PEAT/ORGANIC DEPOSITS
- *Qmw* MASS WASTING

VASHON
- *Qvr* RECESSIONAL OUTWASH
- *Qvic* ICE-CONTACT
- *Qvt* LODGEMENT TILL
- *Qva* ADVANCE OUTWASH

OLYMPIA BEDS
- *Qo* NON-GLACIAL SEDIMENTS

PRE-OLYMPIA DEPOSITS
- *Qpog t* GLACIAL TILL
- *Qpog 1c* GLACIAL OUTWASH
- *Qpon 1c* NON-GLACIAL, COARSE-GRAINED
- *Qpon 1f* NON-GLACIAL, FINE-GRAINED

OLDER PRE-OLYMPIA DEPOSITS
- *Qpog 2c* GLACIAL OUTWASH
- *Qpon 2f* NON-GLACIAL, FINE-GRAINED

TERTIARY
- *Th* HAMMER BLUFF FORMATION
- *Tp* PUGET GROUP

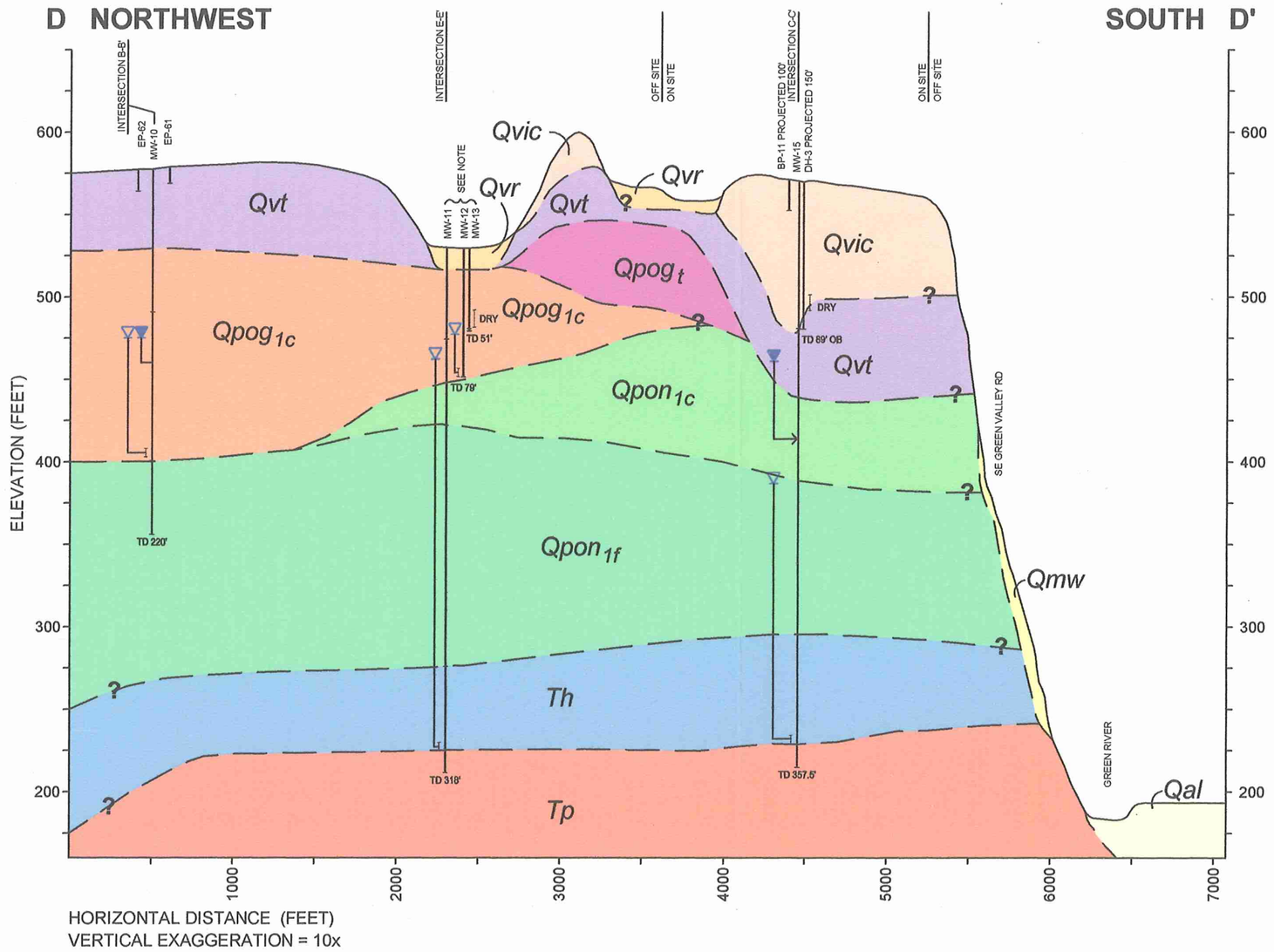
- ▼ WATER LEVEL AT TIME OF DRILLING (ATD)
- ▽ STATIC WATER LEVEL MEASURED ON 6/19/08
- I WELL SCREEN
- DRY DRY ON 6/19/08
- PERFORATED WELL CASING
- OB OPEN BOTTOM WELL COMPLETION
- SPRING

060601 Villages at Black Diamond \ 060601 Geo Sections REV 7-08.dwg LAYOUT: Sect C-C 11x17

Associated Earth Sciences, Inc.

GEOLOGIC CROSS-SECTION C - C'
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 12
DATE 9/08
PROJECT NO. KG060601A



LEGEND:

RECENT/HOLOCENE

Qal	RIVER ALLUVIUM
Qp	PEAT/ORGANIC DEPOSITS
Qmw	MASS WASTING

VASHON

Qvr	RECESSIONAL OUTWASH
Qvic	ICE-CONTACT
Qvt	LODGEMENT TILL
Qva	ADVANCE OUTWASH

OLYMPIA BEDS

Qo	NON-GLACIAL SEDIMENTS

PRE-OLYMPIA DEPOSITS

$Qpog_t$	GLACIAL TILL
$Qpog_{1c}$	GLACIAL OUTWASH
$Qpon_{1c}$	NON-GLACIAL, COARSE-GRAINED
$Qpon_{1f}$	NON-GLACIAL, FINE-GRAINED

OLDER PRE-OLYMPIA DEPOSITS

$Qpog_{2c}$	GLACIAL OUTWASH
$Qpon_{2f}$	NON-GLACIAL, FINE-GRAINED

TERTIARY

Th	HAMMER BLUFF FORMATION
Tp	PUGET GROUP

▼	WATER LEVEL AT TIME OF DRILLING (ATD)
▽	STATIC WATER LEVEL MEASURED ON 6/19/08
I	WELL SCREEN
DRY	DRY ON 6/19/08
⁞⁞⁞	PERFORATED WELL CASING
OB	OPEN BOTTOM WELL COMPLETION
	SPRING

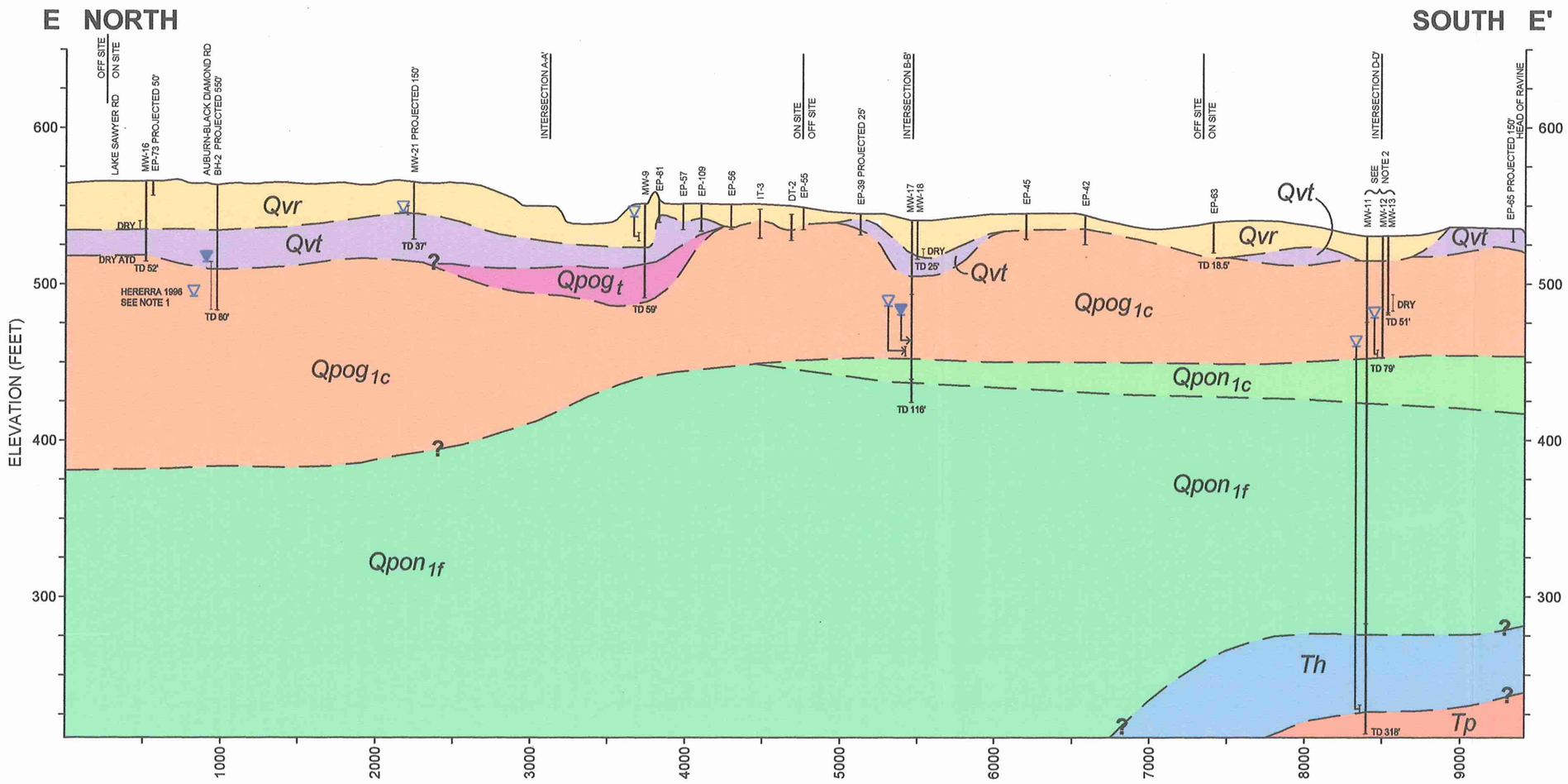
NOTE:
WELLS MW-11, MW-12, AND MW-13 ARE LOCATED WITHIN 5 FEET OF EACH OTHER. THEY ARE SHOWN HORIZONTALLY OFFSET FOR CLARITY.

060601 Villages at Black Diamond \ 060601 Geo Sections REV 7-08.dwg LAYOUT: Sect D-D 11x17

Associated Earth Sciences, Inc.

GEOLOGIC CROSS-SECTION D - D'
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 13
DATE 9/08
PROJECT NO. KG060601A



LEGEND:

RECENT/HOLOCENE

Qal	RIVER ALLUVIUM
Qp	PEAT/ORGANIC DEPOSITS
Qmw	MASS WASTING

VASHON

Qvr	RECESSIONAL OUTWASH
Qvic	ICE-CONTACT
Qvt	LODGEMENT TILL
Qva	ADVANCE OUTWASH

OLYMPIA BEDS

Qo	NON-GLACIAL SEDIMENTS

PRE-OLYMPIA DEPOSITS

$Qpog_t$	GLACIAL TILL
$Qpog_{1c}$	GLACIAL OUTWASH
$Qpon_{1c}$	NON-GLACIAL, COARSE-GRAINED
$Qpon_{1f}$	NON-GLACIAL, FINE-GRAINED

OLDER PRE-OLYMPIA DEPOSITS

$Qpog_{2c}$	GLACIAL OUTWASH
$Qpon_{2f}$	NON-GLACIAL, FINE-GRAINED

TERTIARY

Th	HAMMER BLUFF FORMATION
Tp	PUGET GROUP

▼	WATER LEVEL AT TIME OF DRILLING (ATD)
▽	STATIC WATER LEVEL MEASURED ON 6/19/08
I	WELL SCREEN
DRY	DRY ON 6/19/08
⁞	PERFORATED WELL CASING
OB	OPEN BOTTOM WELL COMPLETION
	SPRING

NOTES:

1. BH-2 WATER LEVEL REPORTED IN HERRERA, 1996 MEMORANDUM: HORSESHOE LAKE SURFACE AND GROUNDWATER ANALYSIS PROJECT-SITE CHARACTERIZATION AND HYDROLOGIC MODELING.

2. WELLS MW-11, MW-12, AND MW-13 ARE LOCATED WITHIN 5 FEET OF EACH OTHER. THEY ARE SHOWN HORIZONTALLY OFFSET FOR CLARITY.

Associated Earth Sciences, Inc.

GEOLOGIC CROSS-SECTION E - E'

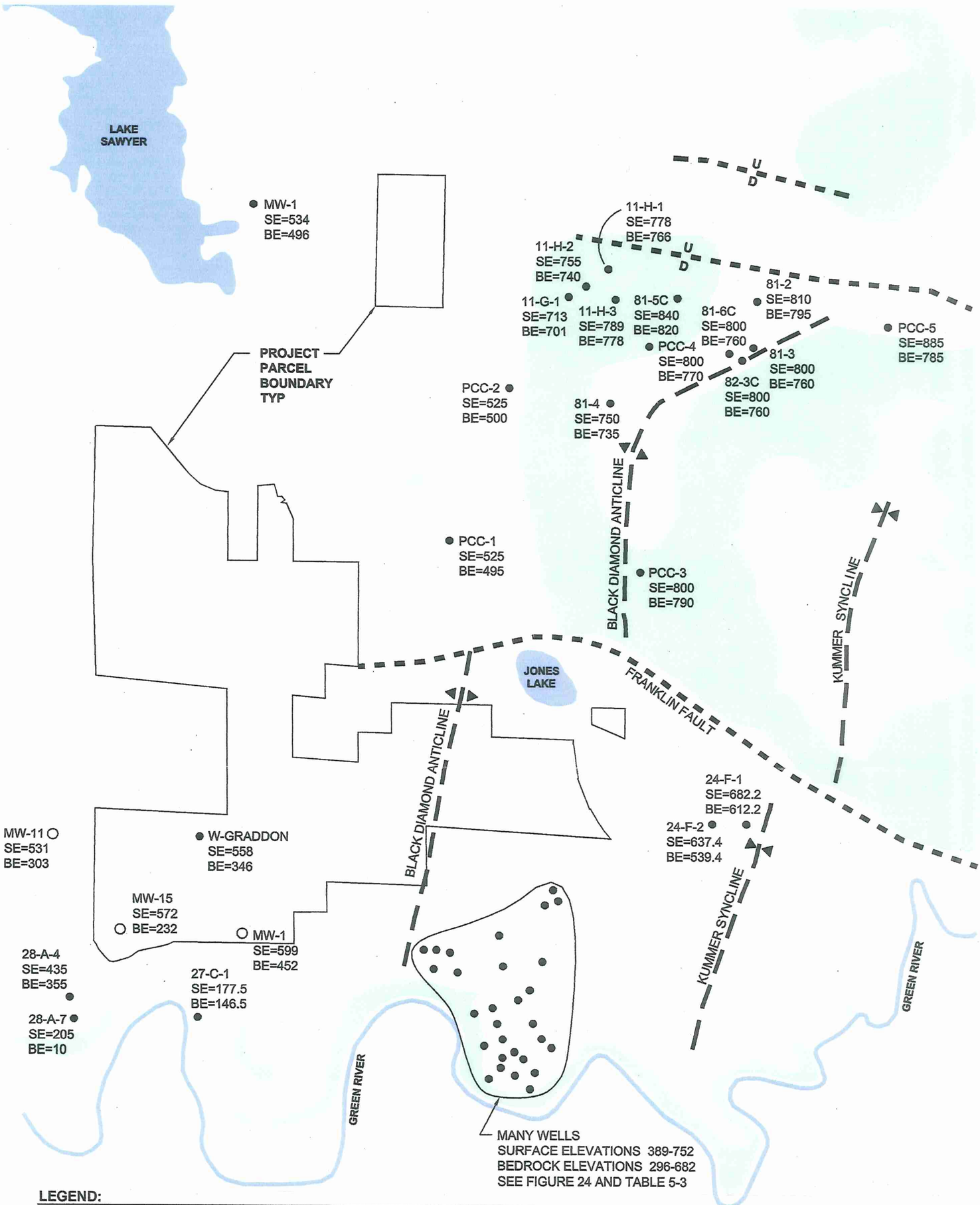
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 14

DATE 9/08

PROJECT NO. KG060601A

060601 Villages at Black Diamond \ 060601 Geo Sections REV 7-08.dwg LAYOUT: Sect E-E 11x17



Reference: Compilation Geologic Map of the Green River Coal District, King County, Washington, Phillips 1984 (OFR 84-4)

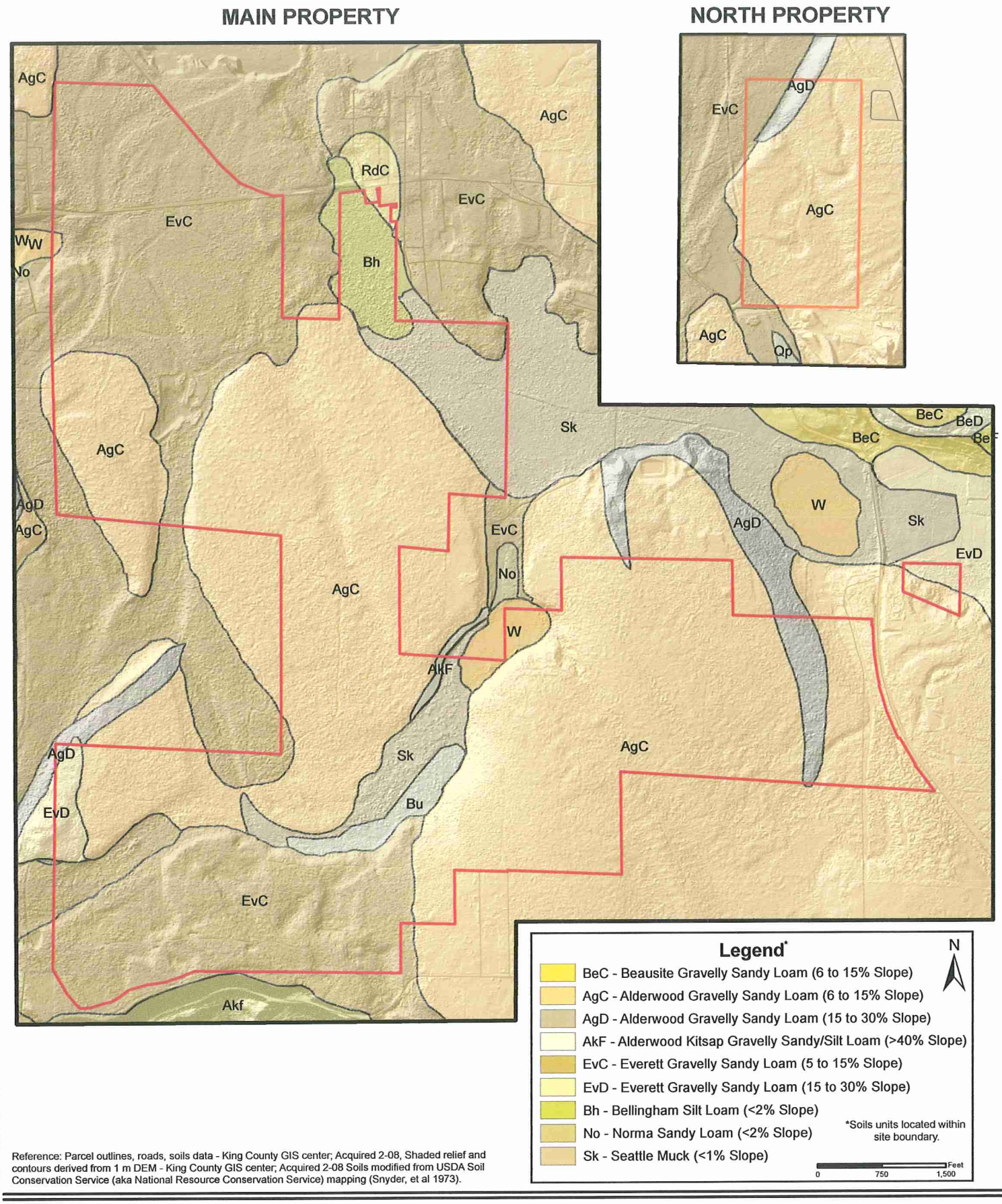
Associated Earth Sciences, Inc.

BEDROCK DISTRIBUTION AND STRUCTURAL MAP

THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 16
DATE 9/08
PROJECT NO. KG060601A

060601 Villages at Black Diamond \ 060601 Site Area Structural Map Rev 7-23-08.dwg Layout: Plan



Reference: Parcel outlines, roads, soils data - King County GIS center; Acquired 2-08, Shaded relief and contours derived from 1 m DEM - King County GIS center; Acquired 2-08 Soils modified from USDA Soil Conservation Service (aka National Resource Conservation Service) mapping (Snyder, et al 1973).

N:\060601KGA_Villages\Figures_11_17\Soils Map_8.5x11

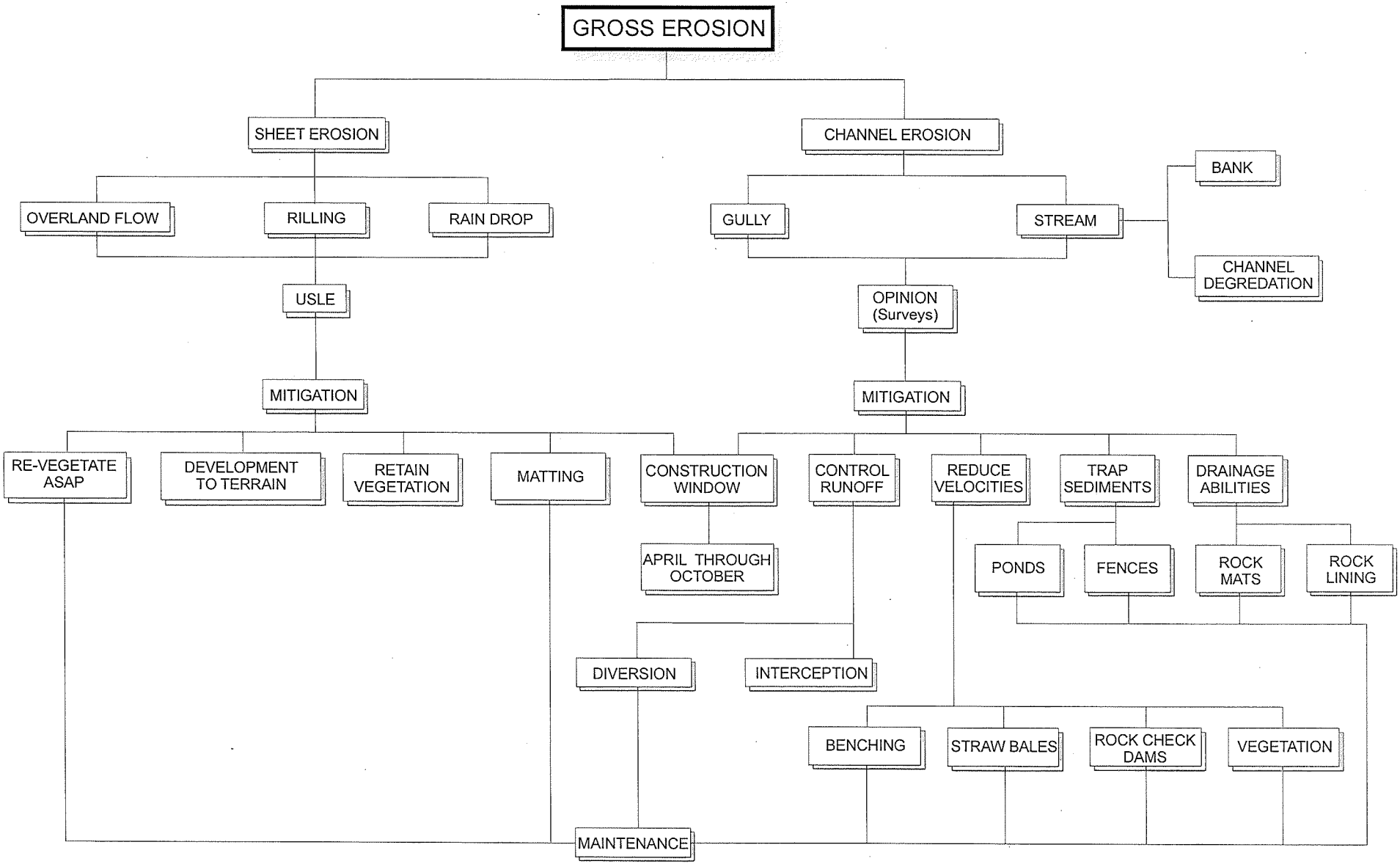
Associated Earth Sciences, Inc.

SOILS MAP
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 17

DATE 9/08

PROJ. NO. KG060601A



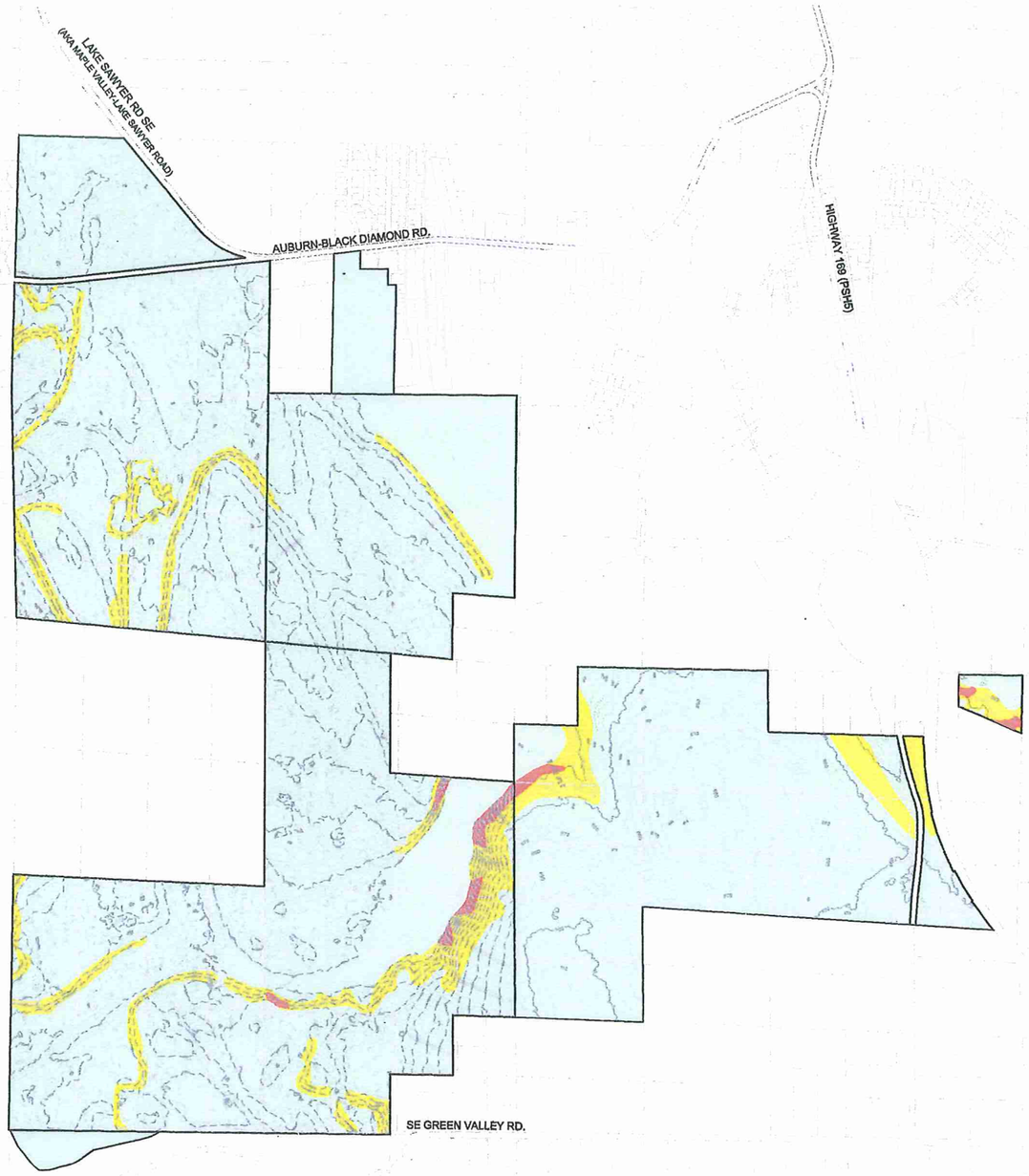
FLOW CHART SHOWING THE BREAKDOWN OF GROSS EROSION INTO DEFINABLE SUB-CLASSIFICATIONS. IN addition, COMMONLY USED MITIGATION IS PROVIDED.

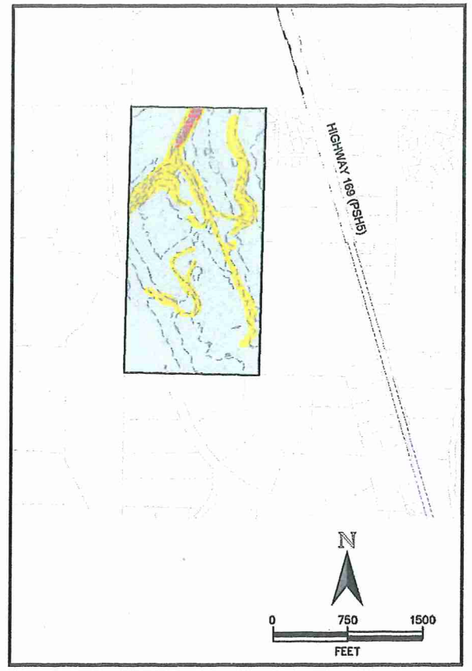
060501 Villages at Black Diamond \ 060601 erosion flow.cdr

Associated Earth Sciences, Inc.

GROSS EROSION FLOW CHART
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 18
DATE 9/08
PROJ. NO. KG060601A



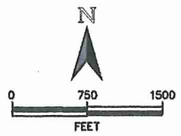


NORTH PROPERTY

REFER TO FIGURE 2 FOR RELATIVE LOCATION

LEGEND:

- EROSION HAZARD ZONE 1 - LOW
- EROSION HAZARD ZONE 2 - MODERATE
- EROSION HAZARD ZONE 3 - HIGH



Reference: TRIAD

060601 Villages at Black Diamond\060601 Slopes.dwg LAYOUT: Erosion

Associated Earth Sciences, Inc.

EROSION HAZARD MAP

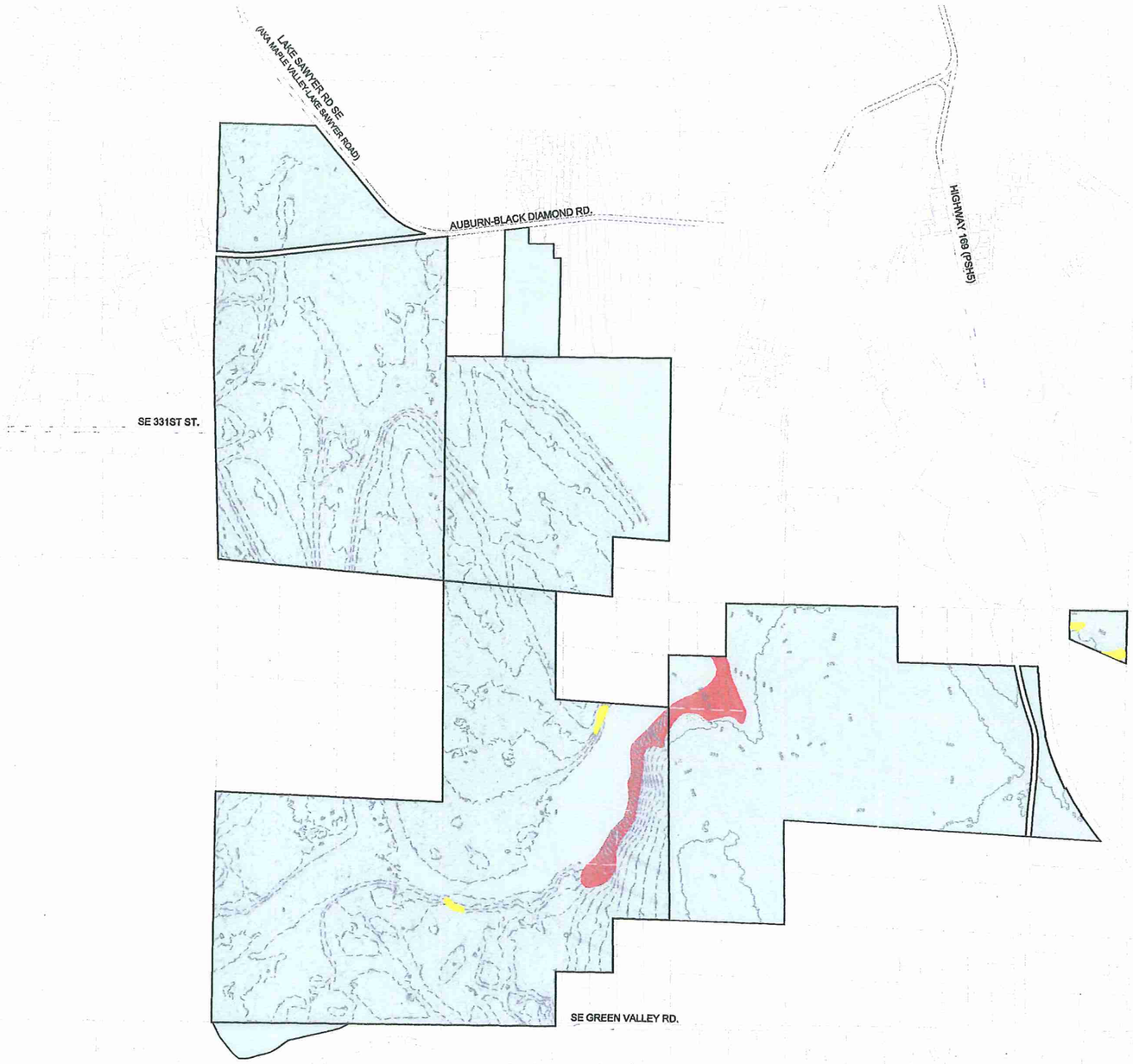
THE VILLAGES

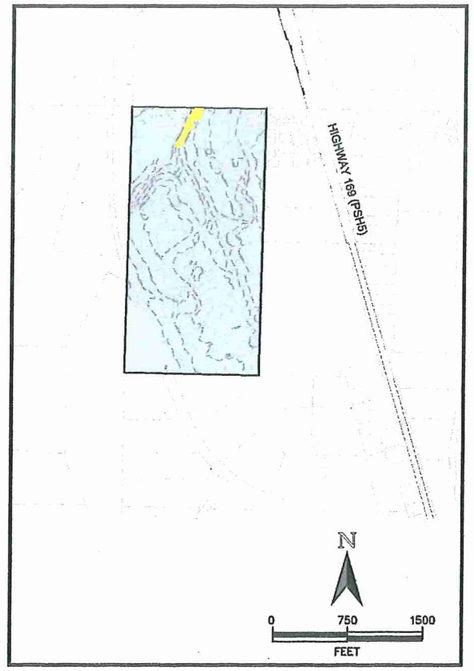
BLACK DIAMOND, WASHINGTON

FIGURE 19

DATE 9/08

PROJECT NO. KG060601A





NORTH PROPERTY

REFER TO FIGURE 2 FOR RELATIVE LOCATION

LEGEND:

- LANDSLIDE HAZARD CLASS 1 - LOW
- LANDSLIDE HAZARD CLASS 2 - MODERATE
- LANDSLIDE HAZARD CLASS 3 - HIGH

N

0 750 1500

FEET

Reference: TRIAD

Associated Earth Sciences, Inc.

LANDSLIDE HAZARD MAP

THE VILLAGES

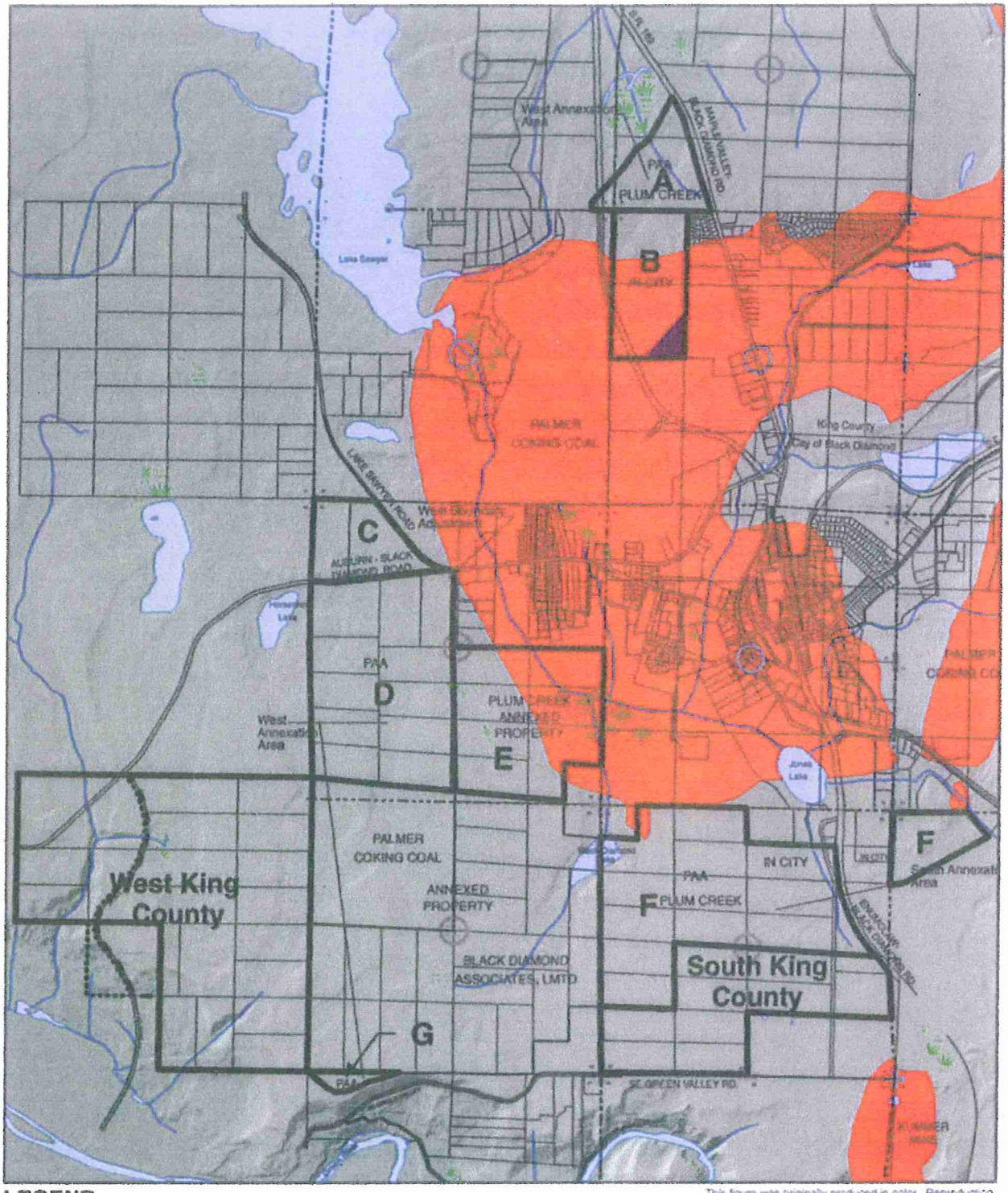
BLACK DIAMOND, WASHINGTON

FIGURE 20

DATE 9/08

PROJECT NO. KG060601A

I:\060601 Villages at Black Diamond\060601 Slopes.dwg LAYOUT: Landslide



LEGEND

- King County Streams
- Wetland
- Coal Mine Hazard Area Defined by Black Diamond and King County
- Possible Moderate Hazard Zone

Note: Hillshade derived from LIDAR.

This figure was originally produced in color. Reproduction in black and white may result in loss of information.

Map Projection: Washington State Plane, North Zone, NAD 83, Feet

Source: TRIAD Associates, PSLC, Golder Associates

N

0 2,500

Reference: Golder Associates 2006

Associated Earth Sciences, Inc.

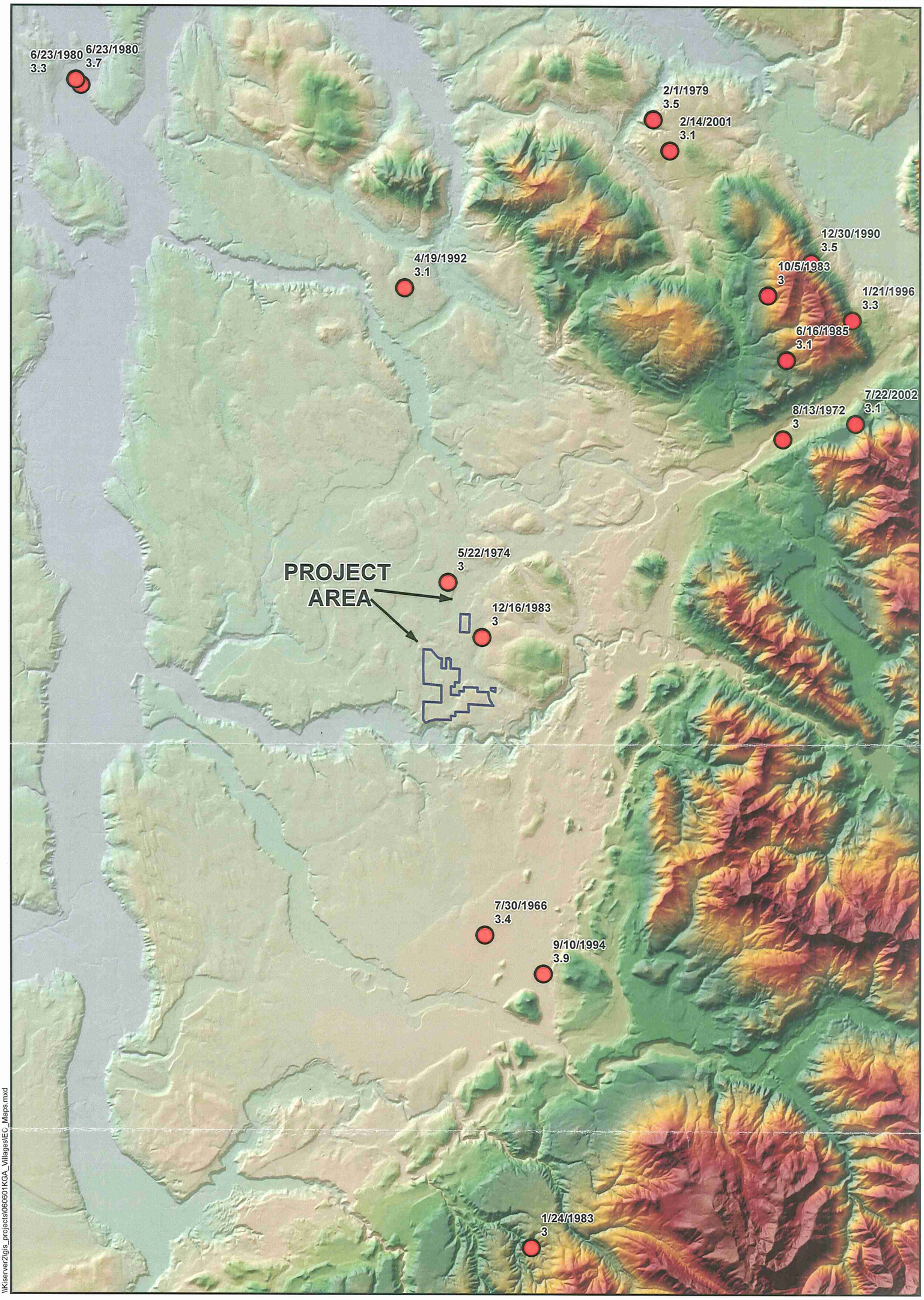
COAL MINE HAZARD MAP
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 21

DATE 9/08

PROJ. NO. KG060601A

060601 Villages at Black Diamond \ 060601 Coal Mine Hazard Map.cdr



\\Kiserver2\gis_projects\060601KGA_VillagesIEC_Maps.mxd

Legend

Earthquake location, date, and magnitude

N

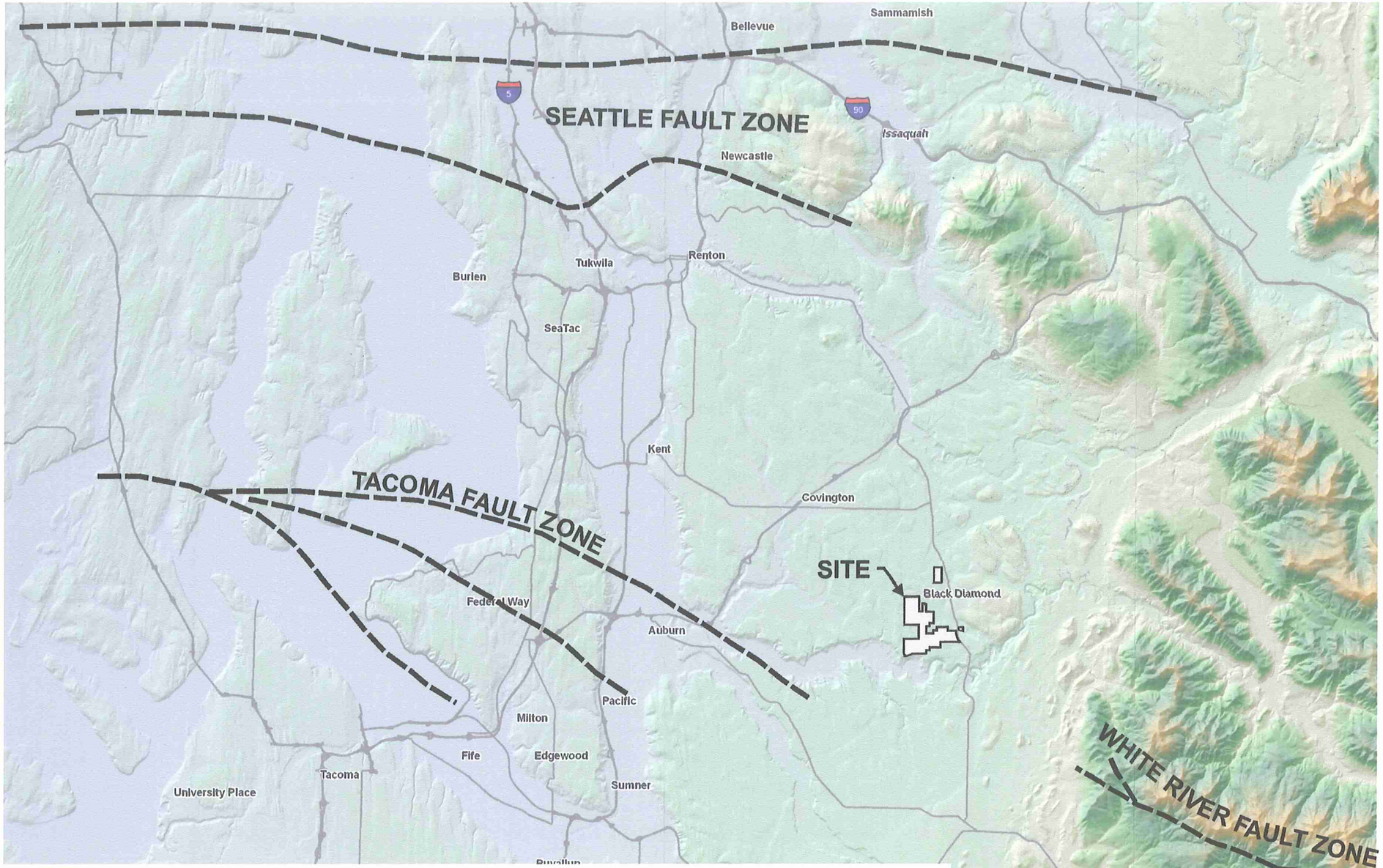
0 1 2 3 4 Miles

References: Basemap - USGS 1:250,000 quadrangles. Earthquake Data - University of Washington Pacific Northwest Seismograph Network, 2008

Associated Earth Sciences, Inc.

M≥3.0 EARTHQUAKE LOCATION MAP
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 22
DATE 9/08
PROJ. NO. KG060601A



Reference: Seattle Fault Zone: TECTONIC ELEMENTS AND EVOLUTION OF NORTHWEST WASHINGTON
Brown, et.al., Washington State Department of Natural Resources, Geologic Map GM-52, 2003

Seattle and Tacoma Fault Zones: THE CATFISH LAKE SCARP, ALLYN, WA: PRELIMINARY FIELD DATA AND IMPLICATIONS FOR EARTHQUAKE HAZARDS POSED BY THE TACOMA FAULT, Sherrod, B.L.,et.al.
United States Geological Survey, Open file Report OFR 03-455

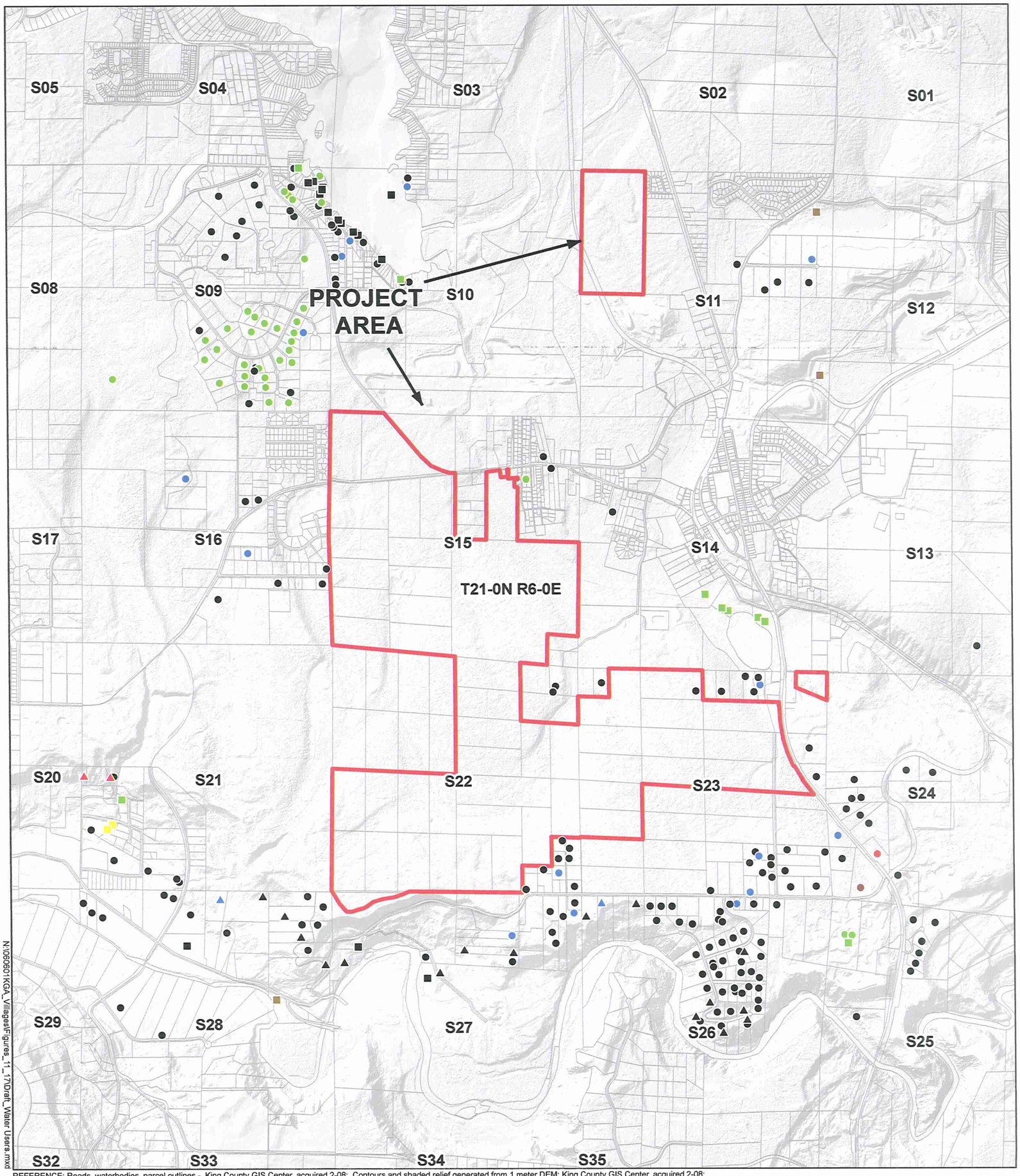
White River Fault Zone: GEOLOGIC MAP OF THE SNOQUALMIE PASS 30X60 MINUTE QUADRANGLE, WASHINGTON
Tabor, R.W., et.al., United States Geological Survey, Geologic Investigations Series map 1-2538, 2000

060601 Villages at Black Diamond \ 060601 Regional Structure Map Rev 7-08.cdr

Associated Earth Sciences, Inc.

REGIONAL STRUCTURE MAP
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 23
DATE 9/08
PROJ. NO. KG060601A



N:\060601KGA_VillagesFigures_11_17\Draft_Water Users.mxd

REFERENCE: Roads, waterbodies, parcel outlines - King County GIS Center, acquired 2-08; Contours and shaded relief generated from 1 meter DEM; King County GIS Center, acquired 2-08;

N

Legend

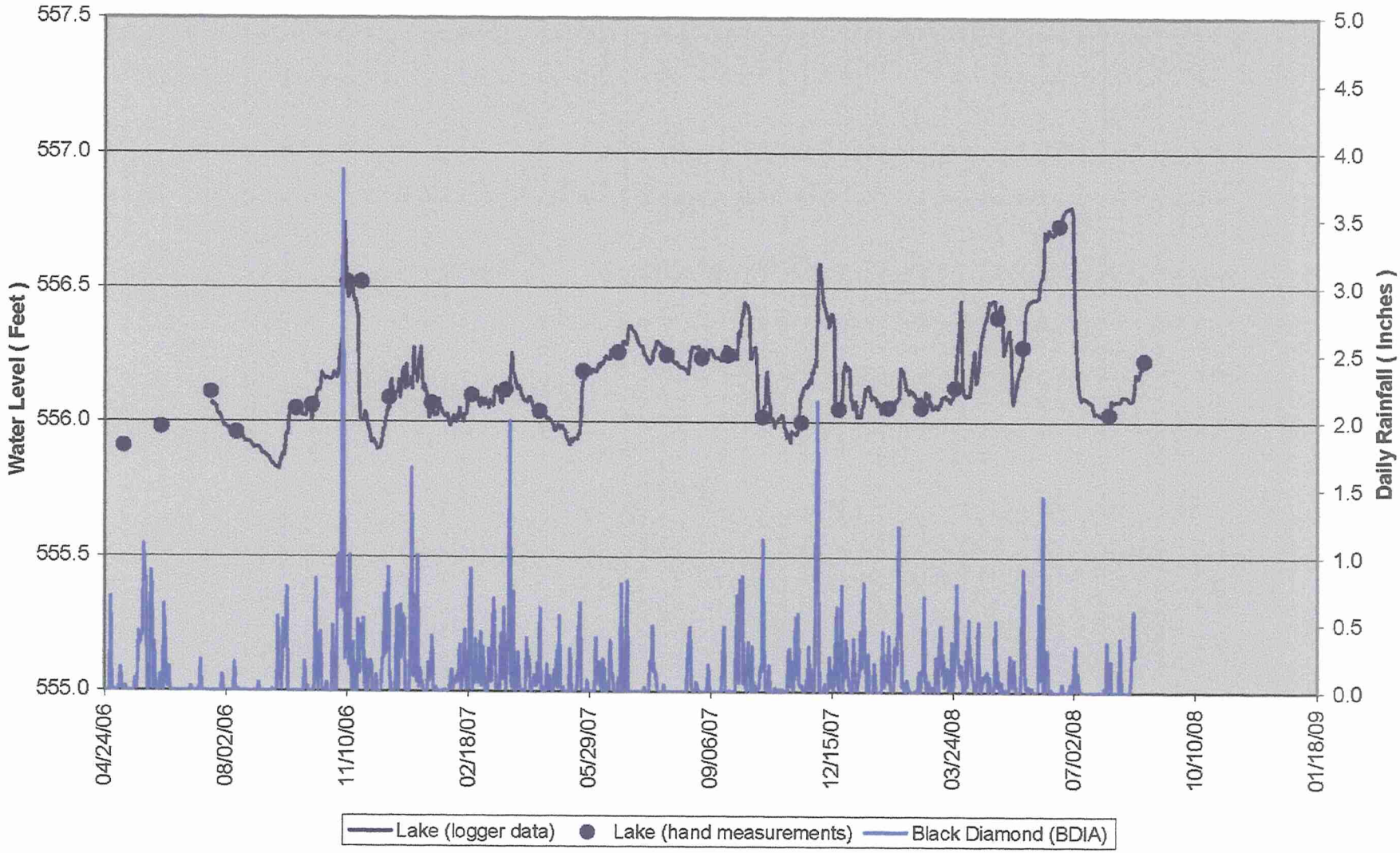
- Group A Well
- Group A Spring
- Domestic Spring
- Group B Spring
- Domestic Surface Water
- Irrigation Well
- Irrigation Surface Water
- Industrial Surface Water
- Domestic Well
- Fish Propagation Surface Water
- Industrial Well
- Group B Well

Feet
0 1,000 2,000

Associated Earth Sciences, Inc.

WATER SUPPLY SPRINGS AND WELLS
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 24
DATE 9/08
PROJ. NO. KG060601A

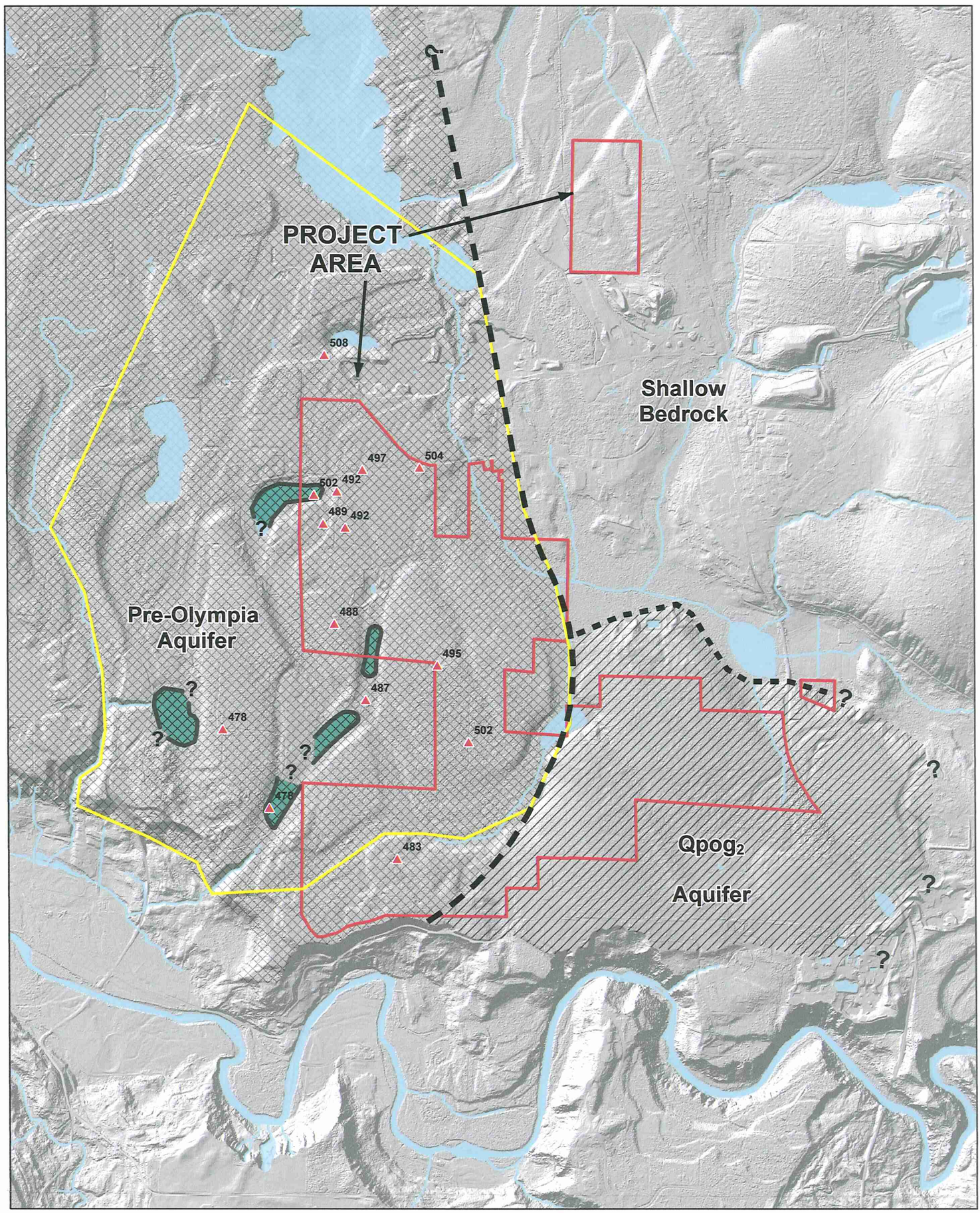


060601 Villages at Black Diamond \ 060601 water - Black Diamond Lake.cdr

Associated Earth Sciences, Inc.

BLACK DIAMOND LAKE - WATER LEVEL VS. DAILY RAINFALL
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 26
DATE 9/08
PROJ. NO. KG060601A



Legend

- 514 Pre-Olympia Aquifer Well Location and Water Elevation from June 19, 2008
- Till Window
- Ground Water Flow Direction
- Extent of the Pre-Olympia Aquifer
- Extent of the Qpog2 Aquifer
- Area of Pre-Olympia Aquifer tributary to Crisp Creek Springs and Springs along Green River slope between Crisp Creek and southwest corner of Main Property

N

Feet
0 1,000 2,000

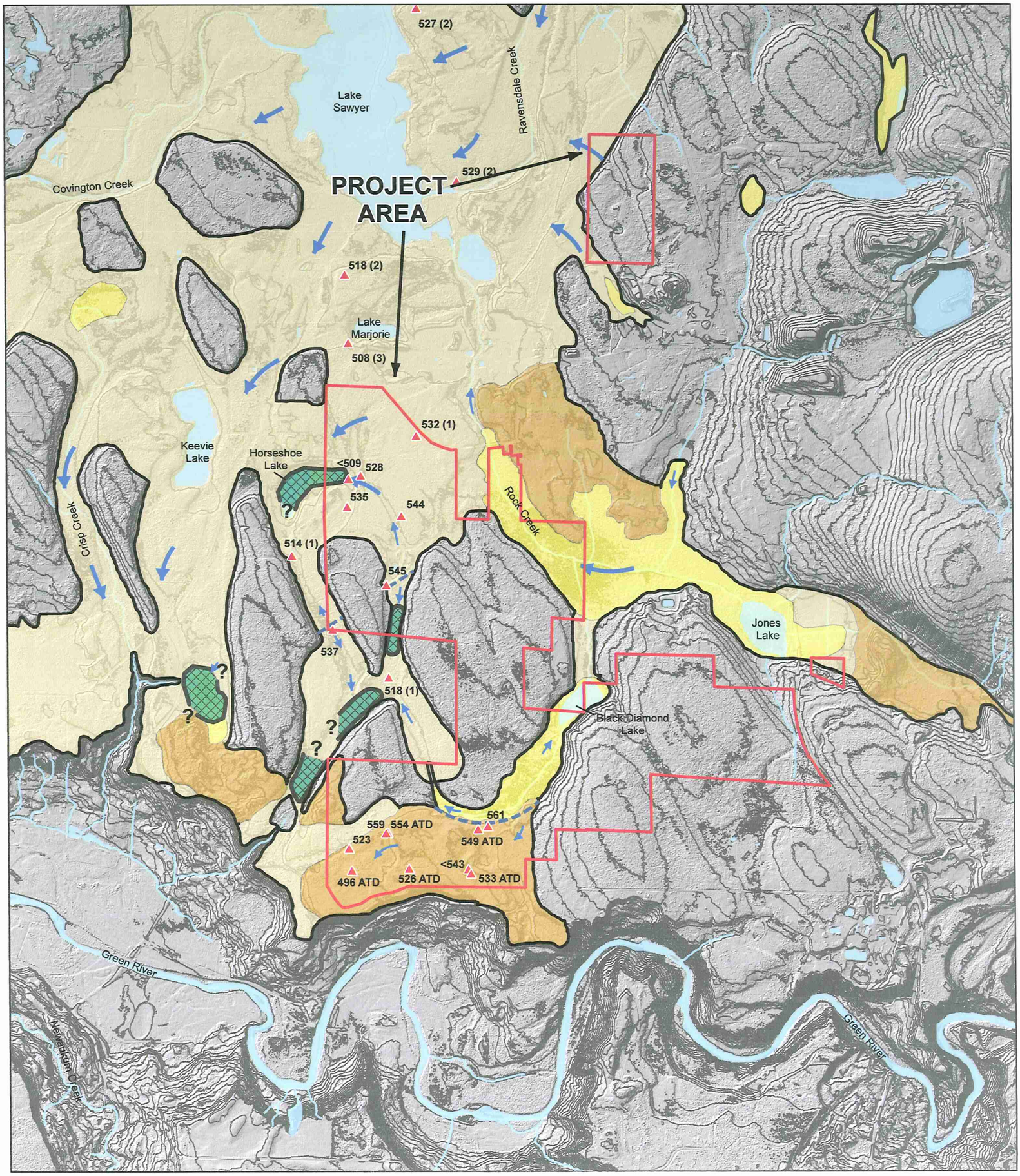
Reference: parcel outlines, waterbodies, King County GIS Center, acquired 2-08; Shaded relief and contours generated from 1 meter DEM acquired from King County GIS center, 2-08

Associated Earth Sciences, Inc.

PRE-OLYMPIA AQUIFER AND $Qpog_2$ AQUIFER GROUND WATER DISTRIBUTION AND FLOW MAP
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 27
DATE 9/08
PROJ. NO. KG060601A

N:\060601KGA_Villages\Figures_3_08\Draft_Pre_Oly_Aquifer_GW_flow.mxd



Legend

Shallow Aquifer Geologic Units:

- Qp - Peat/organic deposits
- Qvr - Vashon Recessional outwash
- Qvic - Vashon Ice Contact deposits

514 Well Location and Water Elevation from June 19, 2008

(1) Elevation of top of Qvt; Well is dry, completed on top of Qvt.

(2) Water Level obtained from Hart Crowser, May 1990.

(3) Unknown completion, may represent lower aquifer.

ATD - Water level at time of drilling.

- Ground Water Divide
- Till Window
- Ground Water Flow Direction
- Aquifer Distribution Line

N

Feet
0 1,000 2,000

REFERENCE: parcel outlines, waterbodies, King County GIS Center, acquired 2-08; Shaded relief and contours generated from 1 meter DEM acquired from King County GIS center, 2-08

N:\060601KGA_Villages\Figures 11_17\Draft_Aquifer_GW_flow.mxd

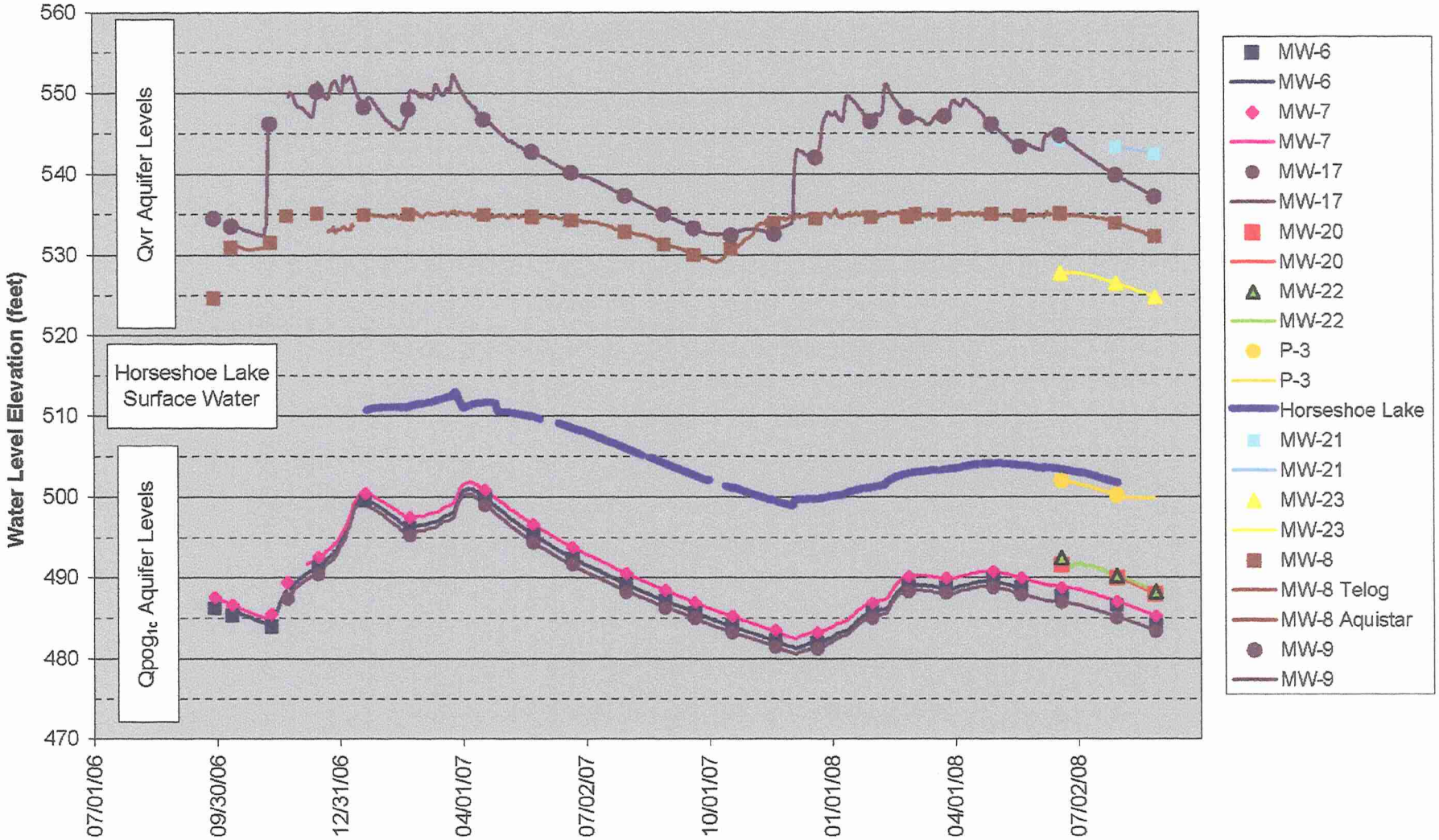
Associated Earth Sciences, Inc.

SHALLOW AQUIFER GROUND WATER DISTRIBUTION AND FLOW MAP
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 28

DATE 9/08

PROJ. NO. KG060601A

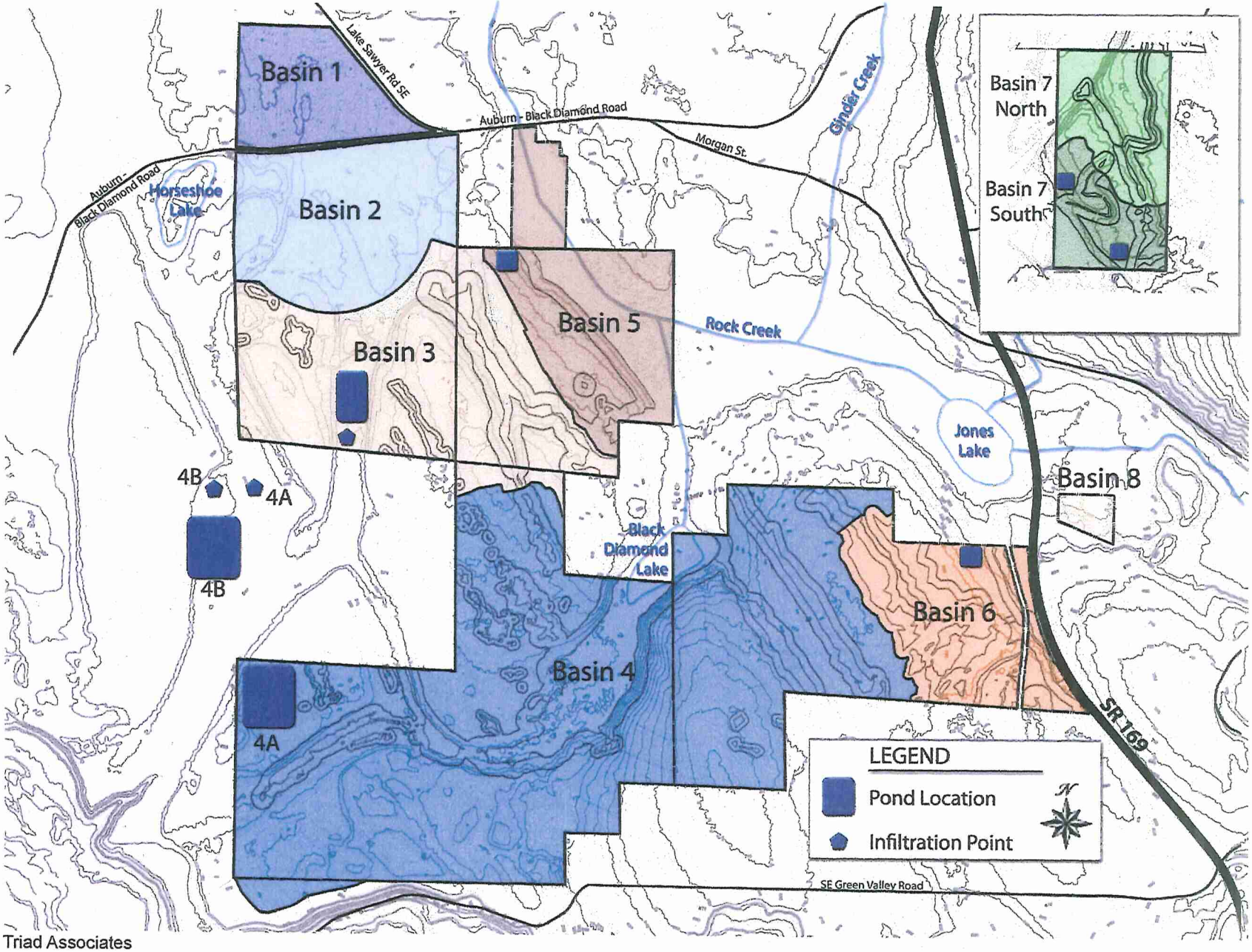


Associated Earth Sciences, Inc.

HORSESHOE LAKE - GROUND WATER LEVEL - SURFACE WATER INTERACTION
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 29
DATE 9/08
PROJ. NO. KG060601A

060601 Villages at Black Diamond \ 060601 water - Horseshoe Lake.cdr



Reference: Triad Associates

Associated Earth Sciences, Inc.

DEVELOPED BASIN MAP
THE VILLAGES
BLACK DIAMOND, WASHINGTON

FIGURE 30
DATE 9/08
PROJ. NO. KG060601A

060601 Villages at Black Diamond \ 060601 Developed Basin Map.cdr

APPENDIX 1

APPENDIX 1
FIELD METHODS

EXPLORATION PITS

Subsurface soil conditions at the site were assessed by monitoring the excavation of 110 exploration pits and 7 infiltration test pits. The exploration/infiltration pits were located in the field with hand-held GPS equipment and/or estimating distances from existing physical features, as shown on site plans provided by Triad Associates (Triad). Exploration/infiltration pit locations are shown on Figure 7 in the main body of the report.

The exploration pits were excavated using a trackhoe operated by Northwest Excavating & Trucking. The pits were excavated to depths ranging from about 5.5 to 21 feet below the existing ground surface, with the majority of the pits extending to depths of 10 to 15 feet. An Associated Earth Sciences, Inc. (AESI) geologist observed all excavation and backfilling activities. At the completion of the exploration pit logging process, the exploration pits were backfilled with the excavated spoils. This backfill should not be expected to behave as compacted structural fill and some minor settling and/or erosion of the ground surface may occur.

Soil samples obtained from the exploration pits were classified in the field and representative portions were placed in airtight, plastic bags. These soil samples were then taken to our Kirkland, Washington laboratory for further examination and testing, as necessary. In situ strength and other attributes of the materials encountered were estimated based on our experience with similar soil types, the difficulty encountered during excavation, and other factors. In addition, pertinent information, including soil sample depths, stratigraphy, soil engineering characteristics, and ground water occurrence, was recorded.

An AESI geologist completed detailed logs describing the subsurface soils encountered in each of the exploration pits. The stratigraphic contacts shown on the individual exploration pit logs represent the approximate boundaries between soil types; actual transitions may be more gradual. The soil and ground water conditions depicted are only for the specific date and locations reported, and therefore, are not necessarily representative of other locations and times. Copies of the individual exploration pit logs are presented in Appendix 2.

DRILLING AND CONSTRUCTION OF OBSERVATION WELLS

Subsurface conditions at the site were also evaluated by drilling 23 exploratory wells. The locations of the exploratory wells are shown on Figure 7 in the main body of the report.

Wells MW-1 through MW-4 were drilled and installed during the time period of April 5 to April 25, 2006, using dual air-rotary drilling equipment owned and operated by Tacoma Pump and Drilling, Inc. (Tacoma Pump) of Graham, Washington. Wells MW-5 and MW-6 were drilled and installed during the time period of September 18 to September 21, 2006, using air-rotary drilling equipment owned and operated by Aquatech Well Drilling and Pumps, Inc. (Aquatech) of Sedro-Woolley, Washington. Wells MW-7 through MW-13 were drilled and installed during the time period of September 25 to October 6, 2006, using dual-air-rotary equipment owned and operated by Tacoma Pump. Wells MW-14 through MW-19 were drilled and installed during the time period of October 31 to November 14, 2006, using dual-air-rotary equipment owned and operated by Tacoma Pump. Wells MW-20 through MW-23 were drilled and installed during the time period of June 4 to June 6, 2008, using dual-air-rotary equipment owned and operated by Tacoma Pump.

Wells MW-1 through MW-19, MW-21, and MW-23 were completed by advancing a 6-inch, inside-diameter, steel casing with a truck-mounted drill rig. Six-inch, inside-diameter, welded, steel casing and 5-inch, inside-diameter, stainless-steel wire-wrapped well screen was used to construct the wells. Wells MW-20 and MW-22 were completed as open bottom wells. The wells were developed using an airlift technique.

Wells MW-1 through MW-23 were drilled and installed under the full-time observation of an AESI geologist. Grab samples of the soil cuttings were obtained at a minimum 5-foot sampling interval. Detailed drilling logs were prepared and are included as Appendix 3.

Grab samples of the soil cuttings were classified in the field and representative portions were placed in airtight, plastic bags. These soil samples were then taken to our Kirkland, Washington laboratory for further examination and testing, as necessary. During drilling, an AESI geologist recorded pertinent information, including soil sample depths, stratigraphy, and ground water occurrence, and prepared the drilling logs. The stratigraphic contacts shown on the boring logs represent the approximate boundaries between soil types; the actual transitions may be more gradual or abrupt. The ground water conditions depicted are only for the specific dates and locations reported, and therefore, are not necessarily representative of other locations and times.

Well construction details are shown on drilling logs included as Appendix 3. A summary of pertinent construction details for wells completed for this study and wells completed previously by others and monitored during this study are presented in Table 3-1 in the main body of this report.

Wellhead protection measures were completed by Tacoma Pump and Aquatech in accordance with *Washington Administration Code* (WAC) 173-160 ("Minimum Standards for Construction and Maintenance of Wells"). Locking manufactured well boxes were installed over each of the well casings. Well locations, ground surface elevations, and well casing elevations were surveyed by Triad.

INFILTRATION TESTING

Infiltration testing was performed in eight locations on the Main Property of The Villages for this study. The approximate locations of the infiltration tests are shown on Figure 7 in the main body of the report.

Infiltration testing was undertaken in three phases. The approximate locations of the infiltration tests are shown on Figure 7 in the main body of the report. The first phase included preliminary shallow infiltration tests IT-1 through IT-4. These tests were performed using the test pit method generally corresponding to the procedure described as a pilot infiltration test (PIT) in the 2005 Washington State Department of Ecology (Ecology) *Stormwater Management Manual for Western Washington* (Ecology Manual). The second phase of testing included installation and testing of three excavated drain tests, DT-1 through DT-3. The third phase included installation and testing of a drilled Underground Injection Control well, UIC-1. The procedures for each testing method are described below. Exploration logs are included in Appendix 2 and Appendix 3.

Pilot Infiltration Test (PIT) Method and Infiltration Testing Results

For the PIT tests, water was discharged at a known rate into a test pit or steel ring of known dimensions, and the saturated infiltration rate (vertical hydraulic conductivity) was calculated using a constant head analysis. IT-1 and IT-3 were performed using a 6-foot-diameter steel ring, and IT-2 and IT-4 testing was performed in an exploration pit (approximately 6 feet long by 3 feet wide) because of the deeper occurrence of target receptor horizon.

An electronic flow meter/totalizer was used to monitor the water discharge rate and total flow. A staff gauge with 0.01-foot divisions was placed into the base of the excavation to measure the depth of water in the infiltration test pit or ring. A water truck was used to provide water for the infiltration testing.

The duration of the tests ranged from 1 hour to 5 hours. During each test, measurements of flow rate, total flow, and water level within the infiltration test pit or ring were monitored and recorded, generally at 2- to 5-minute intervals. During each test, we attempted to obtain a water level (head) of approximately 0.5 feet (low-head test) or 5 to 7 feet (high-head test) by adjusting the flow rate of the water discharged into the pit/ring. The constant head infiltration rate was determined based on the pit/ring geometry and flow rate into the pit/ring. Following the test period, if a head could be achieved, the discharge was discontinued, and the level in the pit/ring was monitored at timed intervals to determine the falling head rate. This rate serves as a verification of the constant head rate.

Upon completion of infiltration tests IT-1 and IT-4, the infiltration test ring was removed and the infiltration exploration pit was overexcavated to: (1) document the types of soils the water infiltrated through, and (2) identify any soil layers which could restrict the downward flow of

infiltrating water. No soil layers that would restrict the downward flow of infiltrating water were observed in the overexcavation of IT-1 and IT-4. The pit tests (IT-2 and IT-3) were not overexcavated because of the practical limits of the equipment used and because IT-2 and IT-3 were filled with 5 to 8 feet of water, respectively, for the "high-head" tests.

Infiltration test IT-1 was performed at a depth of 5 feet in order to assess the infiltration characteristics of the near-surface Vashon ice-contact deposits (Qvic). The Qvic at this location consisted of medium dense, moist, yellow-gray, medium to coarse sand, with fine to coarse gravel and traces of silt. One- to two-inch-thick lenses of silty sand occurred about every 3 to 6 inches below the test depth that were interpreted to be cross beds. Please refer to "Chapter 4" in the main body of the report for a complete description of the Qvic unit.

During the 2-hour testing period, we were unable to obtain a measurable hydraulic head due to the rapid infiltration of water in the test ring. The constant flow rate of water into the ring was approximately 28 gallons per minute (gpm) during the 2-hour testing period, corresponding to a constant head infiltration rate of >200 inches per hour (iph). Water input into the ring was discontinued when the water truck was emptied. No falling head measurements were recorded due to the rapid infiltration rate.

Infiltration test IT-2 was performed at a depth of 19 feet in order to assess the infiltration characteristics of the subsurface Vashon advance outwash sediments (Qva). At the location of IT-2, the Qva was overlain by Vashon lodgement till (Qvt). At the test depth, the Qva consisted of very dense, cemented, oxidized, moist, brown silty medium to coarse sand with few fine to coarse gravel, few cobbles. The matrix was filled with silt. Please refer to "Chapter 4" in the main body of the report for a complete description of the Qva and Qvt units.

The water level in the pit was raised to a height of approximately 1 foot above the base of the pit. The flow rate was gradually decreased with the head rise, until the flow was ceased after approximately 2 hours, suggesting that no significant vertical infiltration of water was occurring through the base of the exploration pit. After the 2-hour "low-head" test, the water level was brought to a height of approximately 5.5 feet above the base of the pit in order to assess the infiltration characteristics of the Qva sediments under "high-head" conditions. The flow rate was gradually decreased with the head rise, until the flow was ceased after approximately 3 hours, suggesting that no significant vertical infiltration of water was occurring under high-head conditions. Periodic head measurements of the water level in the exploration pit were performed over the course of the next 35 minutes. A drop in the water level in the exploration pit was not observed during this time period indicating that no significant vertical infiltration was occurring.

Infiltration test IT-3 was performed at a depth of 19 feet in order to assess the infiltration characteristics of the near-surface upper, pre-Olympia coarse-grained glacial deposits ($Qpog_{lc}$). At the test depth, the $Qpog_{lc}$ consisted of dense, moist, tan silty gravel with fine to coarse sand,

trace cobbles and traces of charcoal. Please refer to "Chapter 4" in the main body of the report for a complete description of the $Qpog_{lc}$ unit.

After an approximate 61-minute filling period, the water level was raised to a height of approximately 1.5 feet above the base of the pit and held constant. The constant flow rate of water into the exploration pit was approximately 1.3 gpm, corresponding to a constant head infiltration rate of approximately 10 iph. The head of 1.5 feet and flow rate of 1.3 gpm were held constant for 1 hour. After the initial 2-hour "low-head" test, the water level was brought to a height of approximately 7.5 feet above the base of the pit in order to assess the infiltration characteristics of the $Qpog_{lc}$ deposits under "high-head" conditions. The constant flow rate of water into the exploration pit was approximately 8 gpm during the final hour of the test, corresponding to a constant head infiltration rate of approximately 31 to 32 iph. Water input into the exploration pit was discontinued and periodic head measurements were performed. Over the course of 1 hour, the drop in water level was 2.1 feet for an effective falling head infiltration rate of approximately 25 to 26 iph.

Infiltration test IT-4 was performed at a depth of 8 feet in order to assess the infiltration characteristics of the near-surface Vashon recessional outwash (Qvr) sediments. At the test location and depth, the Qvr consisted of relatively clean, weakly stratified, loose, very moist, gray-brown gravel with medium to coarse sand. Please refer to "Chapter 4" in the main body of the report for a complete description of the Qvr unit.

During the testing period, we were unable to obtain a measureable hydraulic head due to the rapid infiltration of water in the test ring. The constant flow rate of water into the ring was 60 to 65 gpm during the 56-minute testing period, corresponding to a constant head infiltration rate of >200 iph. Water input into the ring was discontinued when the water truck was emptied. No falling head measurements were recorded due to the rapid infiltration rate.

Laboratory Testing

Soil samples were collected from the infiltration horizon in the IT-1 through IT-4 locations and submitted to the AESI soils laboratory for Mechanical Grain Size Analysis (ASTM:D 422 and 1140), and Moisture, Ash, and Organic Matter of Peat and Other Organic Soils (ASTM: D 2974). The laboratory analysis results are presented as attachments to this Appendix.

Summary of PIT Method Infiltration Testing Results

Results of the infiltration testing are presented in Table A-1 below.

Table A-1
IT-1 to IT-4
Field Infiltration Pit Test Results

Test #	Type of Test	Approx. Test Elev. (fmsl)	Water Volume Used (gal)	Head Height (ft)	Constant Head Infil. Rate (in/hr)	Falling Head Infil. Rate (in/hr)	Geologic Unit
IT-1	PIT	575	3,517	0	>200	NA	Qvic
IT-2 (head 1)	PIT	615	161	2.7	<0.1	NA	Qva
IT-2 (head 2)	PIT	615	857	5.6	<0.1	<0.1	Qva
IT-3 (head 1)	PIT	555	274	1.5	10	NA	$Qpog_{lc}$
IT-3 (head 2)	PIT	555	2,859	7.5	31.5	26	$Qpog_{lc}$
IT-4	PIT	560	3,326	0	>200	NA	Qvr

Measured infiltration rates should not be used for design.
fmsl - feet above mean sea level.
gal - gallon.
ft - feet.
in/hr - inches per hour.
Qvr - Vashon recessional outwash.
Qvic - Vashon ice-contact deposits.
Qva - Vashon advance outwash.
$Qpog_{lc}$ - upper pre-Olympia glacial deposits, coarse-grained.
PIT - modified Ecology Pilot Infiltration Test.
NA - no falling head data available because no head was developed during the test or test was "stepped".

Excavated Test Drain Method and Infiltration Testing Results

Drain tests DT-1, DT-2, and DT-3 were conducted as test drains. The drains consisted of pits excavated with a track-mounted backhoe to depths ranging from 16 to 18 feet. The excavations were completed with relatively flat bottoms. The dimensions of the base of each pit were as follows: DT-1, 30 square feet (sf); DT-2, 26 sf; and DT-3, 28 sf. In each drain, a 4-inch-diameter perforated pipe (piezometer) was placed in the base of the excavation for measuring water levels, and the pit was backfilled to within a few feet of ground surface with free-draining, imported pea gravel.

Infiltration testing consisted of the following:

- Water was introduced through an electronic flow meter/totalizer into the top of the drain at known rates.

- Water levels were monitored within the piezometer by hand and with an electronic data logger.

- Periodic water level, flow, and totalizer data were collected and recorded throughout the test period.

- At the conclusion of the inflow test, the flow was discontinued and the water level in the piezometer was tracked to establish falling head characteristics.

Drain test DT-1 was completed to a depth of 18 feet in $Qpog_{lc}$ consisting of very dense silty/clayey fine to coarse gravel with little charcoal. Please refer to "Chapter 4" of the report for a complete description of the $Qpog_{lc}$ unit.

The water level was raised to a height of approximately 5.0 feet above the base of the excavated drain and held constant for approximately 30 minutes. The constant flow rate of water into the exploration pit was approximately 56 gpm, corresponding to a constant head specific capacity of about 11.3 gallons per minutes per foot (gpm/ft). Water input was discontinued and periodic head measurements were performed. The excavated drain was dry within 28 minutes.

Drain test DT-2 was completed to a depth of 17.5 feet also in $Qpog_{lc}$ consisting of very dense, weakly stratified, silty/clayey fine to coarse gravel with little charcoal and lenses of cleaner sandy gravel. Please refer to "Chapter 4" of the report for a complete description of the $Qpog_{lc}$ unit.

The water level was raised to a height of approximately 7.2 feet above the base of the excavated drain and held constant for approximately 2 hours. The constant flow rate of water into the exploration pit was approximately 23 gpm during the final hour of the test, corresponding to a constant head specific capacity of about 3.3 gpm/ft. Water input was discontinued and periodic head measurements were performed. Over the course of 1 hour, the drop in water level was about 6.4 feet.

Drain test DT-3 was completed to a depth of 16 feet in $Qpog_{lc}$ consisting of very dense silty/clayey fine to coarse gravel with little charcoal. Immediately above the test depth, this unit contained a 0.5-foot layer of gray, medium sand with few fine gravels and coarse sand and traces of silt. Please refer to "Chapter 4" of the report for a complete description of the $Qpog_{lc}$ unit.

The water level was raised to a height of approximately 10.6 feet in the base of the excavated drain and held constant for approximately 3.5 hours. The constant flow rate of water into the exploration pit was approximately 3.1 gpm during the final hour of the test, corresponding to a constant head specific capacity of about 0.3 gpm/ft. After the initial step of 10.6 feet of head, the water level was brought to a height of approximately 13.6 feet. The constant flow rate of water into the exploration pit was approximately 7.5 gpm during the final hour of the test, corresponding to a constant head specific capacity of about 0.5 gpm/ft. Water input was discontinued and periodic head measurements were performed. Over the course of 1 hour, the drop in water level was about 2.9 feet.

Summary of Test Drain Infiltration Testing Results

Results of the infiltration testing are presented in Table A-2 below.

Table A-2
DT-1 to DT-3
Field Infiltration Drain Test Results

Test #	Type of Test	Approx. Test Elev. (fmsl)	Water Volume Used (gal)	Head Height (ft)	Specific Capacity (gpm/ft)	Geologic Unit
DT-1	Excavated Drain	533	3,884	5.0	11.3	$Qpog_{lc}$
DT-2	Excavated Drain	527.5	3,599	7.2	3.3	$Qpog_{lc}$
DT-3 (head 1)	Excavated Drain	531	1,706	10.6	0.3	$Qpog_{lc}$
DT-3 (head 2)	Excavated Drain	531	3,141	13.6	0.5	$Qpog_{lc}$

Measured infiltration rates should not be used for design.
fmsl - feet above mean sea level.
gal - gallon.
ft - feet.
gpm/ft - gallons per minute per foot of head rise.
$Qpog_{lc}$ - upper pre-Olympia glacial deposits, coarse-grained.

Attachments: Laboratory Analysis Results

Am Test Inc.
14603 N.E. 87th St.
Redmond, WA 98052
(425) 885-1664

AMTEST LABORATORIES

Professional Analytical Services

Jan 9 2008
Associated Earth Sciences
911 - 5th Avenue
Suite 100
Kirkland, WA 98033
Attention: Jenny Saltonstall

JAN 11 2008

Dear Jenny Saltonstall:

Enclosed please find the analytical data for your Villages@Black Diamo project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
EP-101 @ 1.5'	Soil	07-A016234	CEC-s
IT-2 @ 16.5'	Soil	07-A016235	CEC-s
IT-1 @ 5'	Soil	07-A016236	CEC-s
EP-102 @ 2.5'	Soil	07-A016237	CEC-s
IT-3 @ 19.35'	Soil	07-A016238	CEC-s
IT-4 @ 8'	Soil	07-A016239	CEC-s

Your samples were received on Monday, December 31, 2007. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Method Detection Limits (MDL's), as opposed to Practical Quantitation Limits (PQL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,

Kathy Fugiel
President

Project #: KH060601A

BACT = Bacteriological
CONV = Conventionals
TC=Total Coliforms

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals
APC=Aerobic Plate Count

Am Test Inc.
14603 N.E. 87th St.
Redmond, WA 98052
(425) 885-1664
www.amtestlab.com

AMTEST LABORATORIES

Professional Analytical Services

ANALYSIS REPORT

Associated Earth Sciences
911 - 5th Avenue
Kirkland, WA 98033
Attention: Jenny Saltonstall
Project Name: Villages@Black Diamo
Project #: KH060601A
All results reported on an as received basis.

Date Received: 12/31/07
Date Reported: 1/ 9/08

AMTEST Identification Number **07-A016234**
Client Identification **EP-101 @ 1.5'**
Sampling Date

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Cation Exchange Capacity	6.2	meq/100g		0.5	SW-846 9081	HL	01/08/08

AMTEST Identification Number **07-A016235**
Client Identification **IT-2 @ 16.5'**
Sampling Date

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Cation Exchange Capacity	16.	meq/100g		0.5	SW-846 9081	HL	01/08/08

AMTEST Identification Number **07-A016236**
Client Identification **IT-1 @ 5'**
Sampling Date

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Cation Exchange Capacity	4.5	meq/100g		0.5	SW-846 9081	HL	01/08/08

AMTEST Identification Number 07-A016237
Client Identification EP-102 @ 2.5'
Sampling Date

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Cation Exchange Capacity	2.7	meq/100g		0.5	SW-846 9081	HL	01/08/08

AMTEST Identification Number 07-A016238
Client Identification IT-3 @ 19.35'
Sampling Date

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Cation Exchange Capacity	7.0	meq/100g		0.5	SW-846 9081	HL	01/08/08

AMTEST Identification Number 07-A016239
Client Identification IT-4 @ 8'
Sampling Date

Miscellaneous

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANLST	DATE
Cation Exchange Capacity	2.2	meq/100g		0.5	SW-846 9081	HL	01/08/08

Kathy Fugiel
President

AMTEST
LABORATORIES

QC Summary for sample numbers: 07-A016234 to 07-A016239

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUPLICATE VALUE	RPD
07-A016047	Cation Exchange Capacity	meq/100g	16.	17.	6.1

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Cation Exchange Capacity	meq/100g	20.	20.	100. %
Cation Exchange Capacity	meq/100g	20.	20.	100. %

BLANKS

ANALYTE	UNITS	RESULT
Cation Exchange Capacity	meq/100g	< 0.5
Cation Exchange Capacity	meq/100g	< 0.5

Associated Earth Sciences, Inc.

Moisture, Ash, and Organic Matter of Peat and Other Organic Soils - ASTM 2974

Date Sampled	Project	Project No.		Soil Description
12/24/2007	Villages at Black Diamond	KG060601A		
Tested By	**Location**	**EP No**	**Depth**	Various
CDF	Parcel A	EP 101,102		

Moisture Content

Sample ID	EP-101@ 1.5'	EP-102 @2.5'
Wet Weight + Pan	308.2	369.0
Dry Weight + Pan	294.5	357.0
Weight of Pan	101.5	99.8
Weight of Moisture	13.6	12.0
Dry Weight of Soil	193.1	257.2
% Moisture	7.1	4.7

Organic Matter and Ash Content

Dry Soil Befor Burn + Pan	249.3	398.9
Dry Soil After Burn + Pan	246.5	396.1
Weight of Pan	76.9	140.4
Wt. Loss Due to Ignition	2.8	2.8
Actual Wt. Of Soil After Burr	169.6	255.6
% Organics	1.7	1.1

Associated Earth Sciences, Inc.

Moisture, Ash, and Organic Matter of Peat and Other Organic Soils - ASTM 2974

Date Sampled	Project	Project No.		Soil Description
12/24/2007	Villages at Black Diamond	KG060601A		
Tested By	**Location**	**EP No**	**Depth**	Various
CDF	Parcel D & BDA Parcel	IT 1,2,3,4		

Moisture Content

Sample ID	IT-4 @ 8'	IT-3 @ 19'	IT-2 @ 16.5'
Wet Weight + Pan	382.1	437.0	345.0
Dry Weight + Pan	366.5	412.0	319.6
Weight of Pan	98.6	98.0	101.3
Weight of Moisture	15.6	25.0	25.3
Dry Weight of Soil	267.9	314.0	218.4
% Moisture	5.8	8.0	11.6

Organic Matter and Ash Content

Dry Soil Befor Burn + Pan	214.7	206.6	221.80
Dry Soil After Burn + Pan	213.6	205.6	220.4
Weight of Pan	90.0	82.9	89.3
Wt. Loss Due to Ignition	1.0	1.0	1.5
Actual Wt. Of Soil After Burr	123.7	122.8	131.1
% Organics	0.8	0.8	1.1

Moisture Content

Sample ID	IT-1 @5'
Wet Weight + Pan	388.5
Dry Weight + Pan	368.9
Weight of Pan	100.9
Weight of Moisture	19.6
Dry Weight of Soil	268.0
% Moisture	7.3

Organic Matter and Ash Content

Dry Soil Befor Burn + Pan	359.3
Dry Soil After Burn + Pan	355.2
Weight of Pan	136.5
Wt. Loss Due to Ignition	4.1
Actual Wt. Of Soil After Burr	218.7
% Organics	1.9

ASSOCIATED EARTH SCIENCES, INC.

911 5th Ave., Suite 100 Kirkland, WA 98033 425-827-7701 FAX 425-827-5424

Associated Earth Sciences, Inc.

Moisture, Ash, and Organic Matter of Peat and Other Organic Soils - ASTM 2974

Date Sampled	Project	Project No.		Soil Description
12/8/2006	Villages Black diamond	KG060601A		
Tested By	**Location**	**EB/EP No.**	**Depth**	Various
MS	Onsite			

Moisture Content

Sample ID	MW 19-1 65'	MW 19-2 195'	MW 7-3 20'
Wet Weight + Pan	373.9	361.3	400.9
Dry Weight + Pan	343.4	279.3	385.0
Weight of Pan	98.7	101.7	95.8
Weight of Moisture	30.5	82.1	15.8
Dry Weight of Soil	244.8	177.6	289.3
% Moisture	12.5	46.2	5.5

Organic Matter and Ash Content

Dry Soil Befor Burn + Pan	336.4	248.3	319.6
Dry Soil After Burn + Pan	334.2	244.0	318.9
Weight of Pan	136.3	140.3	89.2
Wt. Loss Due to Ignition	2.2	4.4	0.7
Actual Wt. Of Soil After Burr	197.9	103.6	229.7
% Organics	1.1	4.2	0.3

GRAIN SIZE ANALYSIS - MECHANICAL

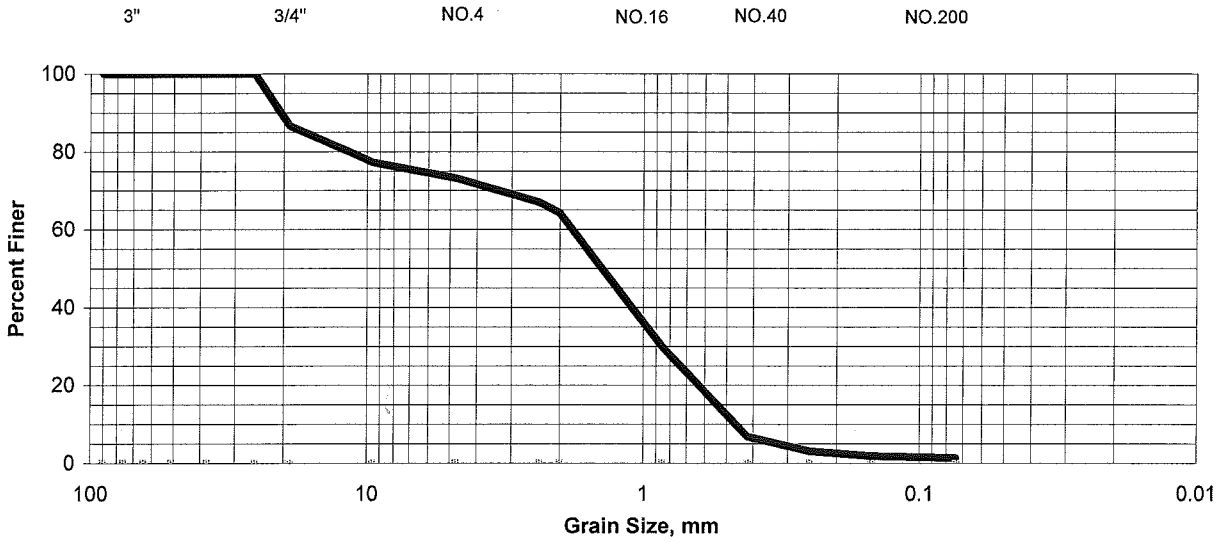
Date	Project	Project No.		Soil Description
12/3/2007	**Villages at Black Diamond**	**KG060601A**		**Sand, little gravel, trace silt**
Tested By	Location	IT No	Depth	
KME	**BDA Parcel**	**1**	**5'**	

Wt. Of wet sample + Tare	1239.46
Wt. of Dry Sample + Tare	1180.77
Wt. of Tare	220.92
Wt. of Dry Sample	959.85
After Wash Weight + Tare	1165.3

Moisture % 6.1

					Specification Requirements	
Sieve No.	Diam. (mm)	Wt. Retained (g)	% Retained	% Passing	Minimum	Maximum
3.5	90	0	0.0	100.0		
3	76.1	0	0.0	100.0		
2.5	64	0	0.0	100.0		
2	50.8	0	0.0	100.0		
1.5	38.1	0	0.0	100.0		
1	25.4	0	0.0	100.0		
3/4	19	128.63	13.4	86.6		
3/8	9.51	217.93	22.7	77.3		
#4	4.76	256.53	26.7	73.3		
#8	2.38	316.22	32.9	67.1		
#10	2	342.57	35.7	64.3		
#20	0.85	673.49	70.2	29.8		
#40	0.42	893.88	93.1	6.9		
#60	0.25	929.51	96.8	3.2		
#100	0.149	941.79	98.1	1.9		
#200	0.074	946.83	98.6	1.4		

US STANDARD SIEVE NOS.



ASSOCIATED EARTH SCIENCES, INC.

911 5th Ave., Suite 100 Kirkland, WA 98033 425-827-7701 FAX 425-827-5424

GRAIN SIZE ANALYSIS - MECHANICAL

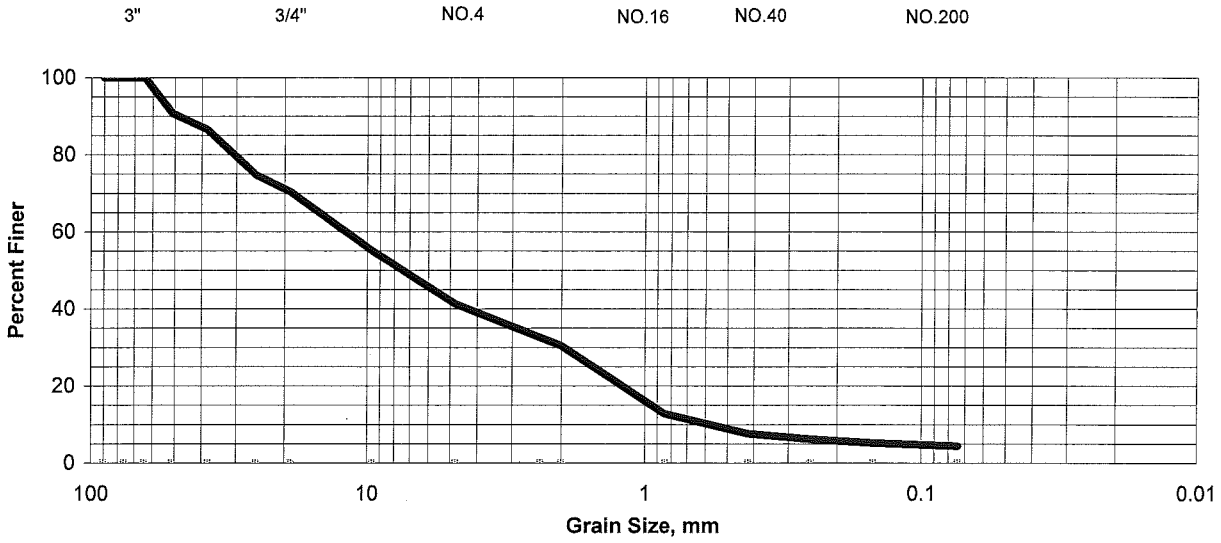
Date	Project	Project No.		Soil Description
12/24/2007	**Villages at Black Diamond**	**KG060601A**		**Gravel with sand, trace silt**
Tested By	Location	EP No	Depth	
KME/CDF	**Parcel D**	**IT-3**	**19'**	

Wt. Of wet sample + Tare	9310
Wt. of Dry Sample + Tare	8755
Wt. of Tare	611.86
Wt. of Dry Sample	8143.14
After Wash Weight + Tare	8355

Moisture % 6.8

					Specification Requirements	
Sieve No.	Diam. (mm)	Wt. Retained (g)	% Retained	% Passing	Minimum	Maximum
3.5	90	0	0.0	100.0		
3	76.1	0	0.0	100.0		
2.5	64	0	0.0	100.0		
2	50.8	755	9.3	90.7		
1.5	38.1	1095	13.4	86.6		
1	25.4	2055	25.2	74.8		
3/4	19	2410	29.6	70.4		
3/8	9.51	3670	45.1	54.9		
#4	4.76	4785	58.8	41.2		
#8	2.38	5490	67.4	32.6		
#10	2	5665	69.6	30.4		
#20	0.85	7095	87.1	12.9		
#40	0.42	7520	92.3	7.7		
#60	0.25	7635	93.8	6.2		
#100	0.149	7715	94.7	5.3		
#200	0.074	7785	95.6	4.4		

US STANDARD SIEVE NOS.



ASSOCIATED EARTH SCIENCES, INC.

911 5th Ave., Suite 100 Kirkland, WA 98033 425-827-7701 FAX 425-827-5424

GRAIN SIZE ANALYSIS - MECHANICAL

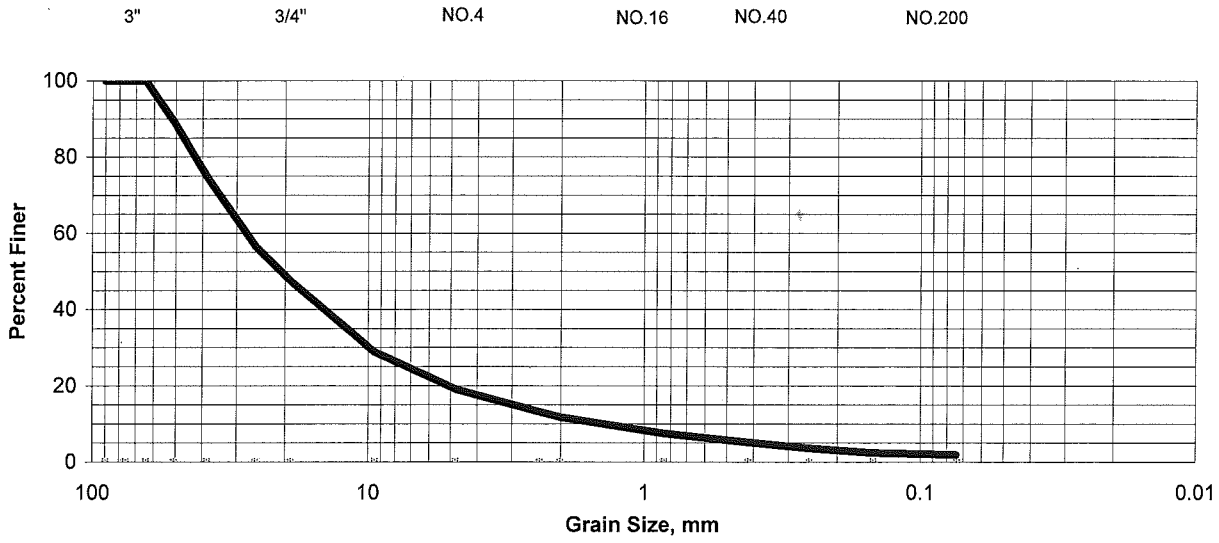
Date	Project	Project No.		Soil Description
12/24/2007	**Villages at Black Diamond**	**KG060601A**		**Gravel with sand, trace silt**
Tested By	Location	EP No	Depth	
KME/CDF	**Parcel D**	**IT-4**	**8'**	

Wt. Of wet sample + Tare	10260
Wt. of Dry Sample + Tare	9920
Wt. of Tare	664.35
Wt. of Dry Sample	9255.65
After Wash Weight + Tare	9750

Moisture % 3.7

					Specification Requirements	
Sieve No.	Diam. (mm)	Wt. Retained (g)	% Retained	% Passing	Minimum	Maximum
3.5	90	0	0.0	100.0		
3	76.1	0	0.0	100.0		
2.5	64	0	0.0	100.0		
2	50.8	989	10.7	89.3		
1.5	38.1	2368	25.6	74.4		
1	25.4	4038	43.6	56.4		
3/4	19	4870	52.6	47.4		
3/8	9.51	6574	71.0	29.0		
#4	4.76	7495	81.0	19.0		
#8	2.38	8040	86.9	13.1		
#10	2	8165	88.2	11.8		
#20	0.85	8555	92.4	7.6		
#40	0.42	8775	94.8	5.2		
#60	0.25	8925	96.4	3.6		
#100	0.149	9030	97.6	2.4		
#200	0.074	9080	98.1	1.9		

US STANDARD SIEVE NOS.



ASSOCIATED EARTH SCIENCES, INC.

911 5th Ave., Suite 100 Kirkland, WA 98033 425-827-7701 FAX 425-827-5424

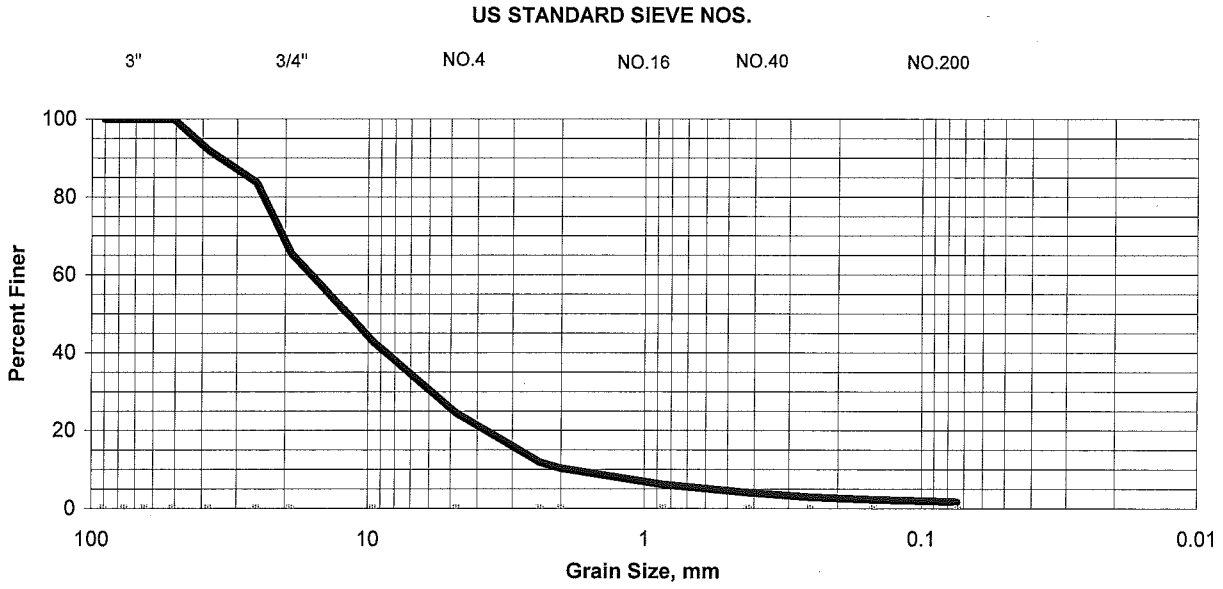
GRAIN SIZE ANALYSIS - MECHANICAL

Date	Project	Project No.		Soil Description
12/4/2007	**Villages at Black Diamond**	**KG060601A**		**Gravel with sand, trace silt**
Tested By	Location	EP No	Depth	
KME	**Parcel A**	**97**	**4 + 11.5**	

Wt. Of wet sample + Tare	2875.22
Wt. of Dry Sample + Tare	2767.32
Wt. of Tare	220.63
Wt. of Dry Sample	2546.69
After Wash Weight + Tare	0

Moisture % 4.2

					Specification Requirements	
Sieve No.	Diam. (mm)	Wt. Retained (g)	% Retained	% Passing	Minimum	Maximum
3.5	90	0	0.0	100.0		
3	76.1	0	0.0	100.0		
2.5	64	0	0.0	100.0		
2	50.8	0	0.0	100.0		
1.5	38.1	203.68	8.0	92.0		
1	25.4	414.49	16.3	83.7		
3/4	19	877	34.4	65.6		
3/8	9.51	1458.78	57.3	42.7		
#4	4.76	1920.98	75.4	24.6		
#8	2.38	2243.61	88.1	11.9		
#10	2	2282.53	89.6	10.4		
#20	0.85	2389.02	93.8	6.2		
#40	0.42	2443.06	95.9	4.1		
#60	0.25	2470.44	97.0	3.0		
#100	0.149	2488.77	97.7	2.3		
#200	0.074	2503.45	98.3	1.7		



ASSOCIATED EARTH SCIENCES, INC.

911 5th Ave., Suite 100 Kirkland, WA 98033 425-827-7701 FAX 425-827-5424

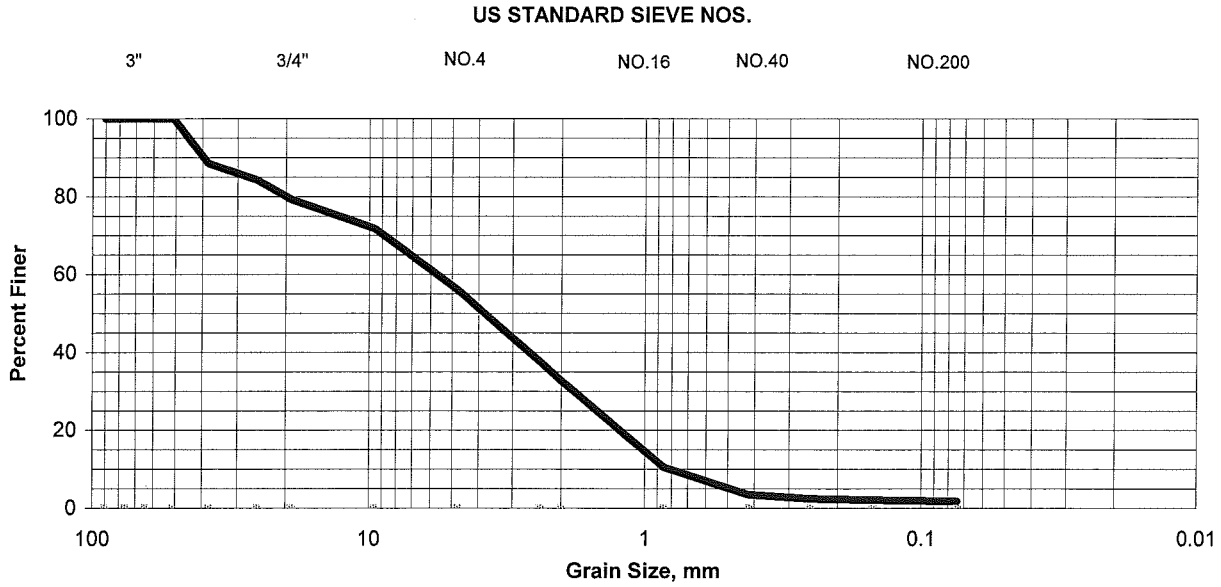
GRAIN SIZE ANALYSIS - MECHANICAL

Date	Project	Project No.		Soil Description
12/4/2007	**Villages at Black Diamond**	**KG060601A**		**Sand with gravel, trace silt**
Tested By	Location	EP No	Depth	
KME	**Parcel A**	**98**	**4**	

Wt. Of wet sample + Tare	1146.56
Wt. of Dry Sample + Tare	1097.48
Wt. of Tare	220.62
Wt. of Dry Sample	876.86
After Wash Weight + Tare	0

Moisture % 5.6

					Specification Requirements	
Sieve No.	Diam. (mm)	Wt. Retained (g)	% Retained	% Passing	Minimum	Maximum
3.5	90	0	0.0	100.0		
3	76.1	0	0.0	100.0		
2.5	64	0	0.0	100.0		
2	50.8	0	0.0	100.0		
1.5	38.1	100.66	11.5	88.5		
1	25.4	137.87	15.7	84.3		
3/4	19	182.45	20.8	79.2		
3/8	9.51	247.33	28.2	71.8		
#4	4.76	385.26	43.9	56.1		
#8	2.38	546.35	62.3	37.7		
#10	2	589.86	67.3	32.7		
#20	0.85	784.78	89.5	10.5		
#40	0.42	845.76	96.5	3.5		
#60	0.25	855.61	97.6	2.4		
#100	0.149	858.44	97.9	2.1		
#200	0.074	860.86	98.2	1.8		



ASSOCIATED EARTH SCIENCES, INC.

911 5th Ave., Suite 100 Kirkland, WA 98033 425-827-7701 FAX 425-827-5424

GRAIN SIZE ANALYSIS - MECHANICAL

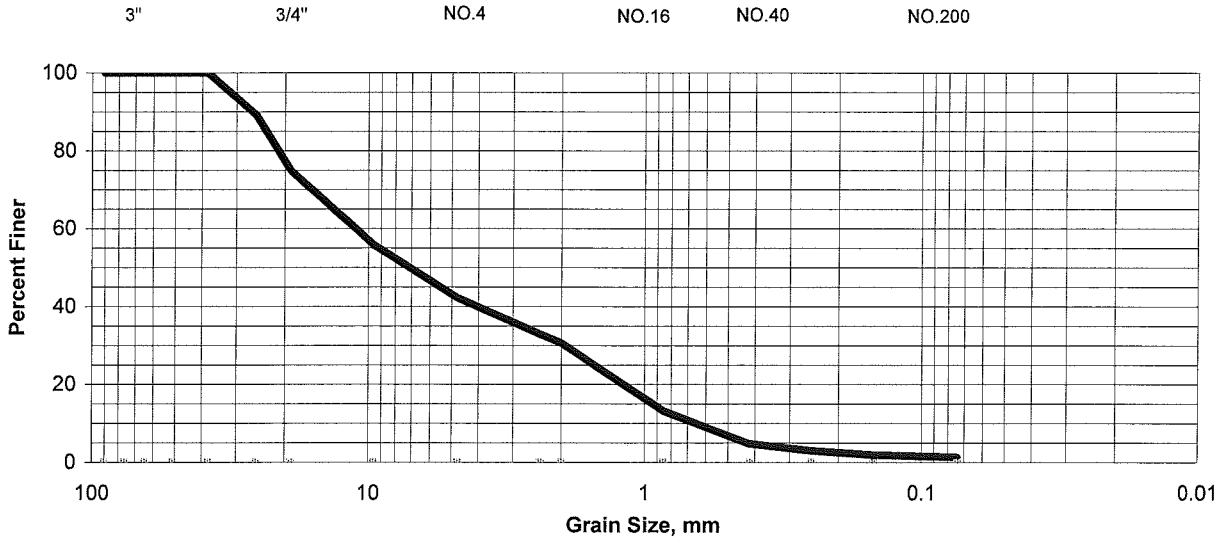
Date	Project	Project No.		Soil Description
12/4/2007	**Villages at Black Diamond**	**KG060601A**		**Sand with gravel, trace silt**
Tested By	Location	EP No	Depth	
KME	**Parcel A**	**99**	**3**	

Wt. Of wet sample + Tare	1624.15
Wt. of Dry Sample + Tare	1554.08
Wt. of Tare	225.55
Wt. of Dry Sample	1328.53
After Wash Weight + Tare	0

Moisture % 5.3

					Specification Requirements	
Sieve No.	Diam. (mm)	Wt. Retained (g)	% Retained	% Passing	Minimum	Maximum
3.5	90	0	0.0	100.0		
3	76.1	0	0.0	100.0		
2.5	64	0	0.0	100.0		
2	50.8	0	0.0	100.0		
1.5	38.1	0	0.0	100.0		
1	25.4	144.47	10.9	89.1		
3/4	19	334.07	25.1	74.9		
3/8	9.51	587.96	44.3	55.7		
#4	4.76	766.53	57.7	42.3		
#8	2.38	891.64	67.1	32.9		
#10	2	920.83	69.3	30.7		
#20	0.85	1153.04	86.8	13.2		
#40	0.42	1263.93	95.1	4.9		
#60	0.25	1288.07	97.0	3.0		
#100	0.149	1302.23	98.0	2.0		
#200	0.074	1310.3	98.6	1.4		

US STANDARD SIEVE NOS.



ASSOCIATED EARTH SCIENCES, INC.

911 5th Ave., Suite 100 Kirkland, WA 98033 425-827-7701 FAX 425-827-5424

GRAIN SIZE ANALYSIS - MECHANICAL

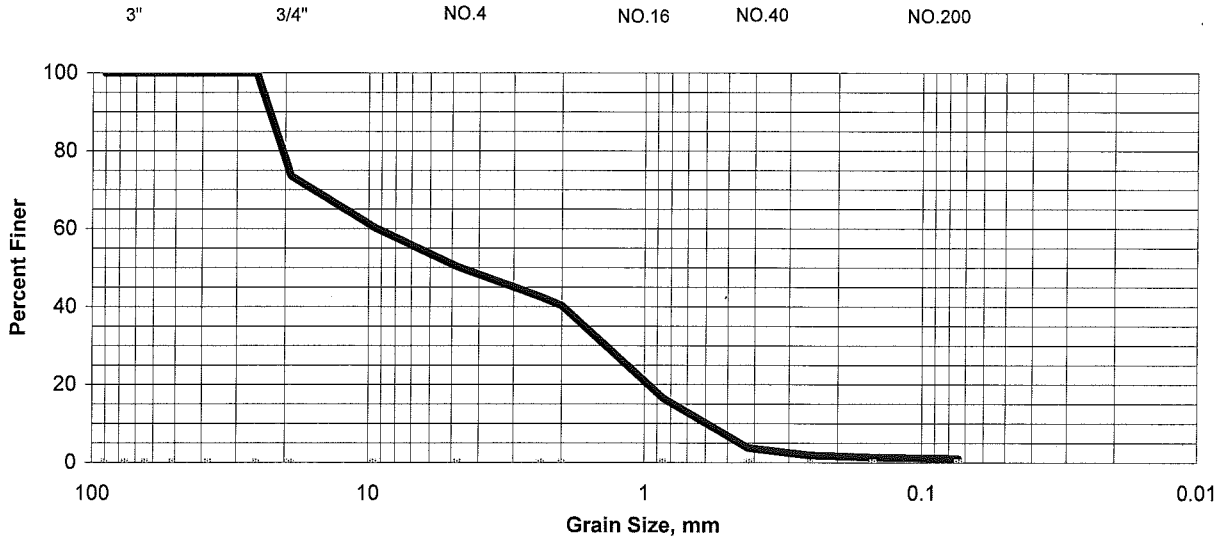
Date	Project	Project No.		Soil Description
12/4/2007	**Villages at Black Diamond**	**KG060601A**		**Sand with gravel, trace silt**
Tested By	Location	EP No	Depth	
KME	**Parcel A**	**101**	**4**	

Wt. Of wet sample + Tare	1252.28
Wt. of Dry Sample + Tare	1202.96
Wt. of Tare	226.54
Wt. of Dry Sample	976.42
After Wash Weight + Tare	0

Moisture % 5.1

					Specification Requirements	
Sieve No.	Diam. (mm)	Wt. Retained (g)	% Retained	% Passing	Minimum	Maximum
3.5	90	0	0.0	100.0		
3	76.1	0	0.0	100.0		
2.5	64	0	0.0	100.0		
2	50.8	0	0.0	100.0		
1.5	38.1	0	0.0	100.0		
1	25.4	0	0.0	100.0		
3/4	19	258.18	26.4	73.6		
3/8	9.51	386.88	39.6	60.4		
#4	4.76	485.57	49.7	50.3		
#8	2.38	561.22	57.5	42.5		
#10	2	583.03	59.7	40.3		
#20	0.85	815.55	83.5	16.5		
#40	0.42	939.85	96.3	3.7		
#60	0.25	958.19	98.1	1.9		
#100	0.149	962.72	98.6	1.4		
#200	0.074	965.75	98.9	1.1		

US STANDARD SIEVE NOS.



ASSOCIATED EARTH SCIENCES, INC.

911 5th Ave., Suite 100 Kirkland, WA 98033 425-827-7701 FAX 425-827-5424

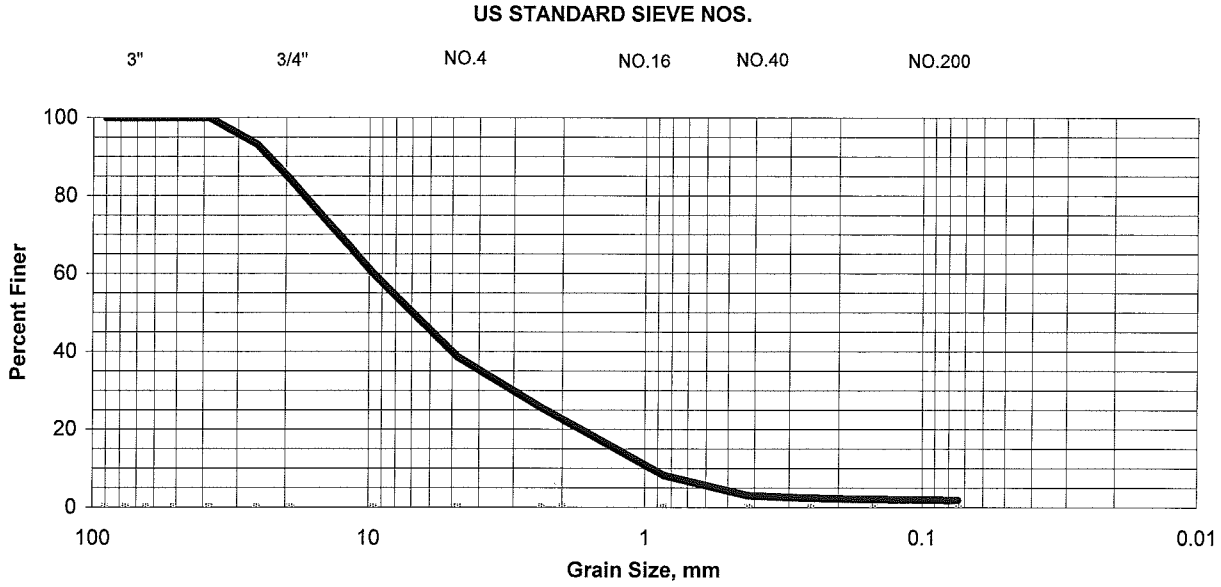
GRAIN SIZE ANALYSIS - MECHANICAL

Date	Project	Project No.		Soil Description
12/4/2007	**Villages at Black Diamond**	**KG060601A**		**Sand with gravel, trace silt**
Tested By	Location	EP No	Depth	
KME	**Parcel A**	**103**	**4**	

Wt. Of wet sample + Tare	1450.2
Wt. of Dry Sample + Tare	1398.28
Wt. of Tare	220.16
Wt. of Dry Sample	1178.12
After Wash Weight + Tare	0

Moisture % 4.4

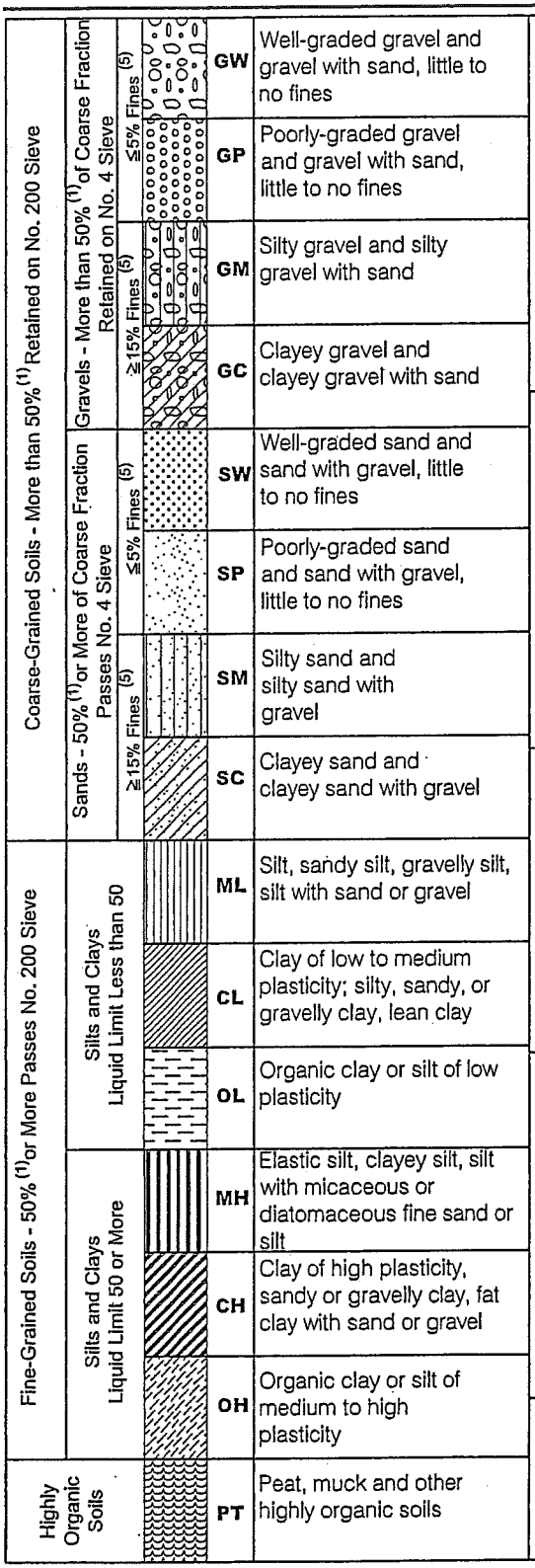
					Specification Requirements	
Sieve No.	Diam. (mm)	Wt. Retained (g)	% Retained	% Passing	Minimum	Maximum
3.5	90	0	0.0	100.0		
3	76.1	0	0.0	100.0		
2.5	64	0	0.0	100.0		
2	50.8	0	0.0	100.0		
1.5	38.1	0	0.0	100.0		
1	25.4	81.47	6.9	93.1		
3/4	19	191.68	16.3	83.7		
3/8	9.51	475.89	40.4	59.6		
#4	4.76	723.64	61.4	38.6		
#8	2.38	876.29	74.4	25.6		
#10	2	911.32	77.4	22.6		
#20	0.85	1081.31	91.8	8.2		
#40	0.42	1141.95	96.9	3.1		
#60	0.25	1150.31	97.6	2.4		
#100	0.149	1153.1	97.9	2.1		
#200	0.074	1155.44	98.1	1.9		



ASSOCIATED EARTH SCIENCES, INC.

911 5th Ave., Suite 100 Kirkland, WA 98033 425-827-7701 FAX 425-827-5424

Appendix 2
AESI Exploration Pit Logs



Terms Describing Relative Density and Consistency

	Density	SPT[2] blows/foot
Coarse-Grained Soils	Very Loose	0 to 4
	Loose	4 to 10
	Medium Dense	10 to 30
	Dense	30 to 50
	Very Dense	>50
	Consistency	**SPT[2] blows/foot**
Fine-Grained Soils	Very Soft	0 to 2
	Soft	2 to 4
	Medium Stiff	4 to 8
	Stiff	8 to 15
	Very Stiff	15 to 30
	Hard	>30

Test Symbols

G = Grain Size
M = Moisture Content
A = Atterberg Limits
C = Chemical
DD = Dry Density
K = Permeability

Component Definitions

Descriptive Term	Size Range and Sieve Number
Boulders	Larger than 12"
Cobbles	3" to 12"
Gravel	3" to No. 4 (4.75 mm)
Coarse Gravel	3" to 3/4"
Fine Gravel	3/4" to No. 4 (4.75 mm)
Sand	No. 4 (4.75 mm) to No. 200 (0.075 mm)
Coarse Sand	No. 4 (4.75 mm) to No. 10 (2.00 mm)
Medium Sand	No. 10 (2.00 mm) to No. 40 (0.425 mm)
Fine Sand	No. 40 (0.425 mm) to No. 200 (0.075 mm)
Silt and Clay	Smaller than No. 200 (0.075 mm)

[3] Estimated Percentage

Component	Percentage by Weight
Trace	<5
Few	5 to 10
Little	15 to 25
With	- Non-primary coarse constituents: ≥ 15% - Fines content between 5% and 15%

Moisture Content

Dry - Absence of moisture, dusty, dry to the touch

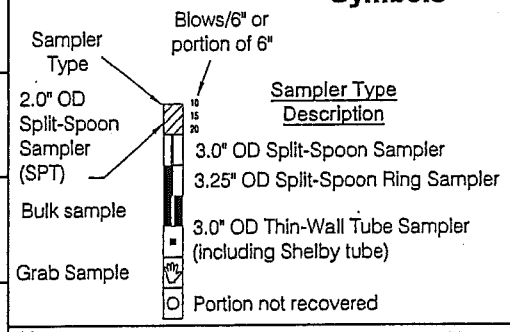
Slightly Moist - Perceptible moisture

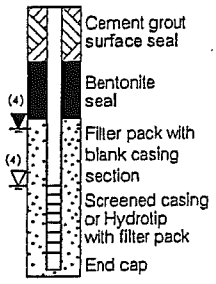
Moist - Damp but no visible water

Very Moist - Water visible but not free draining

Wet - Visible free water, usually from below water table

Symbols





(1) Percentage by dry weight
(2) (SPT) Standard Penetration Test (ASTM D-1586)
(3) In General Accordance with Standard Practice for Description and Identification of Soils (ASTM D-2488)
(4) Depth of ground water
▼ ATD = At time of drilling
▽ Static water level (date)
(5) Combined USCS symbols used for fines between 5% and 15%

Classifications of soils in this report are based on visual field and/or laboratory observations, which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field or laboratory testing unless presented herein. Visual-manual and/or laboratory classification methods of ASTM D-2487 and D-2488 were used as an identification guide for the Unified Soil Classification System.

Associated Earth Sciences, Inc.

EXPLORATION LOG KEY

FIGURE A1

blocksklog_key.dwg LAYOUT: Layout2

LOG OF EXPLORATION PIT NO. EP-1

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION

Approximate Elev. 602 feet

Forest Duff

Qvic - Vashon Ice-Contact Deposits

Loose, moist, reddish brown, oxidized fine to medium SAND with silt, gravel.

Loose to medium dense, moist, brown, medium to coarse SAND with gravel, few fine sand, trace boulders, silt, cobbles, roughly stratified, roots to 8'.

Medium dense, moist, grayish brown, medium to coarse SAND with gravel, trace silt, boulders, cobbles.

Bottom of exploration pit at depth 15 feet
Minor caving from 0 to BOH. No seepage.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-2

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 605 feet**
1	**Forest Duff**
	Qvt - Vashon Lodgement Till
2	Medium dense to dense, moist, reddish brown, fine SAND with silt, scattered gravel, cobbles, organics and roots (weathered till).
3	
4	Dense, moist, grayish brown, fine SAND with silt, few gravel and cobbles.
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	Dense, moist, gray to bluish gray, fine SAND with silt, few gravel and cobbles.
20	Dense, moist, grayish brown/brownish gray, fine SAND with silt, few gravel and cobbles.
21	Bottom of exploration pit at depth 20 feet Minor seepage at 4'. Moderate seepage at 11.5' and 13'. Minor caving 11.5' to 14'.
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-3

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 616 feet**
	Road Fill/Forest Duff
1	**Qvt - Vashon Lodgement Till**
2	Medium dense to dense, moist, orange brown, fine SAND with silt, few gravel and cobbles, organics and roots (weathered till).
3	
4	Dense, moist, grayish brown, fine SAND with silt, few medium to coarse SAND, gravel and cobbles.
5	
6	
7	
8	
9	
10	
11	
12	
13	Slightly more sandy at 13'.
14	
15	**Qva - Vashon Advance Outwash**
16	Dense, moist, brown to orangish brown, fine to medium to fine to coarse SAND with gravel, silt.
17	Dense, moist, brown, fine to coarse SAND with gravel, silt, few cobbles.
18	Decrease in gravel, clast of mottled, unsorted silty fine to coarse SAND in spoils pile.
19	
20	Bottom of exploration pit at depth 19.5 feet Minor seepage at 5.5' and 6.5'. No caving.
21	
22	
23	
24	
25	

KCTP3 05457A.GPJ June 10, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

LOG OF EXPLORATION PIT NO. EP-4

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 607 feet**
1	**Forest Duff**
2	**Qvt - Vashon Lodgement Till** Medium dense to dense, moist, orange-brown, fine to medium SAND with silt, few coarse sand, few gravel, trace cobbles, organics and roots present (weathered till).
3	
4	Dense, moist, brownish gray, fine SAND with silt and gravel, few medium to coarse sand, cobbles.
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	Increase in gravel and cobbles, trace boulders.
16	
17	
18	
19	
20	Bottom of exploration pit at depth 19 feet Moderate seepage at 6'. No caving.
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-5

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 605 feet

Forest Duff

Qvt - Vashon Lodgement Till

Medium dense to dense, moist, orange-brown, fine SAND with silt, few gravel, cobbles, organics, and roots present (weathered till).

Dense, moist, brownish gray, fine SAND with silt, gravel, few medium to coarse sand, trace cobbles.

Bottom of exploration pit at depth 16.5 feet
Minor to moderate seepage at 6'. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-6

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 595 feet**
1	**Forest Duff**
2	**Qvt - Vashon Lodgement Till**
3	Medium dense to dense, moist, tan to brown, fine SAND with silt, trace cobbles/boulders (weathered till).
4	Dense, moist, grayish brown, fine SAND, silt, few gravel, medium to coarse sand.
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	Bottom of exploration pit at depth 17 feet Moderate seepage at 3'. Minor caving 2.5' to 3'.
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A
April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-7

Depth (ft)	DESCRIPTION
	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.
	Approximate Elev. 595 feet
	Forest Duff
1	
2	Medium dense, moist, orange-brown, fine SAND with silt, few coarse sand, gravel, trace cobbles, heavily oxidized, organics and roots present.
3	
4	**Qvt - Vashon Lodgement Till**
5	Medium dense to dense, moist, grayish brown, fine SAND with silt, gravel, few medium to coarse sand, trace cobbles (weathered till).
6	
7	
8	
9	Dense, moist, brownish gray, fine SAND with silt, few gravel, medium to coarse sand, trace cobbles.
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	Bottom of exploration pit at depth 18 feet Moderate seepage at 3.5'. Minor caving 0 to 8'.
20	
21	
22	
23	
24	
25	

KCTP3 05457A.GPJ June 10, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

LOG OF EXPLORATION PIT NO. EP-8

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 605 feet**
1	**Forest Duff**
2	**Qvt - Vashon Lodgement Till** Medium dense, moist, orange-brown, highly oxidized, fine SAND with silt, few to little gravel, medium to coarse sand, trace cobbles, roots and organics present (weathered till).
3	
4	Dense, moist, grayish brown, fine SAND with silt, few gravel, medium to coarse sand, trace cobbles.
5	
6	
7	Not digging as hard as previous till pits, possibly more sand or slightly weathered.
8	
9	
10	
11	Dense to very dense, fine SAND with silt, few gravel, medium to coarse sand, trace cobbles.
12	
13	
14	
15	
16	
17	
18	
19	Bottom of exploration pit at depth 18.5 feet Moderate seepage at 4'. Minor caving 0 to 10.5'.
20	
21	
22	
23	
24	
25	

KCTP3 05457A.GPJ June 10, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

LOG OF EXPLORATION PIT NO. EP-9

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION — Approximate Elev. 565 feet
	Forest Duff
1	**Qvr - Vashon Recessional Outwash**
2	Medium dense, moist, oxidized, orange-brown to dark brown, fine SAND with silt, few to little gravel, medium to coarse sand.
3	Moist, oxidized, grayish brown, medium to coarse SAND with gravel, trace silt and fine sand.
4	
5	
6	Roots to 6'.
7	Becomes very moist.
8	Medium dense, very moist, grayish brown, fine to coarse SAND.
9	Sample - medium dense, wet, gray to grayish brown, medium SAND, few fine to coarse sand, trace
10	gravel.
11	**Qvt - Vashon Lodgement Till**
12	Dense, moist, gray to grayish brown, fine SAND with silt, few to little gravel, medium to coarse sand, minor oxidation.
13	
14	
15	
16	
17	
18	Bottom of exploration pit at depth 17.5 feet
19	Moderate to rapid seepage 8.5' to 10.5'. Minor caving 0 to 10.5'.
20	
21	
22	
23	
24	
25	

KCTP3 05457A.GPJ June 10, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG05457A

April 2006

LOG OF EXPLORATION PIT NO. EP-10

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 565 feet

Forest Duff

1

Qvr - Vashon Recessional Outwash

2 Medium dense, moist, fine to coarse SAND with gravel, little silt.

3

4

Qvt - Vashon Lodgement Till

5 Dense, slightly moist, gray to brownish gray, fine SAND with silt, few to little gravel, few cobbles.

6

7

8

9

Bottom of exploration pit at depth 8.5 feet
10 Moderate seepage at 2'. Rapid seepage at 4'. Minor caving 0 to 4'.

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

KCTP3 05457A.GPJ June 10, 2006

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

LOG OF EXPLORATION PIT NO. EP-11

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 580 feet

Forest Duff

Qvt - Vashon Lodgement Till

Medium dense, slightly moist to moist, grayish brown, fine SAND with silt, few to little gravel, contains roots, scattered organics (weathered till).

Dense, slightly moist, gray to brownish gray, fine SAND with silt, few to little gravel, trace cobbles.

Slightly oxidized from 6' to 8'.

Bottom of exploration pit at depth 17.5 feet
Minor seepage at 3'. Moderate seepage at 10'.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-12

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION

Approximate Elev. 562 feet

Forest Duff

1

Qvr - Vashon Recessional Outwash?

2 Medium dense, wet, highly oxidized, orange-brown, medium to coarse SAND with gravel, few silt,

3 few fine sand; contains roots, scattered organics.

Qvt - Vashon Lodgement Till

4 Dense, slightly moist, gray to brownish gray, fine SAND with silt, few to little gravel, few cobbles,

5 boulders.

6

7

8

9

10 Bottom of exploration pit at depth 9.5 feet

11 Moderate seepage at 1.5'. Minor caving 0 to 3'.

12

13

14

15

16

17

18

19

20

21

22

23

24

25

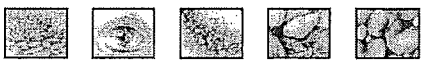
KCTP3 05457A.GPJ June 10, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS



Project No. KG05457A

April 2006

LOG OF EXPLORATION PIT NO. EP-13

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 575 feet
	Forest Duff
1	
	Qvt - Vashon Lodgement Till
2	Medium dense, slightly moist to moist, grayish brown, fine SAND with silt, few to little gravel (weathered till).
3	
4	
5	Dense, slightly moist, gray to brownish gray, fine SAND with silt, few to little gravel.
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
	$Qpog_t$ - Pre-Olympia Glacial Till
17	Gray to dark gray, fine SAND with silt, few gravel, medium to coarse SAND (weakly reacts with HCl).
18	
19	Bottom of exploration pit at depth 18 feet No seepage. No caving.
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A
April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-14

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 555 feet

Forest Duff

Colluvium?

Medium dense, moist, brown to orange-brown, fine to coarse SAND, few to little gravel, trace to few silt, trace cobbles, contains roots and scattered organics.

Medium dense, moist, brown to gray-brown, medium to coarse SAND with gravel, trace silt, cobbles.

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained?

2" bed of laminated, brown, fine SAND with silt.

Dense, slightly moist, dark brown to gray-brown, fine SAND with gravel, silt (till-like).

Very moist to wet, dark brown, fine to coarse SAND with silt, gravel (possible clay?), organics.

Bottom of exploration pit at depth 17.5 feet

Minor seepage at 9'. Moderate to rapid seepage at 13'. Minor caving 0 to 17.5'.

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG05457A

April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-15

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 569 feet
	Forest Duff
1	**Qvic - Vashon Ice-Contact Deposits**
2	Medium dense, slightly moist, brown to orange-brown, fine SAND with silt.
3	Medium dense, slightly moist, brown to orange-brown, fine SAND with silt, few to little gravel, medium to coarse sand, trace cobbles. Till-like clasts to 8.5'.
4	
5	
6	
7	
8	
9	Medium dense, moist, brown to orange-brown, fine to medium SAND, few silt, trace gravel.
10	
11	Medium dense, very moist, brown, medium to coarse SAND, few to little gravel, few silt.
12	
13	
14	
15	
16	
17	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained?**
18	Increase in gravel content. Contains charcoal.
19	Bottom of exploration pit at depth 18 feet No seepage. No caving.
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-16

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 586 feet

Forest Duff

Qvt - Vashon Lodgement Till

Medium dense, slightly moist to moist, grayish brown, fine SAND with silt, few to little gravel (weathered till).

Dense, slightly moist, gray to brownish gray, fine SAND with silt, few to little gravel.

Bottom of exploration pit at depth 17 feet
Minor seepage at 1.5'. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-17

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 585 feet
	Road Fill
1	
2	**Qvr - Vashon Recessional Outwash**
3	Medium dense, slightly moist to moist, brown to orange-brown, fine SAND with silt, few medium to coarse sand and gravel, contains roots, scattered organics.
4	Medium dense, moist, brown to orange-brown, oxidized, medium to coarse SAND with gravel, trace cobbles, silt, roughly stratified.
5	Becomes brown to gray-brown at 5'.
6	
7	
8	
9	
10	
11	
12	
13	**Qvt - Vashon Lodgement Till**
14	Dense, slightly moist, brown to gray-brown, fine SAND with silt, few to little gravel.
	$Qpog_t$ - Pre-Olympia Glacial Till
15	Dense, moist, gray to bluish gray, fine SAND with silt, few gravel, medium to coarse sand (weakly reacts with HCl).
16	
17	Bottom of exploration pit at depth 15 feet No seepage. No caving.
18	
19	
20	
21	
22	
23	
24	
25	

KCTP3 05457A.GPJ June 10, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A

April 2006

LOG OF EXPLORATION PIT NO. EP-18

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 673 feet**
1	**Forest Duff**
2	**$Qpog_{2c}$ - Older Pre-Olympia Glacial Deposits, Coarse-Grained** Medium dense to dense, moist, brown to orange-brown, fine SAND with silt, few gravel, few medium to coarse sand, contains roots, organics to 4'.
3	
4	
5	Medium dense to dense, moist, orange-brown, highly oxidized, fine to fine to medium SAND with silt, few gravel, coarse sand, trace cobbles.
6	
7	
8	
9	
10	Difficult to excavate at 10'.
11	Hard, moist, oxidized, light gray to tan, SILT with few gravel, sand.
12	Till-like clasts of hard silt with scattered sand, gravel in spoils.
13	
14	Faintly stratified.
15	
16	Bottom of exploration pit at depth 15 feet Minor seepage at 14'. No caving.
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG05457A
April 2006

KCTP3 05457A.GPJ June 10, 2008

LOG OF EXPLORATION PIT NO. EP-19

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 685 feet

Forest Duff

$Qpog_{2c}$ - Older Pre-Olympia Glacial Deposits, Coarse-Grained

Medium dense to dense, moist, orange-brown, fine SAND with silt to SILT with fine sand, trace gravel, medium to coarse sand.

Difficult to excavate at 6.5'.

Dense, slightly moist to moist, brown, fine SAND with silt, trace to few medium to coarse sand, fine gravel, faint oxidized bands (do not appear to correspond with sediment layers) (diamict).

Bottom of exploration pit at depth 14 feet
Minor seepage 4' to 6.5'. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

KCTP3 05457A.GPJ June 10, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG05457A

April 2006

LOG OF EXPLORATION PIT NO. EP-20

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION

Approximate Elev. 539 feet

Forest Duff/Topsoil

1

Qvr - Vashon Recessional Outwash

2 Loose to medium dense, moist, brown, medium to coarse SAND, few fine gravel; massive.

3

4

5 Medium dense, moist, brown-gray, medium to coarse SAND, with gravel, trace cobbles; roughly

6 horizontal bedding.

7

8

9

10 Medium dense, moist, brown-gray, medium to coarse SAND, few gravel, few cobbles and boulders.

11

12 Oxidized.

Qvt - Vashon Lodgement Till

13 Dense, moist, gray, silty fine SAND, few gravel, trace cobbles.

14

15 Bottom of exploration pit at depth 14 feet
No seepage. Moderate caving 0 to 5 feet.

16

17

18

19

20

21

22

23

24

25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: JHS

Approved by: JHS

Project No. KG060601A

9/15/06

LOG OF EXPLORATION PIT NO. EP-21

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 570 feet

Forest Duff/Topsoil

1

Qvt - Vashon Lodgement Till

2 Medium dense, tan, silty fine SAND, few gravel, few cobbles; oxidized (weathered till).

3 Dense, tan, oxidized till, few cobbles.

4

5

6

7

8

9

10 Bottom of exploration pit at depth 9.5 feet
No seepage. No caving.

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: JHS

Approved by: JHS

Project No. KG060601A

9/15/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-22

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 560 feet**
1	**Forest Duff**
2	**Qvr - Vashon Recessional Outwash** Loose to medium dense, moist, tan to gray-brown, fine SAND, few gravel and cobbles.
3	
4	
5	Interbed of medium to coarse SAND, few gravel (1 foot in thickness).
6	
7	
8	Medium dense, wet, brown-gray, medium to coarse SAND, with gravel, few cobbles.
9	**Qvt - Vashon Lodgement Till**
10	Dense, brown-gray, till.
11	Becoming gray.
12	
13	Bottom of exploration pit at depth 12 feet Moderate seepage at 9 feet. Minor caving 0 to 5 feet and 9 to 10 feet.
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: JHS
Approved by: JHS

Project No. KG060601A

9/15/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-23

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 550 feet
	Forest Duff
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, tan to oxidized brown, GRAVEL, with fine to coarse sand and cobbles.
3	
4	Loose to medium dense, gray-brown, as above; roughly stratified.
5	
6	
7	
8	
9	
10	Medium dense, moist, gray-brown, GRAVEL, with fine to medium sand, few silt and cobbles. Medium dense, moist, gray-brown, fine to medium SAND, with gravel and cobbles.
11	
12	Seepage.
13	**Qvt - Vashon Lodgement Till**
14	Dense, moist, gray-brown, silty fine SAND, few gravel.
15	Bottom of exploration pit at depth 14 feet Heavy seepage at 12 feet. Moderate caving 0 to 4 feet and 10 to 12.5 feet.
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: JHS
Approved by: JHS

Project No. KG060601A

9/15/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-24

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 615 feet
	Forest Duff/Topsoil
1	**Qvic - Vashon Ice-Contact Deposits**
2	Loose, moist, brown, silty fine SAND, few gravel, few medium to coarse sand; abundant roots/organics (weathered ice contact).
3	Loose, moist, gray, fine to medium SAND, little rounded gravel, few coarse sand, trace silt; trace roots, minor oxidation concentrated around gravels.
4	
5	Loose, moist, tan, fine SAND, trace gravel; trace roots. (Note: Very fine grain size, almost silt)
6	
7	
8	
9	
10	Becomes light grayish tan and slightly harder to dig at 10 feet.
11	Becomes finely bedded at 11 feet with thin oxidized layers. Trace roots.
12	
13	Slight increase in moisture at 13 feet.
14	
15	
16	
17	
18	
19	Loose, moist, gray, fine to coarse SAND (predominantly fine sand), few rounded gravel, trace silt.
20	
21	Bottom of exploration pit at depth 20 feet No seepage. Minor caving 0 to 4 feet.
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A
10/10/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-25

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 599 feet
	Forest Duff/Topsoil
1	**Qvic - Vashon Ice-Contact Deposits**
2	Loose, moist, light orangish brown, fine SAND, trace gravel; minor oxidation.
3	(Note: Very fine grain size, almost silt)
4	Interbed of loose, moist, gray, fine to coarse SAND; minor oxidation from 4 to 5 feet.
5	
6	
7	
8	
9	
10	Loose, moist, gray, fine to coarse SAND, few rounded gravel, trace silt; weakly stratified.
11	Increasing gravel with depth.
12	
13	
14	Increased moisture at 14 feet.
15	
16	Bottom of exploration pit at depth 15 feet No seepage. Moderate caving 0 to 14 feet. Severe caving 14 to 15 feet.
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/10/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-26

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 598 feet
	Forest Duff/Topsoil
1	**Qvic - Vashon Ice-Contact Deposits**
2	Loose, moist, light orangish tan (mottled to 4 feet), fine SAND, trace gravel scattered throughout; abundant roots to 2.5 feet.
3	(Note: Very fine grain size, almost silt).
4	Trace roots to 4 feet.
5	
6	
7	Loose, moist, gray, fine to medium SAND, few rounded gravel, few coarse sand, trace silt; weakly stratified.
8	
9	Increased moisture at 9 feet and larger gravel.
10	Larger gravels with depth. Cobbles at 10.5 feet up to 4 inches in diameter.
11	
12	
13	
14	
15	Increased sand, decreased gravel at 15 feet.
16	
17	
18	Loose, moist, gray, fine SAND, trace gravel, trace silt.
19	Bottom of exploration pit at depth 18 feet No seepage. No caving.
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/10/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-27

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 592 feet**
1	**Forest Duff/Topsoil**
2	**Qvic - Vashon Ice-Contact Deposits** Loose, moist, light orangish tan, fine SAND, trace gravel scattered throughout; moderate oxidation, few roots/organics.
3	(Note: Very fine grain size; almost silt)
4	**Qvt - Vashon Lodgement Till**
5	Very dense, moist, tan, silty fine to medium SAND, few subangular to subrounded gravel, few cobbles up to ~5 inches in diameter; trace roots.
6	Becomes grayish brown at 6 feet.
7	Trace boulders and little gravel at 7 feet.
8	Trace light gray CLAY at 8 feet.
9	
10	
11	Bottom of exploration pit at depth 10 feet No seepage. No caving.
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/10/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-28

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 584 feet

Forest Duff/Topsoil

Qvic - Vashon Ice Contact Deposits

Loose, moist, orangish tan, fine SAND (almost silt), few gravel and cobbles scattered throughout; abundant roots/organics (weathered ice contact).

Becomes tan at 3 feet.

Qvt - Vashon Lodgement Till

Very dense, moist, tan, silty fine SAND, little gravel.

Becomes brownish gray at ~5.5 feet.

Bottom of exploration pit at depth 6 feet
No seepage. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/10/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-29

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 586 feet
	Forest Duff/Topsoil
1	**Qvic - Vashon Ice-Contact Deposits**
2	Loose, moist, tan (slight mottling/orange staining), fine SAND (almost silt), trace gravel scattered throughout; minor oxidation.
3	
4	
5	
6	Becomes grayish tan at 6 feet.
7	Trace roots and organics to 7 feet. Increased moisture at 7 feet.
8	
9	
10	
11	
12	
13	Loose, moist, gray, fine to coarse SAND, little gravel, trace silt.
14	
15	**Qvt - Vashon Lodgement Till**
16	Dense, moist, grayish brown, silty fine SAND, few subangular gravel and coarse sand; clay present in places, trace boulders.
17	
18	Bottom of exploration pit at depth 17 feet No seepage. Moderate caving 13 to 15 feet.
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/10/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-30

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION

Approximate Elev. 630 feet

Forest Duff/Topsoil

$Qpog_{2c}$ - Older Pre-Olympia Glacial Deposits, Coarse-Grained

Medium dense, moist, orangish tan with orange and gray lenses, silty fine SAND, trace medium to coarse sand, trace gravel scattered; mottled coloring, trace organics, abundant roots to 2.5 feet.

Orange-gray mottling concentrated at 2.5 feet and at 5 feet.

Weakly stratified with darker grains concentrated in fine layers.

Note that can break some gravels easily with hands; severely weathered.

Moderate oxidation throughout.

More massive and slight increase in moisture at 16.5 feet.

Bottom of exploration pit at depth 19 feet
No seepage. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/11/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-31

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 645 feet
1	**Forest Duff/Topsoil with some road-fill material**
2	**$Qpog_{2c}$ - Older Pre-Olympia Glacial Deposits, Coarse-Grained** Medium dense, moist, orangish tan, silty fine to medium SAND, trace coarse sand and gravel scattered throughout; (gravels can break apart in your hand, severely weathered).
3	
4	Light gray with moderate orange staining (mottled) CLAY in 6-inch layers at 2.5 and 3.5 feet, trace sand and gravel scattered.
5	
6	
7	
8	
9	
10	
11	Becoming coarser at 11.5 feet - silty fine to coarse SAND, few fine gravel, possible trace charcoal, trace clay.
12	
13	
14	
15	
16	
17	Bottom of exploration pit at depth 16 feet No seepage. No caving.
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/11/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-32

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 668 feet

Forest Duff/Topsoil

Qvt - Vashon Lodgement Till

Medium dense, slightly moist, orangish brown, silty fine SAND, little gravel, few medium to coarse sand; heavy oxidation, abundant roots (weathered till).

Dense, moist, grayish orangish brown (mottled), silty fine SAND, little subangular to subrounded gravels, few medium to coarse sand; moderate oxidation.

Becomes grayish brown at 5 feet and very dense (very hard digging).

Color change at ~9.5 feet.

Very dense, moist, gray, silty fine SAND, little gravel, few medium to coarse sand.

Bottom of exploration pit at depth 10.2 feet
Exploration terminated due to refusal from boulders and density of formation. No seepage. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/11/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-33

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION

Approximate Elev. 635 feet

Forest Duff/Topsoil

1

Qvt - Vashon Lodgement Till

2 Medium dense, moist, orangish brown, silty fine SAND, little gravel, few cobbles and coarse sand; few roots (weathered till).

3

4 Dense, moist, grayish brown, silty fine SAND, little gravel.

5

$Qpog_{2c}$ - Older Pre-Olympia Glacial Deposits, Coarse-Grained

6

7 Dense, moist, dark orangish brown, silty fine to coarse SAND, little rounded gravel, some clay in

8 places; heavy oxidation.

9

10

11 Tan clay lens and slight increase in moisture at 11 feet.

12 Some clasts have till-like appearance except more coarse material and fewer fines, breaks easily,

13 gravels severely weathered.

14

15

16

17 Increased clay content and moisture at ~18 feet.

18

19 Bottom of exploration pit at depth 18 feet
No seepage. No caving.

20

21

22

23

24

25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/11/06

LOG OF EXPLORATION PIT NO. EP-34

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 567 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

Loose, moist, reddish brown, silty fine to coarse SAND, little gravel; abundant roots, heavy oxidation (weathered outwash).

Loose, moist, brownish gray, fine to coarse SAND with gravel (rounded); few roots, minor oxidation, stratified.

Qvt - Vashon Lodgement Till

Medium dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand. Becomes dense and brownish gray, trace boulders.

Dense, moist, brownish gray, silty fine SAND, few gravel, few medium to coarse sand; minor oxidation, clay present.

Bottom of exploration pit at depth 11 feet
No seepage. Moderate caving 0 to 4 feet.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/16/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-35

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 571 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, reddish brown, silty fine to medium SAND; heavy oxidation, few roots (weathered outwash).
3	
4	Loose, moist, brownish gray, fine to medium SAND, trace silt and gravel; trace roots, minor oxidation, well sorted.
5	
6	Becomes gray.
7	Loose, wet, gray, GRAVEL with sand, trace silt.
8	Moderate seepage, minor caving.
	Qvt - Vashon Lodgement Till
9	Medium dense, very moist, light gray with moderate orange staining, silty fine SAND, few gravel, few medium to coarse sand, clay present.
10	Becomes medium dense, gray, minor oxidation.
11	Medium dense, wet, seepage, clay present (possible organics?).
12	
13	
14	Dense, moist, gray, silty fine SAND, little gravel, few medium to coarse sand; poorly sorted.
15	
16	Dense, moist, gray, silty fine SAND, little gravel, few medium to coarse sand; poorly sorted.
17	
18	Bottom of exploration pit at depth 16.5 feet Moderate seepage in places 8 to 16.5 feet. Moderate caving 7 to 16.5 feet.
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A
10/16/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-36

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 569 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, red-orange-brown, silty fine to medium SAND, trace gravel; heavy oxidation, abundant roots.
3	Loose, moist, orange-gray, fine to medium SAND, trace gravel, trace silt; moderate oxidation.
4	
5	
6	**Qvt - Vashon Lodgement Till**
7	Medium dense to dense, moist, brown-gray, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles, minor oxidation, clay present, poorly sorted.
8	Becomes grayish brown, very moist in places, minor oxidation.
9	Seepage.
10	
11	
12	Seepage.
13	
14	
15	Seepage.
16	Little medium to coarse sand.
17	Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand (fine layering silt/sand lenses), minor oxidation around some gravels.
18	
19	Bottom of exploration pit at depth 18 feet Moderate seepage ~7 to 18 feet. Minor caving (water) ~6 to 18 feet.
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A
10/16/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-37

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 587 feet
	Forest Duff/Topsoil
1	**Qvt - Vashon Lodgement Till**
2	Loose, moist, orange-brown, silty fine SAND, little silt, few medium to coarse sand, few roots/organics, poorly sorted (weathered till).
3	
4	Dense, moist, silty fine SAND, little gravel, light grayish brown, minor oxidation, trace roots, subangular to subrounded gravels.
5	
6	
7	
8	Dense to very dense, light grayish brown, minor oxidation around some gravels, possible trace organics.
9	Very dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace
10	cobbles and boulders (poorly sorted), trace oxidation around some gravels.
11	Bottom of exploration pit at depth 10 feet No seepage. No caving.
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/16/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-38

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 570 feet
	Forest Duff/Topsoil
1	**Qvt - Vashon Lodgement Till**
2	Medium dense, moist, orange-brown, silty fine SAND, few gravel, few medium to coarse sand; few roots, moderate oxidation (weathered till).
3	
4	Becomes dense and light orangish brown.
5	Becomes very dense, grayish brown, silty fine to medium SAND, little gravel, few coarse sand, minor oxidation, trace cobbles and boulders, subangular to subrounded, poorly sorted.
6	
7	
8	As above, possible clay present, fewer gravel. Operator notes slightly easier to dig with depth.
9	
10	
11	Slight increase in moisture, moderate oxidation in places.
12	As above.
13	
14	Bottom of exploration pit at depth 13 feet No seepage. No caving.
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/16/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-39

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 544 feet
	Forest Duff/Topsoil
1	Very dark brown.
	Qvr - Vashon Recessional Outwash
2	Loose, moist, orange-brown, medium SAND, few gravel, little silt, moderate oxidation, few roots (weathered outwash).
3	Loose, very moist, gray, medium SAND, few gravel, minor oxidation, stratification, minor seepage
4	from ~4 to 4.5 feet on top of till.
	Qvt - Vashon Lodgement Till
5	Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace
6	cobbles and boulders, clay present?, minor oxidation around some gravels, poorly sorted; possible
7	trace organics (charcoal).
8	
9	
	$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained
10	Dense, very moist, grayish brown, silty medium SAND, few gravel and coarse sand, trace cobbles
11	and boulders, clay present, minor oxidation, trace organics (charcoal) (appears poorly sorted), minor
12	seepage.
13	
14	
15	Medium dense, gray, fine to medium SAND, few silt, trace gravel.
16	
17	Increased moisture and gravel.
	Medium dense, very moist to wet, silty GRAVEL, few medium to coarse sand, gray, tan, silt lenses.
18	
19	Bottom of exploration pit at depth 18 feet Moderate seepage 4 to 5 feet. No caving.
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A
10/16/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-40

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 544 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

Loose, moist, orange-brown, silty fine to coarse SAND, little gravel, trace boulders and cobbles. Becomes gray-brown, less silt, few roots.

Becomes loose to medium dense, moist, gray, medium to coarse SAND with gravel, trace to few cobbles and boulders, trace silt, minor oxidation (weak layering but coarse fraction mixed in).

Slight increase in moisture.

Medium dense, very moist, gray with moderate orange staining, medium to coarse SAND with gravel, few silt, moderate oxidation.

Bottom of exploration pit at depth 18.5 feet
No seepage. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG060601A

10/16/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-41

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 548 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Medium dense to dense, moist, orange-brown, silty fine to medium SAND, little gravel, heavy oxidation; few roots.
3	Medium dense, slightly moist, gray, fine to medium SAND with gravel, trace silt, few coarse sand, minor oxidation, trace roots, trace boulders and cobbles, weakly stratified to GRAVEL with sand (very similar to EP-40).
4	
5	
6	
7	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
8	Medium dense, very moist, light brown, silty fine to coarse SAND with gravel, stratified, seepage 6 to 18 feet.
9	Becomes wet, GRAVEL with sand.
10	
11	
12	
13	
14	
15	
16	
17	Trace silt/clay lenses.
18	Medium dense, very moist, brown, silty GRAVEL with medium to coarse sand, trace clay, trace cobbles, stratified.
19	Bottom of exploration pit at depth 18 feet Minor seepage 7 to 18 feet. No caving.
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/16/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-42

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION — Approximate Elev. 544 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, red-brown, silty fine to coarse SAND with gravel; abundant roots/organics, heavy oxidation.
3	Loose, slightly moist, gray, fine to coarse SAND with gravel, trace silt, few boulders and cobbles, trace oxidation; trace roots, stratified.
4	
5	
6	
7	
8	As above, except few silt.
9	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
10	Medium dense, moist, grayish brown, silty fine to coarse SAND with gravel, trace cobbles; trace organics (charcoal), trace silt/clay lenses.
11	
12	Becomes brownish gray, fine to medium SAND, few gravel, few silt, trace silt/clay lenses.
13	
14	
15	Increase in moisture.
16	Very moist to wet, little silt, trace charcoal.
17	Loose, very moist, brownish gray, fine to coarse SAND, little gravel, little silt, minor oxidation.
18	
19	Bottom of exploration pit at depth 18 feet No seepage. No caving.
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/17/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-43

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 538 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

Loose, moist, red-brown, silty fine SAND, few gravel and medium to coarse sand, trace boulders/cobbles, heavy oxidation; abundant roots/organics.

Medium dense, moist, brown with moderate orange staining, fine to coarse SAND with gravel, few silt, trace boulders and cobbles; trace roots, moderate oxidation, weakly stratified.

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained

As above, moist, brown, medium to coarse SAND, few gravel, few silt, minor oxidation, trace charcoal.

Medium dense to loose, very moist, brown, silty coarse SAND with gravel, few boulders and cobbles, moderate oxidation, trace charcoal, trace silt/clay lenses.

As above with heavy oxidation, caving.

Bottom of exploration pit at depth 17 feet
No seepage. Caving 15 to 17 feet.

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/17/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-44

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)

DESCRIPTION

Approximate Elev. 547 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

1 Loose, moist, dark brown (slightly reddish), silty fine SAND, trace gravel and coarse sand, heavy oxidation; abundant roots, trace organics.

2 Becomes brown, few silt, few roots.

3

4 Medium dense, slightly moist, tan, silty fine SAND, trace cobbles/gravel on top.

5 Dense, dry, gray, medium to coarse SAND with gravel, trace cobbles, stratified, trace silt, trace charcoal.

6

7 **Qvt - Vashon Lodgement Till**

8 Dense to very dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders.

9

10 **$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**

11 Increased moisture. Dense, very moist, grayish brown, silty/clayey GRAVEL with medium to coarse sand (very sticky), trace charcoal.

12 Note: digging slightly easier.

13 As above with large block of SILT/CLAY with fine to coarse sand, scattered charcoal, small white

14 flecks, orange weathering rind.
Minor seepage 10 to 18 feet.

15 Dense, very moist, silty GRAVEL with medium to coarse sand, charcoal, silt/clay lenses (laminated,

16 minor oxidation), trace boulders.
Wood (charcoal), large piece.

17 Large orange and gray SILT/CLAY clast, can see contact between the two layers, gray layer appears to be micaceous, can scratch with fingernail but digs hard. Faintly laminated with

18 weathering rind.
Dense, very moist to wet, light orange-brown, silty GRAVEL with medium to coarse sand, minor

19 oxidation (heavily weathered gravels).
Bottom of exploration pit at depth 18 feet
Minor seepage 10 to 18 feet in places. No caving.

20

21

22

23

24

25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG060601A

10/17/06

LOG OF EXPLORATION PIT NO. EP-45

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 545 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

1 Loose, moist, dark red-brown, silty fine to medium SAND, few gravel, heavy oxidation; few roots.

2

3 Loose, moist, brown, fine to medium SAND, few gravel and coarse sand, trace silt; trace roots,

4 minor oxidation, weakly stratified.

5 Becoming medium dense (still crumbles), few silt, increased silt, boulders/gravel/cobbles.

6

7 Medium dense, moist, brown, fine to coarse SAND with gravel, few silt.

8

9

10 As above, clast of highly weathered, fine-grained, silty material similar to clasts found in lower unit in EP-44.

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained

11 Increase in moisture. Medium dense, very moist, light brown, silty medium to coarse SAND with

12 gravel, trace cobbles and boulders; trace charcoal/organics.

13 Medium dense, very moist to wet, light brown, silty GRAVEL with medium to coarse sand, trace clay/silt lenses; trace charcoal/organics.

14 As above.

15

16 Bottom of exploration pit at depth 15 feet
Very minor to no seepage 10 to 15 feet. No caving.

17

18

19

20

21

22

23

24

25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG060601A

10/17/06

LOG OF EXPLORATION PIT NO. EP-46

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 557 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

1 Loose, moist, brown, silty fine to medium SAND, little gravel, few coarse sand, trace cobbles; few
2 roots (weathered outwash).
3 Medium dense, moist, gray-brown, fine to medium SAND with gravel, trace boulders and cobbles, trace silt; few roots (digging dense down to coarse material), minor oxidation.
4
5
6 More sand, less gravel (little gravel).
7 Minor caving 0 to 13.5 feet.
8
9
10
11
12 As above, clean sand and gravel, grayish brown, medium SAND with gravel, few fine to coarse
13 sand, trace silt.

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained

14 Medium dense, very moist, light brown, silty fine to coarse SAND, little gravel, minor oxidation, clay
15 present.
16 Possible trace charcoal.
17 Medium dense, very moist, light brown, silty, clayey, medium to coarse SAND with gravel, trace charcoal, minor oxidation.
18
19 Bottom of exploration pit at depth 17.5 feet
Very minor seepage 13.5 to 17.5 feet. Minor caving 0 o 13.5 feet.
20
21
22
23
24
25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/17/06

LOG OF EXPLORATION PIT NO. EP-47

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 568 feet**
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, brown, silty fine to medium SAND, little gravel, moderate oxidation; abundant roots.
3	Loose, slightly moist, fine to coarse SAND with gravel to GRAVEL with sand, few silt, trace cobbles and boulders, weakly stratified; trace roots (minor caving) (rounded gravels), minor oxidation.
4	
5	
6	
7	
8	
9	
10	Loose, slightly moist to dry, light brown (tan), GRAVEL, few fine to coarse sand, few silt; trace roots, minor oxidation.
11	
12	Bottom of exploration pit at depth 11 feet Exploration terminated due to severe caving. No seepage. Severe caving 0 to 11 feet.
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-48

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 587 feet

Forest Duff/Topsoil

Qvt - Vashon Lodgement Till

1 Loose, moist, orangish brown, silty fine SAND, few gravel; abundant roots/organics, heavy oxidation (weathered till).

2 Dense, slightly moist, tan, silty fine SAND, little gravel, few medium to coarse sand; minor oxidation, trace roots.

3

4

5 Becomes gray.

6 Becomes grayish brown.

7

8

9 Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse SAND, trace cobbles and boulders.

10

11 Bottom of exploration pit at depth 10 feet
No seepage. No caving.

12

13

14

15

16

17

18

19

20

21

22

23

24

25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-49

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 579 feet

Forest Duff/Topsoil

Qvt - Vashon Lodgement Till

Loose, moist, red-brown, silty fine SAND, few gravel and medium to coarse sand; heavy oxidation, abundant roots (weathered till).

Dense, slightly moist, light brown (tan), silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders; minor oxidation, trace roots to 5 feet.

Becomes grayish brown.

As above (till).
Operator notes very hard digging.
Very dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace boulders and cobbles.

Bottom of exploration pit at depth 10 feet
No seepage. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-50

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 548 feet
	Forest Duff/Topsoil
1	**Qvt - Vashon Lodgement Till**
2	Loose, moist, red-orange-brown, silty fine SAND, few gravel, few cobbles and boulders, many large boulders; abundant roots/organics, has a colluvium appearance (weathered till or possible colluvium).
3	
4	Dense, moist, light brown (tan), silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders; minor oxidation, trace roots to 4 feet.
5	Becomes grayish brown.
6	
7	
8	
9	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
10	Slight increase in moisture, clay present, still dense. More clay, light brown-tan, non-stratified, silt/clay laminated lenses.
11	
12	Dense, very moist, light brown (tan) silty/clayey, fine to coarse SAND with gravel, non-stratified,
13	silt/clay lenses, trace cobbles and boulders; trace charcoal, slightly easier to dig.
14	GRAVEL held together with clay, tan, very weathered gravels and boulders; trace oxidation.
15	
16	Bottom of exploration pit at depth 15 feet Minor seepage in places 9 to 15 feet. No caving.
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-51

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 548 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, red-brown, silty fine SAND, trace gravel; abundant roots, heavy oxidation (weathered outwash).
3	
4	Loose, tan, moist, fine SAND, trace gravel, trace silt; trace roots, minor oxidation, massive.
5	
6	
7	Becomes fine to coarse SAND with gravel, trace silt; minor oxidation, trace organics (charcoal)
8	(heavy oxidation in places, gray).
9	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
10	Heavy oxidation at contact.
11	Medium dense, moist, blue-gray, silty/clayey fine SAND, little gravel, few medium to coarse sand, non-stratified, trace cobbles and boulders, light brown in places, oxidized in places, some gravels very weathered.
12	
13	Finer, fine to coarse, medium SAND, trace gravel, charcoal.
14	(Looks like lower in EP-50 with less boulders and cobbles) Medium dense, very moist, light brown, silty/clayey, fine to coarse SAND, little gravel; trace charcoal/organics, glued with clay/silt.
15	
16	Wetter, more silt/clay, gravels very weathered, coarser.
17	
18	Cleans up. Medium dense to dense, moist, brownish gray, medium SAND, trace gravel scattered
19	throughout, trace silt, coarse sand, non-stratified, very minor oxidation.
20	As above, less gravel.
21	
22	Bottom of exploration pit at depth 21 feet Very minor seepage 13.5 to 18 feet. Minor caving 7 to 9 feet.
23	
24	
25	

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

LOG OF EXPLORATION PIT NO. EP-52

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 587 feet**
1	**Forest Duff/Topsoil**
2	**Qvt - Vashon Lodgement Till** Medium dense, moist, orange-tan, silty fine SAND, little gravel; heavy oxidation, few roots/organics (weathered till).
3	
4	
5	Dense, slightly moist, brownish gray, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles/boulders; minor oxidation.
6	Very dense.
7	
8	
9	Very dense, moist, brownish gray, silty fine SAND, little gravel, few medium to coarse sand.
10	
11	Bottom of exploration pit at depth 10 feet No seepage. No caving.
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-53

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 570 feet
	Forest Duff/Topsoil
1	**Qvt - Vashon Lodgement Till**
2	Medium dense to dense, slightly moist, tan, silty fine SAND, little gravel; moderate oxidation, few roots to 5 feet (weathered till).
3	
4	
5	
6	Very dense, slightly moist, brownish gray, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders, minor oxidation.
7	
8	
9	
10	
11	Very dense, as above, slightly sandier.
12	
13	Bottom of exploration pit at depth 12 feet No seepage. No caving.
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-54

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 560 feet

Forest Duff/Topsoil

1

Qvt - Vashon Lodgement Till

2 Loose, moist, orange-brown, silty fine SAND, few gravel, trace cobbles/boulders; moderately tight, few roots/organics, heavy oxidation (weathered till).

3

4

5

6 Very dense, slightly moist, brownish gray to grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders; minor oxidation (very dense, gray, till contact appears

7 to be dipping parallel to slope surface).

8

9

10 As above - no oxidation.

11

12 Bottom of exploration pit at depth 11 feet
No seepage. No caving.

13

14

15

16

17

18

19

20

21

22

23

24

25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-55

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 547 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, red-brown, silty fine SAND, trace gravel; heavy oxidation, abundant roots/organics (weathered outwash).
3	As above, tan, less silt, trace gravel.
4	Loose to medium dense, moist, gray, medium to coarse SAND with gravel, stratified, minor oxidation (like EP-51 at 7 feet), trace boulders (layer sands and gravels), caving.
5	
6	
7	
8	
9	
10	Boulder layer with medium sand, few gravel and coarse sand.
11	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
12	Medium dense, very moist, tan, silty/clayey GRAVEL with fine to coarse sand; very sticky, glued with clay, trace charcoal/organics, non-stratified.
13	As above, very moist to wet, sticky.
14	Bottom of exploration pit at depth 13 feet Very minor to no seepage 11 to 13 feet. Severe caving 0 to 11 feet.
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-56

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION — Approximate Elev. 552 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, red-orange-brown, silty fine SAND, trace gravel; heavy oxidation, few roots.
	As above, orange-brown, few silt.
3	
4	Loose, slightly moist, gray-brown, fine to medium SAND, trace coarse sand, trace gravel, scattered,
5	trace silt; minor oxidation, well sorted, massive.
6	
7	Increased gravel and moisture, severe caving.
8	
9	
10	
11	
12	
13	Loose, moist, brownish gray, medium SAND, trace gravel scattered, few coarse sand, trace silt;
	minor oxidation, severe caving, stratified.
14	Boulder layer.
	$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained
15	Medium dense to dense, very moist, tan, silty/clayey GRAVEL, with sand.
	Bottom of exploration pit at depth 14.5 feet
16	Exploration terminated due to severe caving. No seepage. Severe caving 0 to 13 feet.
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-57

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 551 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, red-brown, silty fine to coarse SAND with gravel; abundant roots, heavy oxidation.
3	Loose, slightly moist, gray-orange, fine to medium SAND with gravel, stratified; minor oxidation, trace roots.
4	Predominantly fine to medium SAND, trace scattered gravels.
5	
6	
7	
8	
9	Boulders and gravel.
10	**Qvt - Vashon Lodgement Till**
11	Dense, moist, brown-gray, silty fine SAND, little gravel.
12	
13	As above, gray-brown.
14	
15	Bottom of exploration pit at depth 14 feet No seepage. No caving.
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/18/06

LOG OF EXPLORATION PIT NO. EP-58

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION — Approximate Elev. 550 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, dark brown, silty fine to coarse SAND, little gravel; abundant organics/roots (weathered outwash).
3	As above, brown, moderate oxidation (weathered outwash).
4	Loose, slightly moist, fine to coarse SAND with gravel, few cobbles, trace silt, trace roots; minor oxidation, stratified, brown to gray in layers.
5	SAND with gravel to GRAVEL with sand.
6	
7	
8	
9	
10	Increase in moisture to moist.
11	
12	
13	Moderate oxidation, few silt, may produce water.
14	Loose, wet, orange-brown, fine to coarse SAND with gravel, little silt, trace cobbles; moderate oxidation.
15	Seepage on top of till - moderate pooling on bottom of pit.
	Qvt - Vashon Lodgement Till
16	Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles.
17	As above. Bottom of exploration pit at depth 16 feet. Moderate seepage 13.5 to 14 feet on top of till. No caving.
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A
10/19/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-59

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION

Approximate Elev. 548 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

1 Loose, moist, brown, silty fine SAND, few gravel; abundant roots, heavy oxidation (weathered
2 outwash).

3 Loose, slightly moist, light orange-brown, GRAVEL with fine to coarse sand, few silt, few cobbles,
4 trace boulders; minor oxidation, trace roots, stratified.

5 Becomes grayish brown and moist.

6 Caving - some layers more competent but all somewhat caving.

7

8

9

10

11

12 Increased sand content.
Loose, moist, grayish brown, fine to coarse SAND with gravel, few silt.

13

14 Bottom of exploration pit at depth 13 feet
Difficult to keep up with caving. No seepage. Severe caving 11 to 13 feet. Moderate caving 0 to 13 feet.

15

16

17

18

19

20

21

22

23

24

25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG060601A

10/19/06

LOG OF EXPLORATION PIT NO. EP-60

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 554 feet

Forest Duff/Topsoil

Qvt - Vashon Lodgement Till

1 Medium dense, moist, orange-brown, silty fine SAND, few gravel; few roots/organics, moderate
2 oxidation (weathered till).
3
4
5 Dense, moist, grayish brown, silty fine SAND, little gravel, few coarse sand, trace cobbles and
6 boulders; minor oxidation.
7
8
9 As above, grayish brown, increased medium sand.
10
11 Bottom of exploration pit at depth 10 feet
12 No seepage. No caving.
13
14
15
16
17
18
19
20
21
22
23
24
25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/19/06

LOG OF EXPLORATION PIT NO. EP-61

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 580 feet
	Forest Duff/Topsoil
1	**Qvt - Vashon Lodgement Till**
2	Loose, moist, dark orange-brown, silty fine SAND, few gravel; abundant roots/organics, moderate oxidation (weathered till).
3	Medium dense, slightly moist, light orange-brown, silty fine SAND, little gravel; few roots (weathered till).
4	Dense, slightly moist, grayish brown, silty fine SAND, little gravel, few coarse sand.
5	
6	
7	Sandier till "leaner" not quite as tight.
8	
9	Dense (digging slightly easier), moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace oxidation in places.
10	
11	Bottom of exploration pit at depth 10 feet No seepage. No caving.
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/19/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-62

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION

Approximate Elev. 580 feet

Road Fill

1

Qvt - Vashon Lodgement Till

2 Medium dense, very moist, red-brown, silty fine SAND, few gravel; trace roots (weathered till).

3

4 Dense, slightly moist, grayish brown (orange-brown on top ~3 inches), silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders; minor oxidation.

5

6

7

8

9

10 As above, "classic lodgement till", minor oxidation.

11

12

13 Dense, moist, grayish brown, silty fine SAND, little gravel, few coarse sand; very minor oxidation around some gravels.

14

Bottom of exploration pit at depth 13.5 feet
No seepage. No caving.

15

16

17

18

19

20

21

22

23

24

25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/19/06

LOG OF EXPLORATION PIT NO. EP-63

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 539 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

1 Loose, moist, brown, silty fine SAND, few gravel; moderate oxidation, abundant roots/organics (weathered outwash).

2 Medium dense, moist, gray-orange-brown, GRAVEL with fine to coarse sand, trace cobbles and boulders, trace silt; moderate oxidation, trace roots, stratified.

3

4

5 Minor oxidation, gray.

6 More sand than gravel, few silt.

7

8

9

10 Medium dense (easier to dig), moist, gray-brown, medium SAND, few gravel, few coarse sand to silt. More massive, gravels scattered.

11

12

13

14

15 Fine to medium SAND, trace gravel, trace coarse sand, trace silt.

16

17 As above, medium dense, moist, fine to medium SAND, trace gravel, trace coarse sand, trace silt.

18

19 Bottom of exploration pit at depth 18.5 feet
No seepage. Minor caving 0 to 6 feet.

20

21

22

23

24

25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG060601A

10/19/06

LOG OF EXPLORATION PIT NO. EP-64

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 533 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

1 Loose, moist, orange-brown, silty fine SAND, trace gravel; few roots, moderate oxidation
2 (weathered outwash).
3 Loose to medium dense, moist, orange-brown, fine to coarse SAND with gravel to GRAVEL with sand, few cobbles and boulders, few silt; moderate oxidation, trace roots (one 3 x 3 boulder in pit).
4
5
6 Medium dense, moist, gray-brown, fine to coarse SAND, with gravel, few silt, trace cobbles; trace
7 silty lenses, trace organics, stratified.
8
9
10
11 Medium dense to loose, very moist, medium to coarse SAND, little gravel, few silt, increased
12 moisture and silt.
13

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained

14 Medium dense, wet, light brown, silty GRAVEL with fine to coarse SAND, trace boulders and
15 cobbles; minor oxidation, trace organics.
16
17 Medium dense, wet, light brown, silty clayey GRAVEL, few fine to coarse sand, minor oxidation
18 (heavy around some gravels), trace charcoal.
Medium dense to dense, very moist, light brown-gray, fine to medium SAND with gravel, little silt,
19 trace charcoal.
~~Bottom of exploration pit at depth 18.5 feet~~
20 No seepage. Minor caving 0 to 6 feet.
21
22
23
24
25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Logged by: BAA

Approved by: JHS

Associated Earth Sciences, Inc.

Project No. KG060601A

10/19/06

LOG OF EXPLORATION PIT NO. EP-65

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 535 feet

Forest Duff/Topsoil

Qvt - Vashon Lodgement Till

Medium dense, moist, brown, silty fine SAND, few gravel, trace cobbles and boulders; few roots/organics, moderate oxidation (weathered till).

As above, slightly moist, tan, dense.

Dense, moist, grayish brown, silty fine SAND, little gravel, few coarse sand, trace cobbles and boulders; trace roots, minor oxidation.

Very dense, till, as above.

Operator notes very hard digging.

Bottom of exploration pit at depth 7 feet
No seepage. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/19/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-66

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 535 feet

Forest Duff/Topsoil

Qvt - Vashon Lodgement Till

Loose, moist, brown, silty fine SAND, few gravel, trace boulders and cobbles; abundant roots/organics, moderate oxidation (weathered till).

Medium dense, moist, orange-brown, silty fine SAND, little gravel, few coarse sand, trace cobbles; moderate oxidation, few roots (weathered till).

Dense, slightly moist, as above, tan with orange staining; trace roots.

Becomes grayish brown.

Operator notes very hard digging.

Very dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand (slightly sandier).

Bottom of exploration pit at depth 8 feet
No seepage. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-67

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 532 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, brown, silty fine SAND, little gravel, few medium to coarse sand; abundant roots/organics, moderate oxidation (weathered outwash).
3	Dense, moist, orange-brown, fine to coarse SAND with gravel, few silt, trace cobbles; heavy oxidation, stratified, cemented, trace organics, digging tight/hard.
4	Becomes grayish brown (looks similar to till but very sandy and gravelly), SAND and GRAVEL,
5	cemented with silt.
6	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
7	Dense, moist, grayish brown, GRAVEL with medium to coarse sand, little silt, trace silt/clay lenses between gravels, trace cobbles and boulders, round gravels; minor oxidation.
8	
9	Slight increase in moisture.
10	
11	
12	
13	Very moist to wet, as above, light brown (dry in pockets).
14	Seeping slowly.
15	
16	
17	Dense, very moist to wet, light brown, silty GRAVEL with fine to coarse sand, trace silt/clay lenses,
18	trace boulders and cobbles; minor oxidation, possible trace organics. As above, trace charcoal.
19	
20	Bottom of exploration pit at depth 19 feet Minor seepage at 13 feet. No caving.
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A
10/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-68

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth (ft)

DESCRIPTION

Approximate Elev. 549 feet

Forest Duff/Topsoil

Qvic - Vashon Ice-Contact Deposits

1 Loose, moist, brown, silty fine SAND, trace gravel; few roots/organics (weathered ice-contact).

2

3

4 Loose, slightly moist, tan, fine SAND, few silt, trace coarse sand and gravel; minor oxidation, trace roots to 6 feet.

5

6 Trace silt, minor oxidation, slightly cleaner.

7

8

9

10 Loose, moist, tan, fine sandy SILT to silty fine to medium SAND, mottled orange staining (finer grained than top 10 feet).

11

12 Becoming light gray.

13

14

15 Loose, wet, gray to tan, fine sandy SILT, mottled orange staining, laminated.

16

17

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained

18 GRAVEL, trace charcoal, silty fine sand with gravel, slightly more gray.

19 Medium dense, moist, grayish brown, silty fine SAND, few medium to coarse sand, few to little gravel, minor oxidation ("till-like"), moderately consolidated, oxidized around gravels, silty/clayey.

20 More dense, trace cobbles.

21 Medium dense, moist to very moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand; minor oxidation around some gravels (mottled).

22 Bottom of exploration pit at depth 21 feet
Minor seepage 14 to 17 feet. No caving.

23

24

25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG060601A

10/20/06

LOG OF EXPLORATION PIT NO. EP-69

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 518 feet

Forest Duff/Topsoil

Qvic - Vashon Ice-Contact Deposits

1 Loose, moist, brown, silty fine SAND, few gravel; abundant roots/organics.

2

3 Medium dense, slightly moist, tan, fine to medium SAND with gravel, few silt; minor oxidation, few

4 roots, stratified.

Dense, as above, few gravel, trace cobbles and boulders, "tight" cemented, gravels scattered.

5

6

7

Qvt - Vashon Lodgement Till

8 Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace

9 boulders and cobbles; unsorted, minor oxidation, gravels welded with silt, "till-like" (not as solid as

10 till, crumbles).

11

12 Slight increase in moisture, oxidation around gravels (mottled appearance).

13 More consolidated, dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse

14 sand, trace cobbles and boulders; minor oxidation (till).

15 Bottom of exploration pit at depth 14 feet
No seepage. No caving.

16

17

18

19

20

21

22

23

24

25

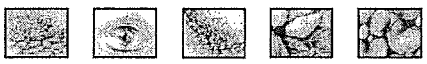
KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Logged by: BAA

Approved by: JHS

Associated Earth Sciences, Inc.



Project No. KG060601A

10/20/06

LOG OF EXPLORATION PIT NO. EP-70

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 518 feet
	Forest Duff/Topsoil
1	**Qvic - Vashon Ice-Contact Deposits**
2	Loose, moist, brown, silty fine SAND, trace gravel, few roots/organics.
	Loose, moist, tan-orange, silty fine SAND, trace gravel; few roots, moderate oxidation.
3	
4	
5	
6	Loose, moist, tan-orange, fine sandy SILT to silty fine SAND; moderate oxidation, mottled.
7	
8	
9	
10	
11	Loose to medium dense, moist, gray/tan with heavy orange staining in places, fine to medium SAND, trace gravel.
12	
13	
14	
15	
16	As above, becoming coarser, fine to medium SAND, few coarse sand, trace gravel.
17	
18	Medium dense, moist, gray/tan with heavy orange staining, fine to medium SAND, few coarse sand, trace gravel; moderate oxidation.
19	
20	Bottom of exploration pit at depth 19 feet No seepage. No caving.
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A
10/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-71

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)

DESCRIPTION

Approximate Elev. 545 feet

Forest Duff/Topsoil

Qvic - Vashon Ice-Contact Deposits

Loose, moist, brown, silty fine SAND, little gravel, few medium to coarse sand, moderate oxidation; abundant roots.

Medium dense, moist, light orange-brown, fine to medium SAND with gravel to GRAVEL with sand, few coarse sand, few cobbles, trace boulders, few silt, stratified; minor oxidation, few roots.

Medium dense, slightly moist, tan, fine SAND with gravel, little medium to coarse sand, few silt; stratified, minor oxidation.

Bottom of exploration pit at depth 8 feet
Exploration terminated due to caving. No seepage. Severe caving 0 to 8 feet.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-72

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 500 feet**
1	**Road Fill**
2	**Qp - Peat/Organic Deposits** Medium stiff, moist, light grayish brown, fine sandy SILT to silty fine SAND, trace gravel; trace roots/organics, faint lamination, few organics.
3	
4	
5	
6	Medium stiff, moist, tan-orange, fine sandy SILT to silty fine SAND; moderate oxidation, few organics, trace roots.
7	
8	
9	
10	As above, becoming light gray with dark brown-gray laminations.
11	
12	Clay layer with organics, laminated.
13	
14	Stiff, moist, tan, silty fine SAND; laminated, minor oxidation.
15	
16	Bottom of exploration pit at depth 15 feet No seepage. No caving.
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-73

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 565 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

1 Loose, moist, brown to orange-brown, silty fine to medium SAND, little gravel; moderate oxidation,
2 few roots/organics (weathered outwash).

3 Loose, moist, brown to gray, fine to coarse SAND with gravel, few silt; minor oxidation, stratified.

4 Loose, moist, gray, medium SAND, few gravel and coarse sand, trace silt; minor oxidation.

5 As above, fine to coarse SAND with gravel, trace silt, increased moisture at 5 feet.

6

7 Loose, moist, gray-brown, medium to coarse SAND with gravel, trace silt, trace cobbles;
8 non-stratified, caving.

9

10 Medium SAND, trace silt, trace gravel.

11

12 Bottom of exploration pit at depth 11 feet
13 Exploration terminated due to caving. No seepage. Severe caving 0 to 11 feet (0 to 2.5 feet slightly more competent with more silt).

14

15

16

17

18

19

20

21

22

23

24

25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

10/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-74

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 595 feet

Forest Duff/Topsoil

Qvt - Vashon Lodgement Till

Loose to medium dense, moist, brown, fine to medium SAND, few gravel, few silt; oxidized, organics present (weathered till).

Dense, moist, gray-brown, silty fine SAND, few medium to coarse sand, few gravel and cobbles, trace boulders.

As above, except gray.

Bottom of exploration pit at depth 17 feet
Minor seepage at 9.5 feet. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: JHS

Approved by: JHS

Project No. KG060601A

9/14/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-75

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 560 feet

Qvr - Vashon Recessional Outwash

1 — Loose, slightly moist, brown, fine to coarse SAND and SILT with fine to coarse gravel, organic rich,
2 — roots.

3 — Loose, slightly moist, tan-gray-brown, fine to coarse GRAVEL with fine to coarse sand, few cobbles,
4 — trace silt, slight layering with more cobbles in 1-foot thick horizons.

5
6
7
8
9
10
11
12
13
14 —

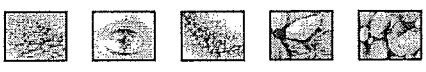
15 — Bottom of exploration pit at depth 14 feet
Heavy caving 7 to 14 feet. No seepage.

16
17
18
19
20
21
22
23
24
25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD
Approved by: JHS



Project No. KG060601A

11/9/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-76

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 525 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

Loose, moist, gray-brown to orange-brown, silty fine SAND; few roots.

Loose, moist, tan, fine SAND, little silt; trace oxidation.

Medium dense, moist, gray, fine to medium SAND; weakly stratified, trace oxidation.

Medium dense, very moist, gray-brown, GRAVEL with medium to coarse sand, few silt; moderate oxidation (rounded gravel).
Increased moisture 13 feet to BOH.

Becomes very dense at 16.5 feet, may be till contact.

Bottom of exploration pit at depth 16.5 feet
Hole caved from 10 feet to BOH. Moderate caving from 13 to 16.5 feet. No seepage.

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-77

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 600 feet
	Forest Duff/Topsoil
1	**Qvt - Vashon Lodgement Till**
2	Medium dense, moist, orangish brown, silty fine SAND, little gravel, few medium to coarse sand; few roots/organics, moderate oxidation, unsorted (minor seepage) (weathered till).
3	
4	Very dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders.
5	
6	Minor seepage within till.
7	
8	Minor seepage within till. (2.5 feet to BOH minor seepage in places)
9	
10	Very dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders.
11	Bottom of exploration pit at depth 10 feet No caving. Minor seepage at 2.5 feet (on top of till) and from 3 feet to BOH in places.
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-78

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 605 feet

Forest Duff/Topsoil

Qvt - Vashon Lodgement Till

Medium dense, moist to very moist, light orange-brown, silty fine SAND, few gravel and medium to coarse sand; trace roots and organics, minor oxidation, moderate seepage (weathered till).

Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders.

Becomes very dense.

Qva - Vashon Advance Outwash

Dense, moist, orange-brown, silty GRAVEL, few fine to coarse sand, heavy oxidation, trace charcoal.

Becomes fine to coarse SAND with gravel, little silt; moderate oxidation.

Dense, moist, orange-brown, fine to coarse SAND, little gravel, silt; moderate oxidation, trace charcoal, weakly stratified.

Bottom of exploration pit at depth 15.5 feet

No caving. Minor seepage in places 3.5 feet to BOH.

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG060601A

11/20/06

LOG OF EXPLORATION PIT NO. EP-79

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 610 feet

Road Fill Material

Qvt - Vashon Lodgement Till

Medium dense, moist, orange-brown, silty fine SAND, little gravel, few medium to coarse sand; moderate oxidation (weathered till).

Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders; minor oxidation in places.

Becomes very dense.

As above.

As above.

Digging very hard - seepage from Golder test pit caving in making it very difficult to dig. Need to move to keep decent pace.

~~Bottom of exploration pit at depth 16 feet~~

No caving. Minor seepage in places 3 to 16 feet.

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG060601A

11/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-80

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 562 feet**
	Forest Duff/Topsoil
1	**Qvt - Vashon Lodgement Till**
	Loose, moist, brown, silty fine SAND, little gravel; few roots/organics (weathered till).
2	Turns medium dense, orange-brown, trace cobbles and boulders, unsorted; trace roots (weathered
3	till).
4	Turns tan, as above; trace roots.
5	
6	
7	Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders.
8	Seepage in places 5 feet to BOH.
9	
10	As above.
11	Bottom of exploration pit at depth 10 feet No caving. Minor seepage in places 5 to 10 feet.
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-81

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 555 feet
	Topsoil
1	**Tailings/Fill**
2	Loose, moist, dark brown, silty fine SAND, few gravel and medium to coarse sand; few roots, unsorted.
3	
4	**Qvr - Vashon Recessional Outwash**
5	(backwall - digging on slope) Medium dense, moist, gray-brown, rounded GRAVEL with fine sand, minor oxidation, well sorted,
6	weakly stratified.
7	
8	Seepage.
9	Medium dense, wet, gray-brown, fine to coarse SAND with gravel.
10	Stratified - gravel and sand layers.
11	
12	**Qvt - Vashon Lodgement Till**
13	Dense, moist, grayish brown, brown-gray, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders.
14	
15	As above.
16	Bottom of exploration pit at depth 15.5 feet
17	No caving. Moderate seepage 8 to 11.5 feet.
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/20/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-82

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 520 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, orange-brown, silty fine SAND, few gravel, medium to coarse sand; moderate oxidation, few roots and organics, poorly sorted (weathered outwash).
3	
4	Loose, moist, tan, silty fine to medium SAND with gravel, few coarse sand; trace roots (looks more like Qvr, not Qpog yet), rounded gravel.
5	
6	Loose, moist, tan with heavy orange staining in places (mottled), fine SAND, few silt (almost a silt in places); moderate oxidation, wood, trace roots to 7 feet.
7	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
8	Medium dense, moist, tan, silty GRAVEL, few fine to coarse sand, trace cobbles and boulders; trace charcoal, oxidation in places.
9	As above (some gravels are very weathered and crumbling).
10	
11	
12	
13	As above with discontinuous zones of medium to coarse sand with gravel.
14	
15	As above.
16	
17	Bottom of exploration pit at depth 15.5 feet No seepage. Moderate caving 7 feet to BOH.
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/21/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-83

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 530 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

1 Loose, moist, orange-brown, fine SAND, little silt, trace roots/organics (weathered outwash).

2

3 Becomes tan with minor orange staining, fine SAND, trace silt.

4

5

6

7

8 Loose, moist, gray, fine to medium SAND, trace silt, trace gravel, cobbles and boulders.

9

10

11

12

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained

13 Becomes medium dense, moist, grayish brown, silty GRAVEL, few fine to coarse sand, trace cobbles and boulders.

14

15 As above.

16 Increasing cobbles and boulders.
As above, trace organics.

17

Bottom of exploration pit at depth 16.5 feet
18 No seepage. Minor caving 12 feet to BOH.

19

20

21

22

23

24

25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/21/06

LOG OF EXPLORATION PIT NO. EP-84

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 540 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, orange-brown, silty fine SAND with gravel, trace cobbles and boulders, trace medium to coarse sand, poorly sorted; few roots/organics.
3	Becomes brown, as above.
4	
5	Loose, moist, gray, fine to coarse SAND with gravel, trace silt, cobbles and boulders. Harder to dig - increase in cobble/boulders.
6	
7	
8	
9	
10	
11	
12	
13	Medium dense, moist, grayish brown, GRAVEL with fine to coarse sand, little silt.
14	
15	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
16	Medium dense, moist, tan, silty GRAVEL, few fine to coarse sand, trace cobbles and boulders; few charcoal scattered.
17	
18	Medium dense, very moist, tan, silty GRAVEL, trace fine to coarse sand, trace charcoal, poorly sorted.
19	Bottom of exploration pit at depth 18 feet Very slight seepage from 13 feet to BOH. Very minor caving 13 feet to BOH.
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/21/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-85

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 565 feet
	Forest Duff/Topsoil
1	**Qvt - Vashon Lodgement Till**
2	Loose, moist, brown, silty fine SAND, little gravel, few medium to coarse sand; trace roots/organics, minor oxidation (weathered till).
3	
4	Moderate seepage on top of unweathered till.
5	Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace oxidation around some gravels.
6	
7	
8	
9	As above.
10	
11	Bottom of exploration pit at depth 10 feet No caving. Moderate seepage at ~4 feet (on top of unweathered till) and minor seepage in places 4 to 10 feet.
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/21/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-86

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 555 feet

Forest Duff/Topsoil

Qvr - Vashon Recessional Outwash

Loose, moist, orange-brown, silty fine SAND, few gravel, few medium to coarse sand; few roots/organics, weakly stratified (weathered outwash).

Qvt - Vashon Lodgement Till

Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand.

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained

Very moist, tan to grayish brown, silty fine to coarse SAND with gravel, clay present; trace organics.

Bottom of exploration pit at depth 15 feet
No caving. Minor seepage at 3 feet and in places from 9 to 15 feet.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/21/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-87

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth (ft)

DESCRIPTION

Approximate Elev. 570 feet

Road Fill/Topsoil

1 — Fill material.

Qvic - Vashon Ice-Contact Deposits

2 — Old topsoil horizon.

3 — Loose, wet, brown, silty fine SAND, few gravel, medium to coarse sand.

4 — Loose, wet, brown, GRAVEL with fine to coarse sand, little silt.
Completely saturated, forming pond 2 feet deep in test pit.

5 —

Qvt - Vashon Lodgement Till

6 — Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand; minor oxidation in places.

7 — Bottom of exploration pit at depth 5.5 feet
Moderate caving 3 to 5 feet. Rapid seepage 3 to 5 feet. Exploration terminated due to rapid seepage.

8 —

9 —

10 —

11 —

12 —

13 —

14 —

15 —

16 —

17 —

18 —

19 —

20 —

21 —

22 —

23 —

24 —

25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG060601A

11/21/06

LOG OF EXPLORATION PIT NO. EP-88

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 575 feet

Forest Duff/Topsoil

Qvic - Vashon Ice-Contact Deposits

Loose, moist, tan with moderate orange staining, silty fine SAND; few roots.

Becomes grayish brown to tan, silty fine SAND to fine sandy SILT, mottled; moderate oxidation.

As above, becoming more gray, weakly laminated.

Qvt - Vashon Lodgement Till

Dense, moist, brownish gray, silty fine SAND, little gravel, few medium to coarse sand.

As above.

Bottom of exploration pit at depth 11 feet
No seepage. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA

Approved by: JHS

Project No. KG060601A

11/21/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-89

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 545 feet

Forest Duff/Topsoil

Qvic - Vashon Ice-Contact Deposits

1 Loose, moist, orange-tan, silty fine SAND to fine sandy SILT; trace gravel scattered, trace medium
2 to coarse sand; moderate oxidation, few roots/organics.
3
4
5

Qvt - Vashon Lodgement Till

6 Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, little gravel,
few medium to coarse sand, orange staining around some gravels.
7 Seepage within till (rapid).
8
9 Very dense till.
10
11 As above.
12 Large boulder at 12 feet, cannot get past. Refusal at 12 feet.
13 Bottom of exploration pit at depth 12 feet
No caving. Rapid seepage 6 to 6.5 feet bgs. Exploration terminated due to boulder.
14
15
16
17
18
19
20
21
22
23
24
25

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/21/06

LOG OF EXPLORATION PIT NO. EP-90

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 550 feet
	Forest Duff/Topsoil
1	**Qvt - Vashon Lodgement Till**
2	Medium dense, moist, dark brown, silty fine SAND, little gravel, trace cobbles and boulders; trace roots/organics, poorly sorted (weathered till).
3	
4	Very dense, moist, grayish brown, silty fine SAND with gravel, few medium to coarse sand; minor oxidation around some gravels, looks like a gravelly till, very dense.
5	As above.
	$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained
6	Very dense, moist, tan, silty fine to coarse SAND with gravel; slightly easier to dig, trace charcoal.
7	Very dense, moist to very moist, tan, silty GRAVEL with fine to coarse sand; trace charcoal.
8	
9	Rapid ground water seepage, filling up test pit rapidly. Difficult to keep up with water, hard to bail.
10	
11	
12	As above, wet.
13	
14	Wet, tan, silty GRAVEL with fine to coarse sand.
15	
16	Bottom of exploration pit at depth 14.5 feet No caving. Minor seepage at 3 feet. Rapid seepage at 8.5 feet to BOH.
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/22/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-91

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 565 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Medium dense, moist, dark brown, silty fine SAND with gravel, few medium to coarse sand; few roots/organics (charcoal), poorly sorted.
3	As above, becomes tan with moderate oxidation.
4	
5	**Qvt - Vashon Lodgement Till**
6	Minor seepage, becomes dense, heavy oxidation on top.
7	Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders; minor oxidation around some gravels.
8	
9	
10	As above.
11	
12	As above.
13	
14	As above, very hard digging. Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand.
15	
16	Bottom of exploration pit at depth 15 feet No caving. Slight seepage at 5 feet.
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/22/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-92

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 562 feet**
1	**Forest Duff/Topsoil** Loose, moist, orange-brown, silty fine to coarse SAND with gravel; few roots/organics.
2	**Qvr - Vashon Recessional Outwash** Loose, moist, orange-brown, fine to coarse SAND with gravel, few silt; trace roots, minor oxidation.
3	
4	
5	**Qvt - Vashon Lodgement Till** Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse SAND; minor
6	oxidation around some gravels and at contact, trace cobbles and boulders.
7	
8	
9	As above, no oxidation.
10	
11	Bottom of exploration pit at depth 10 feet No caving. Slight seepage 3.5 to 4 feet and very slight seepage in places within till.
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/22/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-93

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 585 feet**
	Forest Duff/Topsoil
1	**Qvt - Vashon Lodgement Till**
2	Medium dense, moist, orange-brown, silty fine SAND, few gravel, medium to coarse sand; few roots/organics, charcoal, poorly sorted (weathered till).
3	Turns grayish brown - seepage, trace charcoal.
4	
5	Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, little gravel, few medium to coarse sand; moderate oxidation at 4 feet and around gravels (appears to possibly be re-worked?).
6	Digging easier, increasing gravel and seepage.
7	
8	
9	Dense, very moist, grayish brown to tan, silty fine SAND, little to with gravel, few medium to coarse sand, trace cobbles and boulders.
10	
11	As above, slightly more gray, harder to dig.
12	As above.
13	
14	
15	As above.
16	
17	Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand.
18	
19	Bottom of exploration pit at depth 18 feet No caving. Moderate seepage in places 3 feet to BOH.
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/22/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-94

Depth (ft)	This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered. **DESCRIPTION** **Approximate Elev. 575 feet**
	Forest Duff/Topsoil
1	**Colluvium?**
2	Loose, moist, orange-brown, silty GRAVEL, few fine to coarse sand; minor oxidation, few roots/organics (charcoal), non-stratified (jumbled), discontinuous layers.
3	Medium dense, moist, tan, silty fine SAND, little gravel, few medium coarse sand; poorly sorted, minor oxidation in places.
4	
5	**Qvt - Vashon Lodgement Till**
6	Well defined root horizon, trace charcoal just below roots, very minor seepage at roots.
7	Dense, moist, grayish brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles and boulders.
8	
9	
10	
11	As above.
12	
13	Dense, grayish brown, silty fine SAND, little gravel and medium to coarse sand; clay present.
14	Dense, silty fine SAND, little gravel, few medium to coarse sand.
15	
16	Bottom of exploration pit at depth 15 feet No caving. Slight seepage at 5 feet.
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/22/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-95

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 550 feet
	Forest Duff/Topsoil
1	**Qvr - Vashon Recessional Outwash**
2	Loose, moist, orange-brown, silty fine SAND with gravel; moderate oxidation, few roots/organics (weathered outwash).
3	Turns orange-tan, increasing medium to coarse sand.
4	
5	
	Qvt - Vashon Lodgement Till
6	Good solid till, dense, moist, grayish brown, silty fine SAND, few gravel, few medium to coarse
7	sand.
	$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained
8	Dense, very moist to wet, silty/clayey, fine to coarse SAND with gravel, tan (minor oxidation); easier
9	to dig, increased moisture.
10	Moderate seepage.
11	
12	As above, except silty GRAVEL with fine to coarse sand (mostly coarse), poorly sorted.
13	Dense, moist, brown, silty fine SAND, little gravel, few medium to coarse sand, trace cobbles.
14	
15	Dense (easier to dig), very moist, silty fine to coarse SAND with gravel, trace cobbles.
16	Increase in silt/clay.
17	
18	Dense (moderately easy to dig), very moist, tan, silty GRAVEL with fine to coarse sand; trace
19	charcoal/organics.
20	Bottom of exploration pit at depth 19 feet No caving. Minor seepage 9 to 12 feet bgs.
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

11/22/06

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-96

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION — Approximate Elev. 579 feet
	Forest Duff/Topsoil
1	Loose, moist, dark brown, silty fine to coarse SAND, few fine to coarse gravel; organic rich, abundant roots.
	Qvr - Vashon Recessional Outwash
2	Medium dense, moist, red-brown, silty fine to coarse SAND, with fine to coarse gravel; highly oxidized, roots present (weathered).
3	Medium dense, moist, brown, fine to coarse SAND, with fine to coarse gravel, trace silt, trace cobbles; slightly oxidized.
4	**Qvt - Vashon Lodgement Till**
5	Very dense, moist, gray, silty fine SAND, little medium to coarse sand, little fine to coarse gravel, trace cobbles; unsorted.
6	
7	At 6.5 feet: Color change to a slightly darker gray.
8	
9	
10	
11	
12	Bottom of exploration pit at depth 11 feet Minor seepage (<1 gpm) at 4 feet. Minor seepage (<1 gpm) at 6.5 feet. No caving.
13	
14	
15	
16	
17	
18	
19	
20	

Parcel A
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD
Approved by:

Project No. KG060601A
12/4/07

KCTP3 060601A (EP-96 THRU EP-103).GPJ June 17, 2008

LOG OF EXPLORATION PIT NO. EP-97

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION — Approximate Elev. 592 feet
	Forest Duff/Topsoil
1	Loose, moist, dark brown, silty fine to coarse SAND, few fine to coarse gravel; organic rich, abundant roots.
	Qvr - Vashon Recessional Outwash
2	Medium dense, moist, red-brown, silty medium to coarse SAND, few fine to coarse gravel, few fine sand; highly oxidized, roots present (weathered).
3	Medium dense, moist, brown, fine to coarse GRAVEL, with coarse sand, few to trace fine to medium sand, trace silt, trace cobbles; stratified with ~6-inch cobble rich horizons every 1 to 2 feet.
4	
5	
6	
7	
8	
9	Becomes very moist.
10	
11	
12	
13	Becomes wet; heavy caving due to wet/saturated conditions.
14	Highly cobble rich horizon and possibly a silt rich horizon below it, but caving was too severe to dig further, the silt could represent weathered sandstone.
15	Bottom of exploration pit at depth 14.5 feet Moderate caving 2 to 9 feet. Heavy caving 9 to 14.5 feet. Wet/saturated conditions at 13 feet.
16	
17	
18	
19	
20	

Parcel A
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD
Approved by:

Project No. KG060601A

12/4/07

KCTP3 060601A (EP-96 THRU EP-103).GPJ June 17, 2008

LOG OF EXPLORATION PIT NO. EP-98

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION — **Approximate Elev. 588 feet**

Forest Duff/Topsoil

1 Loose, moist, dark brown, silty fine to coarse SAND, little fine to coarse gravel; organics rich, abundant roots.

Qvr - Vashon Recessional Outwash

2 Medium dense, moist, red-brown, silty fine to coarse SAND, little fine to coarse gravel, trace cobbles; highly oxidized, roots present (weathered).

3 Medium dense, moist to wet, brown, fine to coarse GRAVEL, with medium to coarse sand, trace silt, trace cobbles; stratified with ~6-inch cobble rich horizons every 1 to 2 feet.

4

5

6

7 Turbid standing water obscuring stratigraphy. Attempted to bail water with trackhoe and water level recovered almost immediately.

8

9

10

11

12

13 Bottom of exploration pit at depth 12.5 feet
Heavy seepage/standing water (>20 gpm) at 6.5 feet. Moderate to heavy caving 1 to 12.5 feet.

14

15

16

17

18

19

20

Parcel A
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD
Approved by:

Project No. KG060601A

12/4/07

KCTP3 060601A (EP-96 THRU EP-103).GPJ June 17, 2008

LOG OF EXPLORATION PIT NO. EP-99

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION — **Approximate Elev. 592 feet**

Forest Duff/Topsoil

1 Loose, moist, dark brown, silty fine to coarse SAND, few fine to coarse gravel; organic rich, abundant roots.

Qvr - Vashon Recessional Outwash

2 Medium dense, moist, red-brown, silty fine to coarse SAND, few to little fine to coarse gravel; highly oxidized roots present (weathered).

3 Medium dense, moist, brown, medium to coarse SAND, little fine to coarse gravel, few fine sand, trace silt, trace cobbles; stratified with ~6-inch gravel/cobble rich horizons every 1 to 2 feet, slightly

4 oxidized to 4 feet.

5

6

7

8

9

10

11

12 Boulders encountered at 12 feet.

13

14

15

16

17 Bottom of exploration pit at depth 16.5 feet
Heavy seepage/standing water at 12.5 feet. Slight to moderate caving 1 to 12.5 feet. Heavy caving 12.5 to 16.5 feet

18

19

20

Parcel A
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD

Approved by:

Project No. KG060601A

12/4/07

KCTP3 060601A (EP-96 THRU EP-103).GPJ June 17, 2008

LOG OF EXPLORATION PIT NO. EP-100

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION

Approximate Elev. 584 feet

Topsoil/Forest Duff

Loose, moist, dark brown, silty fine to coarse SAND, few fine to coarse gravel; organic rich, roots present.

Qvr - Vashon Recessional Outwash

Medium dense, moist, red-brown, silty fine to coarse SAND, few to little fine to coarse gravel; highly oxidized, minor roots present (weathered).

Tp - Puget Group

Dense to very dense, very moist, orange to yellow, silty fine to medium SAND; highly oxidized, mottled texture (weathered sandstone).

Very dense, moist, light tan to gray, silty fine to medium SANDSTONE; 3 to 10 mm horizons of dark sand grains every 1 to 2 inches, cemented.

Bottom of exploration pit at depth 6.5 feet.

Minor seepage (<1 gpm) at 4 feet. No caving.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

Parcel A
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD

Approved by:

Project No. KG060601A

12/4/07

KCTP3 060601A (EP-96 THRU EP-103).GPJ June 17, 2008

LOG OF EXPLORATION PIT NO. EP-101

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 588 feet

Forest Duff/Topsoil

1 — Loose, moist, dark brown, silty fine to coarse SAND, little fine to coarse gravel; organic rich, abundant roots.

Qvr - Vashon Recessional Outwash

2 — Medium dense, moist, red-brown, silty fine to coarse SAND, little to few fine to coarse gravel, trace cobbles; highly oxidized, roots present (weathered).

3 — Medium dense, moist to wet, brown, medium to coarse SAND, with fine to coarse gravel, few to trace cobbles, trace silt; stratified with ~6-inch gravel/cobble rich horizons every 1 to 2 feet.

4

5

6

7

8

9

10

11

Tp - Puget Group

12 — Very dense, very moist to wet, orange-brown, silty fine to medium SAND; highly oxidized, mottled texture, cemented (weathered sandstone).

13

Bottom of exploration pit at depth 12.5 feet

Heavy seepage at 11 feet (10 to 20 gpm) - bailed water with trackhoe and was able to lower water level ~1 foot and it fully recovered within a few minutes. Moderate caving 2 to 11.5 feet.

14

15

16

17

18

19

20

KCTP3 060601A (EP-96 THRU EP-103).GPJ June 17, 2008

Parcel A
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD

Approved by:

Project No. KG060601A

12/4/07

LOG OF EXPLORATION PIT NO. EP-102

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION — Approximate Elev. 590 feet
1	**Forest Duff/Topsoil** Loose, moist, dark brown, silty fine to coarse SAND, few fine to coarse gravel; organic rich, abundant roots.
2	**Qvr - Vashon Recessional Outwash** Medium dense, moist, red-brown, silty medium to coarse SAND, little fine to coarse gravel, trace cobbles; highly oxidized, roots present.
3	Medium dense, moist, brown, medium to coarse SAND, with fine to coarse gravel, few to trace cobbles; stratified with ~6-inch gravel/cobble rich horizons every ~1 foot.
4	
5	
6	
7	
8	
9	**Tp - Puget Group**
10	Very dense, moist, orange to yellow, silty fine to medium SAND; highly oxidized, cemented 3 to 7 mm horizons of dark sand grains every 1 to 2 inches (weathered sandstone). Bottom of exploration pit at depth 9.5 feet. No seepage. Minor caving 2 to 9 feet.
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Parcel A
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD
Approved by:

Project No. KG060601A

12/4/07

KCTP3 060601A (EP-96 THRU EP-103).GPJ June 17, 2008

LOG OF EXPLORATION PIT NO. EP-103

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION

Approximate Elev. 581 feet

Forest Duff/Topsoil

1 Loose, moist, dark brown, silty fine to coarse SAND, few fine to coarse gravel; organic rich, abundant roots.

Qvr - Vashon Recessional Outwash

2 Medium dense to dense, red-brown, silty medium to coarse SAND, little fine to coarse gravel, trace cobbles; highly oxidized, roots present.

3

4 Medium dense, moist to wet, brown, medium to coarse SAND, little to with fine to coarse gravel, trace cobbles, trace silt; stratified with ~6-inch gravel/cobble rich horizons every 1 to 2 feet.

5

6

7

8

9

10

11

12

13

14 Bottom of exploration pit at depth 13.5 feet
Heavy seepage/standing water at 7.5 feet. Moderate to heavy caving 3 to 13.5 feet.

15

16

17

18

19

20

Parcel A
Black Diamond, WA

Logged by: ALD

Approved by:

Associated Earth Sciences, Inc.

Project No. KG060601A

12/4/07

KCTP3 060601A (EP-96 THRU EP-103).GPJ June 17, 2008

LOG OF EXPLORATION PIT NO. EP-104

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 560 feet
1	**Forest Duff/Topsoil** Loose, moist, orange-brown, silty fine to medium SAND, little gravel, organics.
2	**Qvr - Vashon Recessional Outwash** Loose to medium dense, moist, brown, fine to coarse SAND, with gravel, few cobbles, trace boulders up to ~1 foot, trace silt; trace roots to 2.5 feet, minor oxidation, weakly stratified.
3	
4	
5	**Qvt - Vashon Lodgement Till** Dense, moist, gray, silty fine SAND, little gravel, few medium sand (sandy "lean" Vashon Lodgement Till).
6	
7	
8	
9	Increased moisture, siltier. Minor seepage within Vashon Lodgement Till at 9.5 feet.
10	Dense, moist, gray, silty fine SAND, few graevl, few medium sand.
11	
12	Bottom of exploration pit at depth 11 feet Minor seepage at 9.5 feet. No caving.
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

12/17/07

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. EP-105

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth (ft)	DESCRIPTION — Approximate Elev. 523 feet
1	**Forest Duff/Topsoil** Moist, dark brown, fine to coarse SAND, little silt, little fine to coarse gravel; organic-rich, highly oxidized, abundant roots.
2	**Qvr - Vashon Recessional Outwash**
3	Loose, moist, yellowish-brown, fine to medium SAND, little silt, little coarse sand, few fine to coarse gravel; oxidized, roots present (weathered outwash).
4	At 3.5': Loose to medium dense, moist, brown, medium coarse SAND, with fine to coarse gravel, little fine sand, few silt, few cobbles; stratified with ~1' sandier horizons.
5	
6	
7	
8	
9	At 9': Moisture content increases to very moist.
10	
11	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
12	Dense, very moist, orange to tan brown, silty fine to coarse GRAVEL, little medium coarse sand,
13	few to little cobbles, few fine sand, clay present; highly oxidized, clay/silt in interstitial spaces, occasional pieces of charcoal.
14	At 14': Becomes primarily silty fine to coarse GRAVEL.
15	At 15': Dense, very moist, brown, medium coarse SAND, little fine to coarse gravel, few fine sand,
16	few cobbles.
17	At 17': Dense, very moist, orange to tan brown, silty fine to coarse GRAVEL, little cobbles, little
18	medium to coarse sand, few fine sand; stratified with ~1' siltier cobblier horizons that are more oxidized, silt/clay in interstitial spaces, occasional pieces of charcoal encountered.
19	
20	
21	
22	At 22': Heavy seepage (>10 gpm) that probably represents the ground water table.
23	
24	Bottom of exploration pit at depth 23 feet Minor caving 0 to 9 feet, moderate caving 9 to 23 feet. Heavy seepage (>10 gpm) at 22 feet.
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD
Approved by:

Project No. KG060601D

6/5/08

KCTP3 060601D.GPJ July 3, 2008

LOG OF EXPLORATION PIT NO. EP-106

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION — **Approximate Elev. 525 feet**

Forest Duff/Topsoil

1 Loose, moist, dark brown, silty fine to coarse SAND, few fine to coarse gravel; organic-rich, abundant roots.

Qvr - Vashon Recessional Outwash

2 Loose to medium dense, moist, yellowish-brown, silty fine to medium SAND, little coarse sand, few fine to coarse gravel; oxidized, roots present (weathered outwash).

3 At 3.5': Medium dense, moist, brown, medium to coarse SAND, with fine to coarse gravel, little coarse sand, few cobbles.

4

5

6

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained

7 Dense, moist, orange, silty medium coarse SAND, with fine to coarse gravel, little cobbles, few fine sand, clay present; highly oxidized, clay/silt in interstitial spaces.

8

9 At 9': Dense, very moist, gray-brown, medium to coarse SAND, with fine to coarse gravel, few fine

10 sand, few cobbles, few silt; stratified with gravelier/siltier horizons ~1' thick.

11

12

13

14

15

16 At 15.5': Becomes very moist to saturated.

17 At 17': Dense, very moist, tan brown, silty fine to coarse GRAVEL, little medium to coarse sand, few

18 cobbles, few fine sand; stratified with horizons of primarily silty fine to coarse gravel ~1' thick, slightly oxidized, silt in interstitial spaces.

19

20 Bottom of exploration pit at depth 19.5 feet

21 Minor caving 0 to 15.5 feet, moderate caving 15.5 to 19.5 feet. Minor seepage (<1 gpm) at 15.5 feet.

22

23

24

25

KCTP3 060601D.GPJ July 3, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD

Approved by:

Project No. KG060601D

6/5/08

LOG OF EXPLORATION PIT NO. EP-107

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION **Approximate Elev. 522 feet**

Forest Duff/Topsoil

1 Loose, moist, dark brown, silty fine SAND, trace medium sand; organic-rich, roots present.

Qvr - Vashon Recessional Outwash

2 Loose, moist, yellow-brown, silty fine SAND, trace medium sand; roots present, oxidized (weathered outwash).

3 At 3': Loose, moist, brown, fine SAND, trace medium sand, trace silt; slightly stratified with ~1"

4 siltier horizons.

5

6 At 5.5': Loose, moist, brown, fine to coarse GRAVEL, with medium to coarse sand, few fine sand, few cobbles, trace silt; slightly stratified with ~1' sandier horizons.

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21 Bottom of exploration pit at depth 20 feet
Moderate caving 3 to 20 feet. No seepage.

22

23

24

25

KCTP3 060601D.GPJ July 3, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD

Approved by:

Project No. KG060601D

6/5/08

LOG OF EXPLORATION PIT NO. EP-108

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION — **Approximate Elev. 524 feet**

Topsoil/Forest Duff

1 Loose, moist, dark brown, silty fine SAND, trace medium sand; organic-rich, abundant roots.

Qvr - Vashon Recessional Outwash

2 Loose, moist, yellow-brown, fine SAND, little silt, trace medium sand; oxidized, roots present, slightly mottled texture (weathered outwash).

3 At 3': Becomes brown and trace silt.

4

5

6

7

8

9

10

11

12

13

14 At 14': Loose, moist, brown, fine to coarse GRAVEL, with medium to coarse sand, few fine sand, few cobbles, trace silt.

15

16

17

18

19 Bottom of exploration pit at depth 18 feet
Moderate caving 3 to 18 feet. No seepage.

20

21

22

23

24

25

KCTP3 060601D.GPJ July 3, 2008

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD

Approved by:

Project No. KG060601D

6/5/08

LOG OF EXPLORATION PIT NO. EP-109

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION — Approximate Elev. 552 feet
1	**Forest Duff/Topsoil** Loose, moist, dark brown, silty fine to coarse SAND, few fine to coarse gravel; organic rich, roots present.
2	**Qvr - Vashon Recessional Outwash**
3	Medium dense, moist, orange-brown, fine to coarse SAND, little silt, few fine to coarse gravel; highly oxidized, roots present.
4	Medium dense, moist, brown, medium to coarse SAND, little fine to coarse gravel, few fine sand, trace silt; slightly stratified with ~0.5' more gravelly horizons.
5	
6	
7	
8	
9	**Qvt - Vashon Lodgement Till**
10	Very dense, very moist, brown-gray, silty fine to medium SAND, little fine to coarse gravel, trace to few cobbles, trace coarse sand; unsorted.
11	
12	
13	Becomes more gravel and cobble rich and ~6 to 8 gpm of seepage from this interval.
14	Very dense, very moist, gray-brown, silty fine to medium SAND, little fine to coarse gravel, few to trace cobbles, trace coarse sand; unsorted, water level rose to 12.5' with BOH at 15' from seepage
15	at 12.5' to 13.5'.
16	
17	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
18	Very dense, very moist, tan-gray, medium to coarse SAND, with fine to coarse gravel, few cobbles, few silt, trace fine sand; dark rind around several gravels.
19	With the bottom of the pit at 18', the water level has risen to 17.5' in ~10 min due to seepage from
20	the zone at 12.5' to 13.5', flowing at a rate of ~6 to 8 gpm.
21	Bottom of exploration pit at depth 18 feet Seepage (<1 gpm) at 9'. ~6 to 8 gpm of seepage at 12.5' to 13.5'. Moderate caving 0 to 9'.
22	
23	
24	
25	

The Villages
King County, WA

Associated Earth Sciences, Inc.

Logged by: ALD
Approved by:

Project No. KG060601E
6/23/08

KCTP3 060601B (EP-109 & EP-110, DT-1 THRU DT-3).GPJ July 3, 2008

LOG OF EXPLORATION PIT NO. EP-110

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth (ft)	DESCRIPTION — Approximate Elev. 542 feet
1	**Forest Duff/Topsoil** Loose, medium dense, dark brown, silty fine to medium SAND; organic rich, roots present.
2	**Qvr - Vashon Recessional Outwash** Medium dense, moist, orange-brown, fine to medium SAND, few silt, trace fine to coarse gravel; slightly laminated; oxidized, roots present.
3	
4	Becomes unoxidized, brown, unweathered, no roots present and primarily medium sand.
5	
6	
7	
8	
9	
10	Gravel content increases and cobbles become present.
11	**Qvt - Vashon Lodgement Till**
12	Dense, moist to very moist, gray-brown, silty fine SAND, little fine to coarse gravel, trace cobbles, trace medium to coarse sand; unsorted.
13	
14	
15	
16	Becomes very dense, very hard digging, and medium sand content increases.
17	
18	
19	
20	
21	Bottom of exploration pit at depth 20 feet Minor seepage (<1 gpm) at 13'. Minor cavnig 0 to 11'.
22	
23	
24	
25	

The Villages
King County, WA

Associated Earth Sciences, Inc.

Logged by: ALD
Approved by:

Project No. KG060601E

6/25/08

KCTP3 060601B (EP-109 & EP-110, DT-1 THRU DT-3).GPJ July 3, 2008

LOG OF EXPLORATION PIT NO. IT-1

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 575 feet

Forest Duff/Topsoil

1 Loose to medium dense, moist, dark brown, silty, fine to coarse SAND, little fine to coarse gravel, trace cobbles; organic-rich, roots present.

Qvic - Vashon Ice-Contact Deposits

2 Medium dense, moist, yellow-gray, fine to coarse GRAVEL, with medium to coarse sand, little to few cobbles, trace silt; oxidized.

3 At 2.5 feet: Becomes unoxidized gray, and sand content increases.

4 At 4.5 feet: Medium dense, moist, yellow gray, medium to coarse SAND, with fine to coarse gravel, trace silt; oxidized, minor roots present.

5 At 5 feet: Medium dense, moist, gray, medium to coarse SAND, few to trace fine to coarse gravel.

6 At 6 feet: 1 to 2-inch lenses of siltier material appear every 3 to 6 inches and the layering has approximately a 20 to 30 degree dip toward the west (cross-bedding?).

7

8

9

10

11

12

13

14

15

16 Bottom of exploration pit at depth 15 feet
No seepage; moderate caving 5 to 15 feet. Infiltration test performed at 5 feet.

17

18

19

20

21

22

23

24

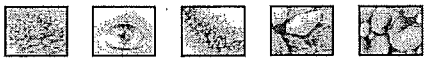
25

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD

Approved by: JHS



Project No. KG060601A

11/29/07

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. IT-2

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 615 feet
1	**Forest Duff/Topsoil** Loose to medium dense, moist, dark brown, silty fine to coarse SAND, few fine to coarse gravel; organic-rich, roots present, oxidized.
2	**Qvt - Vashon Lodgement Till** Medium dense to dense, moist, orange-brown, silty fine to coarse SAND, little fine to coarse gravel, trace cobbles; highly oxidized, roots present (weathered till).
3	
4	Very dense, moist, gray, silty fine SAND, little medium to coarse sand, little fine to coarse gravel, trace cobbles; unsorted.
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	**Qva - Vashon Advance Outwash**
15	Very dense, moist, slightly gray brown, silty medium to coarse SAND, with fine to coarse gravel, trace cobbles; silt in interstitial spaces.
16	
17	At 16.5 feet: Cobble content increases and silt content decreases.
18	
19	At 18 feet: Very dense, moist, brown, silty medium to coarse SAND, few fine to coarse gravel, trace cobbles; silt in interstitial spaces, oxidized, cemented.
20	Bottom of exploration pit at depth 19 feet At 10 to 10.5 feet minor (<1' gpm) seepage; no caving. Infiltration test performed at 19 feet.
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: ALD
Approved by: JHS

Project No. KG060601A

11/30/07

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. IT-3

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 555 feet
	Forest Duff/Topsoil
1	Loose, moist, dark brown, silty fine SAND, organics/roots.
	Qvr - Vashon Recessional Outwash
2	Loose, moist, brown, fine to medium SAND, trace silt, trace gravel, trace roots, moderate oxidation.
3	Transitions to gray-brown at 3 feet.
4	
5	
6	Severe caving 0 to 8 feet.
7	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
8	Boulder layer up to 1 foot in diameter. Slight seepage at ~8.5 feet.
9	Dense, moist, tan, silty/clayey fine to coarse SAND, with gravel, trace cobbles and boulders (gravel
10	and cobbles are rounded).
11	
12	
13	Dense, very moist, tan, silty fine to coarse SAND, with gravel, trace charcoal (gravels are very
14	weathered).
15	
16	Dense, very moist, tan, silty GRAVEL, with fine to coarse sand, trace cobbles.
17	
18	Dense, moist, tan, silty GRAVEL, with fine to coarse sand, trace cobbles, trace charcoal (weathered
19	gravels).
20	Bottom of exploration pit at depth 19 feet Minor seepage at 8.5 feet. Severe caving 0 to 8 feet. Infiltration test performed at 19 feet.
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A
12/11/07

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. IT-4

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 560 feet
	Forest Duff/Topsoil
1	Loose, moist, dark brown, silty SAND, with gravel, organics/roots.
	Qvr - Vashon Recessional Outwash
2	Loose, moist, brown, fine to coarse SAND, with gravel, few silt, trace roots (weathered outwash).
3	
4	Loose, moist, gray-brown, medium to coarse SAND, with gravel up to 3 inches (rounded), trace silt, weakly stratified, trace roots.
5	
6	
7	
8	Increased moisture, caving, cleaner, loose, very moist, gray-brown, GRAVEL, with medium to coarse sand, weakly stratified.
9	
10	
11	Severe caving, having trouble staying ahead of caving.
12	
13	Loose, very moist, gray-brown, GRAVEL, with medium to coarse sand, weakly stratified, severe caving.
14	
15	Bottom of exploration pit at depth 14 feet Exploration terminated due to severe caving. No seepage. Severe caving 7.5 to 14 feet. Infiltration test performed at 8 feet.
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

The Villages
Black Diamond, WA

Associated Earth Sciences, Inc.

Logged by: BAA
Approved by: JHS

Project No. KG060601A

12/17/07

KCTP3 060601A (EP-20 THRU EP-95, EP-104, IT-1 THRU IT-4).GPJ June 9, 2008

LOG OF EXPLORATION PIT NO. DT-1

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplification of actual conditions encountered.

DESCRIPTION — **Approximate Elev. 551 feet**

Depth (ft)

Forest Duff/Topsoil

1 — Loose, moist, dark brown, silty fine to medium SAND, organic rich, abundant roots.

Qvr - Vashon Recessional Outwash

2 — Loose, moist, orange-brown, fine to medium SAND, few silt, few coarse sand, occasional fine gravel; highly oxidized, minor roots present.

3

4 — Loose to medium dense, moist, gray-brown, medium to coarse SAND, few fine sand, trace fine gravel; slightly stratified with 1" to 2" siltier horizons.

5

6

7

8

9

10

11

12 — Cobble rich horizon.

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained

13 — Very dense, moist, tan-brown, silty/clayey fine to coarse GRAVEL, little fine to coarse sand, trace cobble; silt/clay in interstitial spaces, slightly oxidized, black (charcoal) fragments encountered, dark rind around some gravels.

14

15 — Becomes very moist at 15'.

16

17

18

19 — Bottom of exploration pit at depth 18 feet
No seepage. Moderate caving 0 to 12.5'.

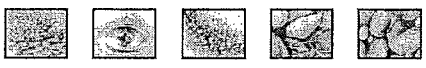
20

The Villages
King County, WA

Logged by: ALD

Approved by:

Associated Earth Sciences, Inc.



Project No. KG060601E

6/23/08

KCTP3 060601B (EP-109 & EP-110, DT-1 THRU DT-3).GPJ July 3, 2008

LOG OF EXPLORATION PIT NO. DT-2

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

Depth (ft)	DESCRIPTION Approximate Elev. 545 feet
	Forest Duff/Topsoil
1	Loose, moist, dark brown, fine to medium SAND, few coarse sand, trace fine to coarse gravels; organic rich, abundant roots.
	Qvr - Vashon Recessional Outwash
2	Loose to medium dense, moist, orange-brown, fine to medium SAND, few silt, trace coarse sand; oxidized, roots present.
3	Medium dense, moist, brown, fine to coarse SAND, few fine to coarse gravel, trace silt.
4	
5	
6	Becomes predominantly sand.
7	
8	
9	Gravel content increases.
10	**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
11	Very dense, very moist, tan-brown, silty/clayey fine to coarse GRAVEL, little to few fine to coarse sand, trace cobbles; silt/clay in interstitial spaces, slightly stratified with ~1' horizons with less silt/clay, dark rind around some gravels.
12	
13	
14	
15	
16	
17	
18	Bottom of exploration pit at depth 17.5 feet Minor seepage (<1 gpm) at 11.5 to 12'. Minor caving 0 to 10'.
19	
20	

The Villages
King County, WA

Associated Earth Sciences, Inc.

Logged by: ALD
Approved by:

Project No. KG060601E
6/24/08

KCTP3 060601B (EP-109 & EP-110, DT-1 THRU DT-3).GPJ July 3, 2008

LOG OF EXPLORATION PIT NO. DT-3

Depth (ft)

This log is part of the report prepared by Associated Earth Sciences, Inc. (AESI) for the named project and should be read together with that report for complete interpretation. This summary applies only to the location of this trench at the time of excavation. Subsurface conditions may change at this location with the passage of time. The data presented are a simplfication of actual conditions encountered.

DESCRIPTION

Approximate Elev. 547 feet

Forest Duff/Topsoil

Loose, moist, dark brown, silty fine to medium SAND, few coarse sand, trace fine gravel; organic rich, abundant roots.

Qvr - Vashon Recessional Outwash

Medium dense, moist, orange-brown, fine to medium SAND, few silt, few coarse sand; oxidized, roots present.

$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained

Very dense, very moist, tan-brown, silty/clayey fine to coarse GRAVEL, little fine to coarse sand, trace cobbles; dark rind around some gravels, silt/clay in interstitial spaces, black (charcoal) fragments encountered.

A 0.5' horizon of gray, medium SAND, few fine gravel, few fine and coarse sand, trace silt.

Bottom of exploration pit at depth 16 feet
Minor seepage (<1 gpm) at 5'. Minor cAving 0 to 5'.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

The Villages
King County, WA

Logged by: ALD

Approved by:

Associated Earth Sciences, Inc.

Project No. KG060601E

6/24/08

KCTP3 060601B (EP-109 & EP-110, DT-1 THRU DT-3).GPJ July 3, 2008

Appendix 3
AESI Exploratory Well Logs

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-1	1 of 4

Project Name: The Villages
Location: King County, WA
Elevation (Top of Well Casing): 601.36'
Surface Elevation (ft): 599.24'
Water Level Elevation: Dry
Date Start/Finish: 4/5/06,4/6/06
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hole Diameter (in): 10" to 18', 6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards.				**Surface Material: Forest Duff**
						Dark brown, organic SAND, with silt.
						Qvic - Vashon Ice-Contact Deposits
		10-inch-diameter bentonite chip surface seal 0 to 18 feet				
5						Slightly moist, dark brown, fine to coarse SAND with gravel, trace silt.
10						As above, gravels less than 1 1/2 inch.
15						Slightly moist, gray-brown, fine to coarse SAND, few gravel, trace silt.
						Driller notes scattered boulders.
20						Slightly moist, gray-brown, fine to coarse SAND with few to little gravel, trace silt.
		6-inch-diameter steel casing from approximately 2 feet ags to 50 feet				
25						As above.
30						As above.
35						As above. Driller notes small amount of moisture at 35 feet.
						With BOC at ~37 feet, wait 10 minutes, then run air. No free water present.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (Dry 12/14/06)
- Water Level at time of drilling (ATD)

Logged by: SS/BAA

Approved by:

NWWELL 05457A.GPJ BORING.GDT 7/3/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-1	2 of 4

Project Name: The Villages
Location: King County, WA
Elevation (Top of Well Casing): 601.36'
Surface Elevation (ft): 599.24'
Water Level Elevation: Dry
Date Start/Finish: 4/5/06 4/6/06
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hole Diameter (in): 10" to 18', 6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	WELL CONSTRUCTION	Blows/6"	DESCRIPTION
	6-inch-diameter steel casing from approximately 2 feet ags to 50 feet		At 40 feet: driller loses air into formation, notes less sand.
			Slightly moist, gray-brown, gravel with SAND (abundant angular cuttings).
45			As above.
	K-packer 47.25 to 47.75 feet		
	5-inch I.D. steel casing 47.75 to 50 feet 5-inch I.D. stainless steel wire wrapped screen 0.010-inch slot width 50 to 55 feet		
50			At 50 feet: small amount of moisture. As above.
55	Tailpipe 55 to 57 feet with welded end plate		Slightly moist to moist, gray-brown, GRAVEL with sand, trace silt.
			At 55 1/2 to 56 feet: brown to orange-brown, fine SAND with gravel, few silt, gravels to 1 to 1/2 inch.
60	Bentonite chips 57 to 130 feet		Slightly moist to moist, brown to orange-brown, fine SAND with gravel, few silt, gravels 1/2 to 1 inch.
65			As above.
70			Slightly moist to moist, brown to gray-brown, fine to coarse SAND with gravel, few silt, gravels 1/2 to 1 inch.
75			Moist, orange-brown to tan, fine SAND with silt, few gravel, few coarse sand.
			Driller notes from 60 feet and lower more dense than above.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample
- M - Moisture
- Water Level (Dry 12/14/06)
- Water Level at time of drilling (ATD)

Logged by: SS/BAA
Approved by:

NWWELL 05457A.GPJ BORING.GDT 7/3/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-1	3 of 4

Project Name	The Villages	Location	King County, WA
Elevation (Top of Well Casing)	601.36'	Surface Elevation (ft)	599.24'
Water Level Elevation	Dry	Date Start/Finish	4/5/06,4/6/06
Drilling/Equipment	Tacoma Pump and Drilling/Dual Air Rotary	Hole Diameter (in)	10" to 18', 6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	S-T	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Moist, brown to orange-brown, fine to coarse SAND with gravel, few to little silt, gravels 1/2 to 1 inch.
85						As above.
90		Bentonite chips 57 to 130 feet				Moist, orange-brown to gray-brown, fine to coarse SAND with gravel, few to little silt, gravels 1/2 to 1 inch. Driller notes formation change at 92 feet. **Qvt - Vashon Lodgement Till**
95						Moist, gray-brown, fine to medium SAND, few gravel, few to little silt, gravels to 1/2 inch.
100	▼					As above. Water came up to 102 feet bgs after sitting overnight with BOC at 85 feet and BOH at 130 feet.
105						As above.
110						As above. Driller notes change at 113 feet.
115						Moist, brown, fine to medium SAND, trace silt, trace fine gravel, coarse sand. Very moist, brown, SAND and GRAVEL, blue nodules of clay.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

▽ Water Level (Dry 12/14/06)

▼ Water Level at time of drilling (ATD)

Logged by: SS/BAA

Approved by:

NWWELL 05457A.GPJ BORING.GDT 7/3/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-1	4 of 4

Project Name: The Villages
Location: King County, WA
Elevation (Top of Well Casing): 601.36'
Surface Elevation (ft): 599.24'
Water Level Elevation: Dry
Date Start/Finish: 4/5/06,4/6/06
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hole Diameter (in): 10" to 18', 6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	WELL CONSTRUCTION	Blows/6"	Graphic Symbol	DESCRIPTION
				Moist to very moist, gray to blue-gray, SILT, clay present, few sand.
				Driller notes sand and gravel again at 121 feet.
				$Qpon_{1c}$ - Pre-Olympia Non-Glacial Deposits, Coarse-Grained
125	Bentonite chips 57 to 130 feet			Moist to very moist, olive-gray, SILT with sand, few gravel.
				Water came up to 102 feet bgs after sitting overnight with BOC at 85 and BOH at 130 feet.
				Driller adds water to clear out silt/clay.
130	Hole collapsed, natural backfill slough 130 to 155 feet			Wet (driller added water), olive-gray, fine to coarse SAND with silt, few gravel, silt/clay nodules present, abundant cuttings.
135				Wet (driller added water), olive-gray, SILT with sand, few gravel, silt/clay nodules present (abundant cuttings).
140				Wet, olive-gray, fine to coarse SAND with silt, trace fine gravel.
145				Very moist, olive to dark gray, fine to coarse SAND with silt.
				Tp - Lower Tertiary Puget Group
				Driller notes bedrock, very hard drilling. Moist, light gray, pulverized volcaniclastic, SANDSTONE (silty fine sand).
150				Wet (driller added water), dark gray to light gray, volcaniclastic deposit (fine to coarse sand with gravel), clasts of basalt and andesite.
				As above.
155				Boring terminated at 155 feet on 4/6/06
				Pulled casing back to 85' and let sit overnight. Water level at 102' bgs on 4/6/06. Well completed 4/6/06.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (Dry 12/14/06)
Water Level at time of drilling (ATD)

Logged by: SS/BAA
Approved by:

NWWELL 05457A.GPJ BORING.GDT 7/3/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-2	1 of 5

Project Name: The Villages
Location: King County, WA
Elevation (Top of Well Casing): 564.56'
Surface Elevation (ft): 562.10'
Water Level Elevation: 511.10'
Date Start/Finish: 4/11/06 4/12/06
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hole Diameter (in): 10" to 18', 6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Forest Duff** Moist, dark brown, organic silty sand (some fill from drill pad).
						Qvt - Vashon Lodgement Till
5						Moist, brown, SAND with silt and gravel (few cuttings), gravel <1 inch - silt/clay nodules present.
10		10-inch-diameter bentonite chip surface seal 0 to 18 feet				Moist, grayish brown, fine to coarse SAND with silt, few to little gravel, gravel <3/4 inch. Driller notes "tight".
15		6-inch-diameter steel casing from approximately 2.5 feet aboveground to 60 feet				Moist, grayish brown, fine SAND with silt, few gravel, gravel <3/4 inch. Small amount of perched water at 17 to 18 feet.
20						Driller notes coarse gravels up to small boulders abundant throughout section 0 to 20 feet. Moist, grayish brown, fine to coarse SAND with silt, few gravel (<3/4 inch) clay present.
						Qpog, - Pre-Olympia Glacial Till Driller added small amount of water - notes large boulders.
25						Very moist to wet, gray, fine to coarse SAND with silt, few to little gravel (gravels <3/4 inch), clay present.
30						Moist, gray, fine SAND with silt, few gravel, trace medium to coarse SAND (gravels <3/4 inch), efferveses weakly with HCL. Driller notes more silt, fewer gravel and boulders.
35						Moist, brownish gray, fine SAND with silt, few gravel, trace medium to coarse SAND, efferveses weakly with HCL.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-2	2 of 5

Project Name: The Villages
Location: King County, WA
Elevation (Top of Well Casing): 564.56'
Surface Elevation (ft): 562.10'
Water Level Elevation: 511.10'
Date Start/Finish: 4/11/06,4/12/06
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hole Diameter (in): 10" to 18', 6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	WELL CONSTRUCTION	DESCRIPTION
		Moist, bluish gray, GRAVEL with silt, sand, abundant angular cuttings (gravels up to 1 inch), efferveses weakly with HCL.
		Driller notes increased moisture at 44 feet.
45	6-inch-diameter steel casing from approximately 2.5 feet ags to 60 feet	Very moist, gray to blue-gray, fine SAND with silt, few gravel, trace medium to coarse sand, gravel (<3/4 inch), efferveses weakly with HCL.
		Driller notes trace gravel at 48 feet, increase in gravel at 50 feet.
50	*Water level after screen set (greenish gray water)*	Moist, blue-gray to gray, fine SAND with silt, trace gravel (<3/4 inch), trace medium to coarse sand, efferveses weakly with HCL.
55		Moist, blue-gray to gray, fine SAND with silt, few gravel (<3/4 inch), trace medium to coarse sand, efferveses weakly with HCL.
	K-packer 57 to 57.5 feet 5-inch I.D. steel casing 57.5 to 60 feet	**$Qpon_{lc}$ - Pre-Olympia Non-Glacial Deposits, Coarse-Grained** Driller notes moisture at ~58 feet.
60	5-inch I.D. stainless steel wire wrapped screen 0.010-inch slot width 60 to 65 feet with welded end plate	Wet, gray, GRAVEL with sand, silt (abundant cuttings).
		Driller adding water.
65	Colorado silica sand 65 to 67 feet	As above.
70	Bentonite chips 67 to 106 feet	Moist, gray, fine to coarse SAND with gravel, silt (abundant cuttings). Water level came up to 70 feet bgs overnight with BOC at 95 feet and BOH at 98 feet.
		Discharge hose blowing large amount of dust at ~73 feet.
75		As above.
		Water at 78 feet seeping in during drilling.
		Large boulder at 79 feet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-2	3 of 5

Project Name	The Villages	Location	King County, WA
Elevation (Top of Well Casing)	564.56'	Surface Elevation (ft)	562.10'
Water Level Elevation	511.10'	Date Start/Finish	4/11/06 4/12/06
Drilling/Equipment	Tacoma Pump and Drilling/Dual Air Rotary	Hole Diameter (in)	10" to 18', 6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	WELL CONSTRUCTION	DESCRIPTION
		Very moist, gray, GRAVEL with sand, silt (abundant cuttings), gravel up to 1 1/2 inch.
85		Very moist, gray, GRAVEL with sand, silt, to SAND with gravel, silt; silt nodules present, abundant cuttings.
90	Bentonite chips 67 to 106 feet	As above.
95		Very moist, gray, fine to coarse SAND with silt, few gravel (<3/4 inch), clay present. Let sit overnight with BOC at 95 feet, BOH at 98 feet. Water level was 70 feet bgs on 4/12/06.
		Increased moisture.
100		Wet, gray, GRAVEL with sand (gravels 3/4 inch), cuttings, discharge water is turbid gray.
105		Wet, gray, fine to coarse SAND, few to little gravel.
110	Hole collapsed, natural backfill slough 106 to 176.5 feet	Wet, gray, fine to medium SAND, few gravel, trace coarse sand.
		Driller notes formation is loose.
115		Wet, brownish gray, fine to medium SAND, few gravel, few silt.
		Driller notes formation is producing ~42 gallons/min. at 116 feet, sulfur odor present.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-2	4 of 5

Project Name: The Villages
Location: King County, WA
Elevation (Top of Well Casing): 564.56'
Surface Elevation (ft): 562.10'
Water Level Elevation: 511.10'
Date Start/Finish: 4/11/06 4/12/06
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hole Diameter (in): 10" to 18', 6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Wet, gray, fine to medium SAND, trace gravel, trace silt.
						Driller notes less gravel.
125						Wet, gray, fine to medium SAND, trace gravel, trace silt.
						Driller notes heaving sands.
130		Hole collapsed, natural backfill slough 106 to 176.5 feet				As above. Scattered coal fragments 130 to 175 feet.
						Driller notes more gravel at 132 feet.
135						Wet, gray, fine to coarse SAND, trace to few gravel, trace silt.
						Driller notes producing 60 gpm.
140						Wet, gray, fine to coarse SAND with gravel, trace silt.
145						As above.
						Driller notes increasing gravel size.
150						As above, with few gravel.
155						Wet, gray, fine to medium SAND, trace gravel, trace silt, trace coarse sand, micaceous, coal present.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-2	5 of 5

Project Name: The Villages
Location: King County, WA
Elevation (Top of Well Casing): 564.56'
Surface Elevation (ft): 562.10'
Water Level Elevation: 511.10'
Date Start/Finish: 4/11/06,4/12/06
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hole Diameter (in): 10" to 18', 6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
165						**$Qpon_{tf}$ - Pre-Olympia Non-Glacial Deposits, Fine-Grained** Wet, gray, fine SAND, few silt, trace gravel, trace medium to coarse sand.
						Driller notes change at 165 feet.
170		Hole collapsed, natural backfill slough 106 to 176.5 feet				Wet, gray, SILT with sand, trace gravel (clay present).
175						As above.
						Boring terminated at 176.5 feet on 4/12/06 Let sit with BOC at 174.5'. Water level at 71.5' bgs after 2 hours. Let sit overnight with BOC at 96' and BOH at 106'. Water level at 70.5' bgs on 4/13/06. Well completed 4/13/06.
180						
185						
190						
195						

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample
- M - Moisture
- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-3	1 of 4

Project Name	The Villages	Location	King County, WA
Elevation (Top of Well Casing)	564.25'	Surface Elevation (ft)	562.05'
Water Level Elevation	540.57'	Date Start/Finish	4/6/06,4/7/06
Drilling/Equipment	Tacoma Pump and Drilling/Dual Air Rotary	Hole Diameter (in)	10" to 18', 6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Forest Duff**
						Moist, dark brown, organic silty SAND.
						Qvt - Vashon Lodgement Till
5		10-inch-diameter bentonite chip surface seal 0 to 18 feet				Moist, dark brown, fine to coarse SAND, few gravel, few to little silt, gravel 1/2 inch.
10						Moist to very moist, orange-brown, fine to coarse SAND with silt, few gravel, clay present, micaceous, gravel 1/2 inch.
						At 11 to 12 feet: becoming gray.
15						Moist, brownish gray, fine to coarse SAND with silt, few gravel, gravel 1/2 inch. Perched water at 16 to 18 feet.
						$Qpog_t$ - Pre-Olympia Glacial Till
20	▽	6-inch-diameter steel casing from approximately 2.5 feet ags to 75 feet				Very moist to wet, gray, GRAVEL with sand, silt, gravel 1/2 to 3/4 inch, abundant cuttings.
25						Moist, gray, fine SAND with silt, trace to few gravel, gravels <3/4 inch.
30						Moist, gray, fine SAND with silt, trace to few gravel, efferveses weakly with HCL.
35						Very moist, gray, medium to coarse SAND with silt, gravel.
	▼					Let rig sit overnight with BOC at 35 feet, BOH at 38 feet. Water level at 21 feet bgs on 4/7/06.
						$Qpon_{1c}$ - Pre-Olympia Non-Glacial Deposits, Coarse-Grained
						Driller notes increased moisture at 37 feet, gravel up to 1 inch. Let rig sit over weekend with BOC at 113 feet, BOH at 141 feet. Water level at 37 feet bgs on 4/10/06.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

▽ Water Level (12/14/06)

▼ Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-3	2 of 4

Project Name: The Villages
Location: King County, WA
Elevation (Top of Well Casing): 564.25'
Surface Elevation (ft): 562.05'
Water Level Elevation: 540.57'
Date Start/Finish: 4/6/06,4/7/06
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hole Diameter (in): 10" to 18', 6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Wet, olive-gray, GRAVEL with medium to coarse sand, silt (numerous cuttings), gravel 1/2 to 3/4 inch.
						Color change at 42 feet to gray to grayish brown.
45						Wet, gray, GRAVEL with sand to medium to coarse SAND with gravel, silt nodules present (numerous cuttings), discharge water is grayish brown.
50		6-inch-diameter steel casing aboveground to 75 feet				As above.
						Color change at 51 feet to gray.
55						Wet, gray, medium to coarse SAND with gravel to GRAVEL with sand (numerous cuttings), gravel up to 1 inch subrounded, discharge water is brownish gray. Driller notes formation is making 10 gal/min at 55 feet.
60						As above.
65						As above.
						Driller notes material is fairly loose between boulders.
70						As above.
		K-packer 72.75 to 73.25 feet				
75		5-inch I.D. steel casing 73.25 to 75 feet 5-inch I.D. stainless steel wire wrapped screen 0.010-inch slot width 75 to 80 feet with welded end plate				Driller notes at 74 feet water volume decreases from ~10 gal/min to <5 gal/min. Discharge water becomes more turbid. As above, discharge water is turbid, gravel up to 1 1/2 to 2 inches.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-3	3 of 4

Project Name: The Villages
Location: King County, WA
Elevation (Top of Well Casing): 564.25'
Surface Elevation (ft): 562.05'
Water Level Elevation: 540.57'
Date Start/Finish: 4/6/06,4/7/06
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hole Diameter (in): 10" to 18', 6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	WELL CONSTRUCTION	DESCRIPTION
	Silica sand 80 to 82.5 feet	Wet, olive-gray to light gray, medium to coarse SAND with gravel to GRAVEL with sand, gravel up to 1 inch.
85	Bentonite chips 82.5 to 141 feet	As above.
		Color becomes more green, increase in silt content.
90		As above, olive-gray to greenish gray, silt nodules present.
		Very moist, dark gray to olive, SAND with silt, trace gravel, clay present. No free water.
		Water again at 93 feet.
95		Wet, olive-gray, fine to coarse SAND with gravel, gravel up to 2 inches.
100		Wet, olive-gray, fine SAND with silt to SILT with sand, trace fine gravels, clay present.
		SAND with gravel, high silt content.
105		Wet, gray, fine SAND with silt to SILT with fine sand, trace fine gravel, clay present.
		As above, no free water.
110		Driller notes formation making water again. Thinks different aquifer.
		Wet, gray, fine to coarse SAND with silt, gravel, silt/clay nodules present.
115		Wet, gray, fine to coarse SAND with gravel to GRAVEL with sand.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-3	4 of 4

Project Name: The Villages
Elevation (Top of Well Casing): 564.25'
Water Level Elevation: 540.57'
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hammer Weight/Drop: N/A

Location: King County, WA
Surface Elevation (ft): 562.05'
Date Start/Finish: 4/6/06,4/7/06
Hole Diameter (in): 10" to 18', 6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Wet, dark gray, GRAVEL (all cuttings). Driller notes boulders sitting between 118 and 124 feet.
125						Driller notes water stops, casing not following drill very well, on ~6-foot boulder. Moist, olive-gray, fine to coarse SAND with silt, gravel, clay present, gravel up to 3/4 inch. Driller adding water.
130		Betonite chips 82.5 to 141 feet				Wet, olive-gray, fine to coarse SAND with gravel, few to little silt (high silt content, cloudy water), gravel up to 1 inch (abundant cuttings). Driller notes drilling harder - more dense, coarser gravel.
135						Wet, olive-gray, fine to coarse SAND with gravel, silt/clay nodules present, gravel up to 1 inch (high silt content, very cloudy water) (abundant cuttings).
140						Wet, greenish gray to olive-gray, fine to coarse SAND with gravel, silt/clay nodules present, gravel up to 1 1/2 inch (abundant cuttings), micaceous.
145		Hole collapsed, natural backfill slough 141 to 151 feet				As above, with possible organics.
						Wet, greenish gray to olive-gray, fine SAND with silt to SILT with fine sand, trace to few gravel.
150						**$Qpon_{tf}$ - Pre-Olympia Non-Glacial Deposits, Fine-Grained**
						Boring terminated at 151 feet on 4/7/06 Pulled casing back to 113' and let sit over weekend. Water level at 37' bgs on 4/10/06 with BOH at 141'. Well completed 4/10/06.
155						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-4	1 of 4

Project Name	The Villages	Location	King County, WA
Elevation (Top of Well Casing)	617.53'	Surface Elevation (ft)	615.41'
Water Level Elevation	553.14'	Date Start/Finish	4/24/06 4/24/06
Drilling/Equipment	Tacoma Pump and Drilling/Dual Air Rotary	Hole Diameter (in)	10" to 18', 6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Forest Duff/Road Material** Moist, dark brown, forest duff and gray fill from road (pit run).
						Qvt - Vashon Lodgement Till
5		10-inch-diameter bentonite surface seal 0 to 18 feet				Very moist, brown, silty fine to coarse SAND, few to little gravel (up to 1/2 inch), roots, organics present.
10						Moist, brownish gray, silty fine SAND, few to little gravel (up to 1/2 inch), few medium to coarse sand, numerous cuttings.
15						As above, except gray.
						Qva - Vashon Advance Outwash
						Dusty - driller added small amount of water.
20						Moist, brown to orangish brown, fine to coarse SAND with gravel, trace to few silt, numerous cuttings (mostly medium to coarse sand).
		6-inch-diameter steel casing from approximately 2.5 feet ags to 67.5 feet				
25						As above, except few to little gravel.
30						As above, except few gravel.
						Driller notes boulders.
35						Moist, brown to orange-brown, fine to coarse SAND with gravel, trace to few silt, numerous cuttings.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-4	2 of 4

Project Name: The Villages
Location: King County, WA
Elevation (Top of Well Casing): 617.53'
Surface Elevation (ft): 615.41'
Water Level Elevation: 553.14'
Date Start/Finish: 4/24/06,4/24/06
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hole Diameter (in): 10" to 18', 6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Moist, brown to orange-brown, fine to coarse SAND, little gravel, trace to few silt (mostly medium to coarse sand), numerous cuttings.
45						Moist, brown to orange-brown, medium to coarse SAND, little gravel, trace to few silt.
50		6-inch-diameter steel casing aboveground to 67.5 feet				Moist, brown to orange-brown, fine to coarse SAND, few to little gravel, trace to few silt. Driller notes more gravel at 50 feet.
55						As above, with numerous cuttings.
60	▼ ▽					Moist, brown to orange-brown, medium to coarse SAND with gravel, trace fine sand, silt, some cuttings.
65		K-packer and riser 64.5 to 65 feet 5-inch I.D. steel casing 65 to 67.5 feet 5-inch I.D. stainless steel wire wrapped screen 0.010-inch slot width 67.5 to 72.5 feet with welded end plate				Moist, brown to orange-brown, GRAVEL with medium to coarse sand, trace silt, fine sand. Driller notes ground water at ~68 feet.
70						Moist, brown to orange-brown, medium to coarse SAND with gravel, trace fine sand, silt.
		Silica sand				Driller notes sand at 73 feet.
75		Bentonite chips 74 to 152 feet				Moist, brown to orange-brown, fine to medium SAND, trace fine gravel, coarse sand, silt. Driller notes gravel at 76 feet. Let rig sit for 1 hour with BOC at 75 feet, BOH at 77 feet. Water level came up to 61 feet bgs.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
▽ Water Level (12/14/06)
▼ Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-4	3 of 4

Project Name: The Villages
Elevation (Top of Well Casing): 617.53'
Water Level Elevation: 553.14'
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hammer Weight/Drop: N/A

Location: King County, WA
Surface Elevation (ft): 615.41'
Date Start/Finish: 4/24/06 4/24/06
Hole Diameter (in): 10" to 18', 6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/6"	Graphic Symbol	DESCRIPTION
						Wet, brown to orange-brown, fine SAND, few silt, trace gravel, medium to coarse sand.
85						Wet, brown to orange-brown, GRAVEL, few to little silt, trace sand, abundant cuttings.
						$Qpog_t$ - Pre-Olympia Glacial Till
						Driller notes change in formation at 88 feet, drills like till.
90		Bentonite chips 74 to 152 feet				Moist, gray, fine SAND with silt, trace to few gravel, trace medium to coarse SAND.
						$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained
						Driller notes change at 93 feet.
95						Moist, brownish gray, fine to coarse SAND, few to little gravel, trace silt.
						Increased moisture again at 96 feet, making water.
100						Wet, grayish brown, fine to coarse SAND with gravel, few to little silt, abundant cuttings.
105						As above, with few to little gravel.
						Driller notes casing harder to pull from 97 to 108 feet. Indicates possible higher silt content, or tighter formation.
110						Wet, grayish brown, fine to coarse SAND with gravel, trace to few silt, abundant cuttings.
						Driller notes casing pulling hard from 97 to 108 feet.
						Driller notes less silt at 110 to 115 feet.
	▼					Water level at 114 feet bgs on 4/25/06 with BOH at 152 feet, BOC at 146 feet after sitting overnight.
115						Wet, grayish brown, medium to coarse SAND with few gravel, trace silt.
						With casing at ~116 feet making ~5 gpm water.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
▽ Water Level (12/14/06)
▼ Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG05457A	MW-4	4 of 4

Project Name: The Villages
Elevation (Top of Well Casing): 617.53'
Water Level Elevation: 553.14'
Drilling/Equipment: Tacoma Pump and Drilling/Dual Air Rotary
Hammer Weight/Drop: N/A

Location: King County, WA
Surface Elevation (ft): 615.41'
Date Start/Finish: 4/24/06 4/24/06
Hole Diameter (in): 10" to 18', 6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Wet, grayish brown, medium to coarse SAND with gravel, trace fine sand, silt, some cuttings (discharge water brown).
125						As above.
						Qpon$_{1c}$ - Pre-Olympia Non-Glacial Deposits, Coarse-Grained At 126 feet: color change to gray.
130		Bentonite chips 74 to 152 feet				Wet, gray to brownish gray, GRAVEL with fine to coarse sand, trace silt, abundant cuttings.
135						As above.
140						Wet, gray, fine to coarse SAND with gravel, few silt, abundant cuttings. Driller notes tighter formation at 140 feet, water almost shut off - more gray.
145						As above.
150						Wet, gray, fine to coarse SAND with gravel, trace silt. Producing ~22 gpm with air lift.
						Boring terminated at 152 feet on 4/24/06 Let rig sit overnight with BOC at 146' and BOH at 152'. Water level was 114' bgs on 4/25/06. Well completed 4/25/06.
155						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 05457A.GPJ BORING.GDT 6/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-5	1 of 3

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	603.74'	Surface Elevation (ft)	601.59'
Water Level Elevation	535.86'	Date Start/Finish	9/18/06 9/19/06
Drilling/Equipment	Aquatech Well Drilling and Pump/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road Fill/Topsoil/Forest Duff**
						Qvt - Vashon Lodgement Till
5		10-inch-diameter bentonite chip surface seal 0 to 18 feet (Perma Plug 3/8-inch medium bentonite chips)				At 5 feet: Slightly moist, brown, silty fine SAND, little subangular gravel, few medium to coarse sand, minor oxidation, trace roots.
						Driller notes large gravels and cobbles not being lifted, samples missing coarser material, more "firm" at 7 feet - more clay/silt.
10						At 10 feet: As above, except grayish brown, no oxidation, no roots, abundant cuttings.
						(change drill bit)
15						At 15 feet: As above, slightly more gray.
20						At 20 feet: As above, slightly moist to moist, grayish brown, silty fine SAND, little gravel (subangular to subrounded), few medium to coarse sand; abundant cuttings.
						Driller notes formation is "hard".
25		6-inch I.D. steel blank casing from approximately 2 feet above ground surface to 65.4 feet				At 25 feet: As above.
						Driller notes 2- to 3-inch clay layer at 28 feet.
						Slightly more gray.
30						At 30 feet: Moist, brownish gray, silty fine SAND, little gravel, few medium to coarse sand.
						Driller notes another thin clay layer at 34 feet. Much more gravel, less silt. Driller notes still "tight", staying open but slightly looser.
35						At 35 feet: Moist, brownish gray, silty fine to medium SAND with gravel, few coarse sand (gravel size is fairly uniform).

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

Water Level (12/14/06)

Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-5	2 of 3

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	603.74'	Surface Elevation (ft)	601.59'
Water Level Elevation	535.86'	Date Start/Finish	9/18/06,9/19/06
Drilling/Equipment	Aquatech Well Drilling and Pump/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Driller adding water from 40' to BOH. At 40 feet: Brownish gray, fine to coarse SAND (mostly coarse) with gravel, little silt (silty discharge water), trace silt/clay nodules; abundant cuttings (more silt than represented in sample).
45						Driller notes "tight", cemented. At 45 feet: As above, few silt. Note: 40 feet down, color inferred from discharge water and sample.
50						**Qva - Vashon Advance Outwash** Becomes brown at 49 feet and "looser". At 50 feet: Brown, fine to coarse SAND, little silt (silty discharge water), few gravel (slightly more rounded).
55						Driller notes cleared up at 53 feet - checking for free water. No free water. At 55 feet: Brown, GRAVEL, little coarse sand, trace fine to medium sand and silt; abundant cuttings. Driller adding water.
60		8-inch long 1K-packer 3-foot riser pipe (5-inch I.D. steel casing) 62.4 to 65.4 feet				At 60 feet: Brown, medium to coarse SAND, little gravel, trace fine sand and silt; abundant cuttings.
65	▽	Bottom of 6-inch steel casing at 65.4 feet 5-inch I.D. stainless steel wire-wrapped screen 0.015-inch slot width 65.4 to 70.4				At 65 feet: Wet, brown, GRAVEL with medium to coarse sand, few fine sand, trace silt; abundant cuttings. Driller notes formation is wet 65 to 70 feet. Driller notes more silt - silt nodules at 68 feet. Small amount of water on silt at 68 feet - airlifted.
70		Colorado silica sand 70.4 to 70.9 feet (6 inches) Perma Plug 3/8-inch bentonite chips 70.9 to 73.9 feet (3 feet)				At 70 feet: Wet, brown, fine to coarse SAND with gravel, little silt, trace brown clay nodules (more silt in discharge).
75		Cut 6-inch steel casing 73.9 to 77.9 feet with drive shoe Natural backfill 73.9 to 100 feet bgs				**Qo - Olympia Non-Glacial Deposits** Driller notes thin, gray, clay layer at 75 feet - clay nodule in sample. At 75 feet: Wet, brown, fine to coarse SAND with gravel, with silt, gray, clay/silt nodules. Driller notes at 76 feet more clay than gravel. Drilling much "easier", formation staying open after 75 feet. Wood at 78 feet. Conventional radiocarbon age of >48,000 BP

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

▽ Water Level (12/14/06)

▼ Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-5	3 of 3

Project Name: The Villages
Location: Black Diamond, WA
Elevation (Top of Well Casing): 603.74'
Surface Elevation (ft): 601.59'
Water Level Elevation: 535.86'
Date Start/Finish: 9/18/06,9/19/06
Drilling/Equipment: Aquatech Well Drilling and Pump/Air Rotary
Hole Diameter (in): 10" to 18'/6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
85		Natural backfill 73.9 to 100 feet bgs				At 79.5 feet: Wet, gray, silty fine to coarse SAND with gravel. Becomes wet, gray, SILT, few sand and gravel at 80 to 85 feet.
						Driller notes turned brownish gray and into sand and gravel again at 85 feet (staying open, "tight") (till-like).
						$Qpog_{1c}$ - Pre-Olympia Glacial Depsoits, Coarse-Grained
						At 85 feet: Wet, brownish gray, GRAVEL with fine to coarse sand, little silt (angular to subangular gravels) (gravels mostly green and orange, oxidized outer coating). (Silty discharge - more silt than in samples 85 to 100 feet)
90						At 90 feet: Wet, brownish gray, GRAVEL with fine to coarse sand, little silt (silty discharge water). Angular gravels, abundant cuttings.
95						At 95 feet: As above, except brown.
						Formation has more silt than is seen in samples. Very murky discharge. Driller notes "tight" and hole staying open. Drilled open hole 80 to 100 feet.
100						At 100 feet: As above, slightly more orangish brown.
						Boring terminated at 100 feet on 9/19/06
105						
110						
115						

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-6	1 of 5

Project Name: The Villages
Elevation (Top of Well Casing): 591.69'
Water Level Elevation: 491.25'
Drilling/Equipment: Aquatech Well Drilling and Pump/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 589.71'
Date Start/Finish: 9/19/06 9/20/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road Fill/Topsoil/Forest Duff**
						Vashon Lodgement Till
5		10-inch-diameter surface seal ground surface to 18 feet bgs (Perma Plug 3/8-inch medium bentonite chips)				At 5 feet: Slightly moist, brown, silty fine SAND, few medium to coarse sand, trace gravel; trace organics/roots. (Coarse fraction not sampled, cannot airlift, more gravel in formation than in sample)
10						Driller adding small amount of water to keep dust down and to help lift cuttings. At 10 feet: Moist, grayish brown, silty fine to coarse SAND, little gravel (subangular/subrounded).
						Driller adding water.
15						At 15 feet: As above, except very moist.
						Driller adding water at 20 feet.
20						Grayish brown, silty GRAVEL with fine to coarse sand; abundant cuttings.
						Driller notes drilling like cement - very "hard" drilling.
25		6-inch I.D. steel blank casing from approximately 2 feet above ground surface to 167.8 feet				At 25 feet: As above, slightly more gray, equal parts sand and gravel.
						Driller notes becoming "looser" and slight color change at 30 feet.
30						**Qva - Vashon Advance Outwash** At 30 feet: Brown, silty GRAVEL with fine to coarse sand, more rounded gravels than above; abundant cuttings.
						Driller notes more clay in sample at 35 feet. Minor clay seams/layers. At 35 feet: As above with silt/clay nodules/"blobs".
35						More gray at 38 feet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/06

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-6	2 of 5

Project Name: The Villages
Location: Black Diamond, WA
Elevation (Top of Well Casing): 591.69'
Surface Elevation (ft): 589.71'
Water Level Elevation: 491.25'
Date Start/Finish: 9/19/06,9/20/06
Drilling/Equipment: Aquatech Well Drilling and Pump/Air Rotary
Hole Diameter (in): 10" to 18'/6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 40 feet: Brownish gray, silty fine to coarse SAND, little gravel.
						Driller notes thin (~1 foot) clay layer at ~45 feet.
45						**$Qpog_t$ - Pre-Olympia Glacial Till** At 45 feet: Gray, fine to coarse sandy SILT, little gravel, effervesces with HCL. Dark gray/black film in discharge water.
50		6" I.D. steel blank casing from approximately 2 feet above ground surface to 167.8 feet				At 50 feet: Gray, silty fine to coarse SAND with gravel (subangular to rounded gravels, predominantly volcanic), few silt/clay nodules with sand inside, effervesces with HCL.
55						At 55 feet: As above. HCL reaction from 45 feet to BOH, including $Qpog_t$ and $Qpog_c$
60						At 60 feet: Brownish gray, silty fine to coarse SAND, little gravel; abundant cuttings. **$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained** Becomes more brown at 61'.
65						At 65 feet: Brown, silty medium to coarse SAND with gravel, few fine sand, effervesces with HCL. Driller notes formation "loose" - sand and gravel at 66 feet, decrease in silt but formation staying open.
70						At 70 feet: Grayish brown, fine to coarse SAND with gravel, few silt (mostly medium to coarse sand), effervesces with HCL.
75						At 75 feet: As above, slightly more gray, more gravel, coal flecks in sample; mostly volcanic gravels, effervesces with HCL. Driller notes becoming more coarse last 6 to 7 feet of run ~73 to 78 feet. No free draining water.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.	Geologic & Monitoring Well Construction Log		
	Project Number	Well Number	Sheet
	KG060601A	MW-6	3 of 5

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	591.69'	Surface Elevation (ft)	589.71'
Water Level Elevation	491.25'	Date Start/Finish	9/19/06,9/20/06
Drilling/Equipment	Aquatech Well Drilling and Pump/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
85						At 80 feet: Brownish gray, medium to coarse SAND, little gravel, little silt, effervesces with HCL. Color change at 82 feet. Driller still adding water. At 85 feet: Brown, medium to coarse SAND with gravel, little silt, effervesces with HCL.
90		6" I.D. steel blank casing from approximately 2 feet above ground surface to 167.8 feet				Driller notes discharge "cleaned up" at 88 feet. Gravels become more oxidized starting at 85 feet. At 90 feet: As above, few silt.
95	▽					At 95 feet: Brown, medium to coarse SAND, few gravel, few silt, effervesces with HCL.
100						At 100 feet: Brown, GRAVEL with coarse sand, trace silt, effervesces with HCL. Increased silt in discharge ~101 to 103 feet - silty lens.
105						At 105 feet: Wet, brown, medium to coarse SAND, little gravel, few silt, effervesces with HCL. Driller notes feels like water at 105 feet. Clean, wet sand and gravel below 103 feet.
110						At 110 feet: As above (rounded gravels).
115						At 115 feet: Wet, brown, GRAVEL with medium to coarse sand, few silt, effervesces with HCL. Formation producing more water.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

▽ Water Level (12/14/06)

▼ Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-6	4 of 5

Project Name: The Villages
Elevation (Top of Well Casing): 591.69'
Water Level Elevation: 491.25'
Drilling/Equipment: Aquatech Well Drilling and Pump/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 589.71'
Date Start/Finish: 9/19/06,9/20/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 120 feet: Wet, brown, medium to coarse SAND with gravel, few silt (subangular to rounded gravel), effervesces with HCL.
						Driller notes silty lens at ~121 to 123 feet.
125		6" I.D. steel blank casing from approximately 2 feet above ground surface to 167.8 feet				At 125 feet: As above.
130						At 130 feet: As above.
135						At 135 feet: As above.
140						At 140 feet: As above.
145						At 145 feet: As above.
150						At 150 feet: As above.
						Silty lens ~152 feet, driller notes large gravels and cobbles.
155						At 155 feet: As above.
						Driller notes formation is producing ~75 gpm.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-6	5 of 5

Project Name: The Villages
Location: Black Diamond, WA
Elevation (Top of Well Casing): 591.69'
Surface Elevation (ft): 589.71'
Water Level Elevation: 491.25'
Date Start/Finish: 9/19/06,9/20/06
Drilling/Equipment: Aquatech Well Drilling and Pump/Air Rotary
Hole Diameter (in): 10" to 18'/6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	WELL CONSTRUCTION	Blows/6"	Graphic Symbol	DESCRIPTION
				At 160 feet: As above, wet, brown, medium to coarse SAND with gravel, few silt, effervesces with HCL.
165	8-inch long K-packer 3-foot riser pipe (5-inch I.D. steel casing) 164.8 to 167.8 feet Bottom of steel casing at 167.8 feet			At 165 feet: As above.
170	5-inch I.D. stainless steel wire-wrapped screen 0.015-inch slot width 167.8 to 177.8 feet bgs			At 170 feet: As above. Brownish gray 173 to 175 feet - no change in formation.
175				At 175 feet: As above. Driller notes gravels getting larger. At 180 feet: As above - no change.
180	Natural slough 177.8 to 180 feet bgs			88 feet to BOH: "Loose", wet, brown, SAND and GRAVEL, few silt, purple, green, and red gravels throughout, very minor hue changes in overall formation), effervesces with HCL. Boring terminated at 180 feet on 9/20/06 Screen installation and development completed on 9/21/06.
185				
190				
195				

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-7	1 of 4

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	553.36'	Surface Elevation (ft)	550.70'
Water Level Elevation	492.56'	Date Start/Finish	9/25/06 9/26/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	WELL CONSTRUCTION	DESCRIPTION
	Aboveground monument with bollards	**Surface Material: Road Fill/Topsoil** Damp, brown, fine to medium SAND, with gravel, trace silt. **Qvr - Vashon Recession Outwash**
5	10-inch-diameter bentonite chip surface seal from 0 to 18 feet	At 5 feet: Damp, brown, fine to medium SAND, with gravel, trace silt.
10		At 10 feet: As above. Driller adds small amount of water to cut dust.
15		At 15 feet: Damp, gray-brown, fine to medium SAND, with few gravel, trace silt. At 16 feet: Small amount of moisture.
20		At 20 feet: As above with gravel.
25	6-inch I.D. steel casing from approximately 2 feet ags to 119.6 feet	At 25 feet: As above. **Qvt - Vashon Lodgement Till** At 27 feet: Color change to gray; damp to moist, gray, silty fine SAND, with few gravel.
30		At 30 feet: As above. Pull casing back to 25 feet and wait approximately 5 minutes for moisture. Small amount of moisture above till. **$Qpog_t$ - Pre-Olympia Glacial Till** At 32 feet: Drilling slows.
35		At 35 feet: Moist, gray, silty fine SAND, with gravel. Effervesces with HCl.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

Water Level (12/14/06)

Water Level at time of drilling (ATD)

Logged by: JHS

Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-7	2 of 4

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	553.36'	Surface Elevation (ft)	550.70'
Water Level Elevation	492.56'	Date Start/Finish	9/25/06 9/26/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 40 feet: As above, abundant cuttings. Note: no free water after casing weld.
						$Opog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained
45						At 45 feet: Moist, grayish brown, silty fine to coarse SAND, with gravel.
						At 47 feet: Driller notes losing air into formation.
50		6-inch I.D. steel casing from approximately 2 feet ags to 119.6 feet				At 50 feet: As above.
55						At 55 feet: As above.
	▽					No free water after casing weld.
60						At 60 feet: Moist, gray-brown, silty GRAVEL, with few sand.
65						At 65 feet: As above, moist to wet.
						Driller notes cobble/boulder at 68 feet (granite clasts in sample return).
70	▼					At 70 feet: As above.
						At 71 feet: Driller producing turbid water, gray-brown in color.
75						At 75 feet: As above.
						*WL with BOH approximately 77 feet and BOC approximately 76 feet: 59.6 feet bgs after sitting overnight.
						Making less water than at 71 feet bgs.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

▽ Water Level (12/14/06)

▼ Water Level at time of drilling (ATD)

Logged by: JHS

Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-7	3 of 4

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	553.36'	Surface Elevation (ft)	550.70'
Water Level Elevation	492.56'	Date Start/Finish	9/25/06 9/26/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 80 feet: Wet, brown, medium to coarse SAND, with gravel, few silt. Gravels are mostly fine in size.
						Drill speed slows, increase in gravel content.
85						At 85 feet: Wet, brown, GRAVEL with sand, silt. Gravels are mostly broken.
90		6-inch I.D. steel casing from approximately 2 feet ags to 119.6 feet				At 90 feet: As above, few silt. Gravels are mostly fine to medium in size.
						At 92 feet: Increase in free water.
95						At 95 feet: Wet, brown to gray, fine to coarse SAND, with gravel, few silt. Silt content under-represented in sample due to free water.
						Driller estimates airlifting approximately 15 to 20 gpm with drillstem at 97 feet bgs.
100						At 100 feet: Wet, gray to brown (brown discharge water), fine to coarse SAND, with gravel (washed by discharge).
105						At 105 feet: As above.
110						At 110 feet: As above.
115						At 115 feet: As above.
		K-packer from 117.7 to 118.2 feet 5-inch I.D. steel casing from 118.2 to 120.7 feet				Driller notes flow rate increased with depth; discharge water is brown in color.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: JHS

Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-7	4 of 4

Project Name: The Villages
Location: Black Diamond, WA
Elevation (Top of Well Casing): 553.36'
Surface Elevation (ft): 550.70'
Water Level Elevation: 492.56'
Date Start/Finish: 9/25/06 9/26/06
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hole Diameter (in): 10" to 18'/6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
125		5-inch I.D. stainless steel screen, 0.015-inch slot width, with welded end plate from 120.7 to 125.7 feet bgs 8/12 Colorado silica sand (Oglebay Norton)				At 120 feet: Wet, gray to brown, fine SAND, with gravel (washed). At 125 feet: As above.
130						**$Qpon_{ff}$ - Pre-Olympia Non-Glacial Deposits, Fine-Grained** At 127 feet: Discharge water changes from brown to gray in color. Occasional intact clasts of gray silt/clay. Driller adding water. At 130 feet: Gray, SILT/CLAY, with trace gravel.
135		Bentonite chips from 127.7 to 140.7 feet				At 135 feet: As above. Minor amount free water at casing weld. Driller notes leakage past casing from upper zone.
140		Native material from 140.7 to 150 feet				At 140 feet: Gray, SILT/CLAY.
145						At 145 feet: As above.
150						At 150 feet: As above. Boring terminated at 150 feet on 9/26/06 After 30 minutes of well development using air lift well produces 65 to 70+ gpm with no visible turbidity.
155						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: JHS
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-8	1 of 1

Project Name: The Villages
Elevation (Top of Well Casing): 553.35'
Water Level Elevation: 535.20'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 550.72'
Date Start/Finish: 9/26/06 9/27/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road Fill/Topsoil** Damp, brown, fine to medium SAND, with gravel, trace silt. **Qvr - Vashon Recessional Outwash**
5		10-inch-diameter bentonite chip surface seal from 0 to 18 feet				At 5 feet: Damp, brown, medium to coarse SAND, with gravel, few cobbles.
10		6-inch I.D. steel casing from approximately 2.5 to 20.9 feet				At 10 feet: Damp, brown to gray-brown, GRAVEL, with sand. Rough drilling.
15	▽					At 15 feet: Damp, gray-brown, fine to medium SAND, with gravel.
		K-packer from 18.8 to 19.3 feet				Dry after sitting overnight, with BOH at 18 feet.
20		5-inch I.D. steel casing from 19.3 to 21.8 feet				At 20 feet: Damp, brown, fine to medium SAND, with few gravel.
25		5-inch I.D. stainless steel screen, 0.010-inch slot width, with welded end plate from 21.8 to 26.8 feet bgs				At 25 feet: As above.
		8/12 Colorado silica sand (Oglebay Norton) from 26.8 to 30 feet.				**Qvt - Vashon Lodgement Till** At 27 feet: Damp, gray-brown, silty fine SAND, with few gravel. At 30 feet: As above.
30						Boring terminated at 30 feet on 9/27/06
35						

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: JHS
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-9	1 of 2

Project Name: The Villages
Elevation (Top of Well Casing): 555.04'
Water Level Elevation: 550.17'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 552.41'
Date Start/Finish: 9/27/06,9/27/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road Fill/Topsoil** Damp, brown, fine to medium SAND, with gravel, cobbles. **Qvr - Vashon Recessional Outwash**
5		10-inch-diameter bentonite chip surface seal from 0 to 18 feet				At 5 feet: Damp, brown, fine to medium SAND, with gravel, cobbles.
10		6-inch I.D. steel casing				At 10 feet: As above.
15						At 15 feet: As above, with few gravel.
		K-packer from 18 to 18.5 feet 5-inch I.D. steel casing from 18.5 to 19 feet				No water after casing weld. Driller added small amount of water to lift 20' sample.
20		5-inch I.D. stainless steel screen, 0.010-inch slot width, with welded end plate from 19 to 24 feet bgs				At 20 feet: (wet), brown, GRAVEL, with sand, silt.
25		8/12 Colorado silica sand (Oglebay Norton) from 24 to 26 feet				At 25 feet: Damp, brown, fine to medium SAND, with gravel. **Qvt - Vashon Lodgement Till**
30		Bentonite chips from 26 to 59 feet bgs				At 30 feet: Damp, brown, fine to fine-medium SAND, with gravel.
35						At 35 feet: Damp, brown, fine SAND, with few gravel. No free water at casing weld. **Qpog$_t$ - Pre-Olympia Glacial Till** Driller notes change at 38 feet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: JHS
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-9	2 of 2

Project Name: The Villages
Location: Black Diamond, WA
Elevation (Top of Well Casing): 555.04'
Surface Elevation (ft): 552.41'
Water Level Elevation: 550.17'
Date Start/Finish: 9/27/06 9/27/06
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hole Diameter (in): 10" to 18'/6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
45		Bentonite chips from 26 to 59 feet bgs				At 40 feet: Moist, gray-brown, silty medium to coarse SAND, with trace gravel.
						At 45 feet: As above, gray.
50						At 50 feet: Moist, gray, silty fine GRAVEL, with medium to coarse sand.
55						At 55 feet: As above.
						Driller notes losing air but sticky with BOC at 56 feet, BOH at 59 feet; sit for 20 minutes, still dry.
60						Boring terminated at 59 feet on 9/27/06
65						
70						
75						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: JHS
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-10	1 of 6

Project Name: The Villages
Elevation (Top of Well Casing): 581.90'
Water Level Elevation: 480.14'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 579.16'
Date Start/Finish: 9/28/06,10/2/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road Fill**
						Qvt - Vashon Lodgement Till
5						At 5 feet: Slightly moist, brown, fine to coarse SAND, few gravel, little silt, minor oxidation around gravels (rounded).
10						At 10 feet: Slightly moist, brown, GRAVEL, few fine to coarse sand, few silt (rounded to subrounded).
		10" diameter bentonite chip surface seal from 0 to 18 feet.				
15						At 15 feet: Slightly moist, brown/gray, GRAVEL, few fine to coarse sand, trace silt (rounded to subrounded), abundant cuttings.
						Driller notes 5- to 15-foot section is cobbly and "loose".
20						At 20 feet: Slightly moist, grayish brown, silty fine SAND, little gravel (subangular).
		6-inch I.D. steel blank casing from approximately 2.5 feet ags to 166.8 feet bgs				
						Driller adding very little water to keep dust down.
25						At 25 feet: As above.
30						At 30 feet: As above except slightly more gravel.
35						At 35 feet: As above except slightly more gray.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-10	2 of 6

Project Name: The Villages
Elevation (Top of Well Casing): 581.90'
Water Level Elevation: 480.14'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 579.16'
Date Start/Finish: 9/28/06 10/2/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 40 feet: Slightly moist, brownish gray, silty fine SAND, little gravel, few medium to coarse sand; minor oxidation around some gravels (lighter in color than above and below).
45						At 45 feet: As above.
50		6-inch I.D. steel blank casing from approximately 2.5 feet ags to 166.8 feet bgs				**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained** Increased moisture at ~50 feet. At 50 feet: Moist, brownish gray, silty medium to coarse SAND with gravel, clay present, abundant orange and red sand and gravels, effervesces with HCL.
55						At 55 feet: As above.
60						At 60 feet: As above with minor zones of oxidation around gravels, associated with increased moisture.
65						At 65 feet: As above. Abundant volcanic gravels 50 to 80 feet.
70						At 70 feet: Moist, brownish gray, silty coarse SAND with gravel, few medium sand, effervesces with HCL.
75						At 75 feet: Moist, brownish gray, silty medium to coarse SAND with gravel, effervesces with HCL. Driller notes many cobbles 50 to 80 feet, formation caving somewhat.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-10	3 of 6

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	581.90'	Surface Elevation (ft)	579.16'
Water Level Elevation	480.14'	Date Start/Finish	9/28/06,10/2/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	SPT	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 80 feet: Very moist, brownish gray, silty GRAVEL with medium to coarse sand (platey/flattened gravels), effervesces with HCL.
						Note with casing at 78 feet driller added a lot of water, most went into formation.
85						At 85 feet: Moist, brownish gray, medium to coarse SAND with gravel, few silt; abundant cuttings, minor oxidation around some gravels, effervesces with HCL.
						Losing air pressure into formation at 85 feet - more caving, cleaner material.
90		6-inch steel blank casing from approximately 2.5 feet ags to 166.8 feet bgs				At 90 feet: Dry, gray, GRAVEL, few medium to coarse sand, trace fine sand and silt (many volcanics and granites), effervesces with HCL.
						Driller adding little water to keep dust down.
95						At 95 feet: Moist, brownish gray, medium to coarse SAND with gravel, trace silt, effervesces with HCL.
	▽					
100	▼					At 100 feet: Moist, brownish gray, GRAVEL with medium to coarse sand, trace silt, effervesces with HCL.
						More intact, rounded gravels at 100 feet. Driller notes formation is siltier, getting air pressure back at 102 feet. Increased moisture.
105						At 105 feet: As above except very moist and little silt.
110						At 110 feet: Very moist, brownish gray, GRAVEL with medium to coarse SAND, few silt; abundant cuttings, effervesces with HCL.
115						At 115 feet: As above except fewer cuttings, minor oxidation around some gravels, effervesces with HCL. With BOC/BOH at 115.5 feet, driller estimates formation producing ~1 to 2 gpm. WL at 102.3' bgs on 9/29/06 with BOC/BOH at 115.5', after sitting overnight.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-10	4 of 6

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	581.90'	Surface Elevation (ft)	579.16'
Water Level Elevation	480.14'	Date Start/Finish	9/28/06 10/2/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 120 feet: Wet, brown, GRAVEL with coarse sand, few fine to medium sand, few silt.
						Rounded to subrounded gravels, more metamorphic clasts.
125						At 125 feet: As above except little silt.
130		6-inch steel blank casing from approximately 2.5 feet ags to 166.8 feet bgs				At 130 feet: Wet, brown, medium to coarse SAND with gravel, little silt.
						Driller notes producing more water at 133 feet ~40 to 50 gpm.
135						At 135 feet: Wet, brown, medium to coarse SAND, little gravel, trace silt.
140						Wet, brown, GRAVEL, little medium to coarse sand, trace silt (rounded gravels).
145						At 145 feet: Wet, brown, medium to coarse SAND, little gravel, trace silt.
						140 to 160 feet run - fairly clean discharge water.
150						At 150 feet: As above.
						Driller notes boulders 145 to 155 feet.
155						At 155 feet: As above with many orange clasts (gravels), weathering rind around some gravels, many metamorphic gravels plus granites and some volcanics.
						Driller notes siltier at 158 feet. Dirty discharge water.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-10	5 of 6

Project Name: The Villages
Location: Black Diamond, WA
Elevation (Top of Well Casing): 581.90'
Surface Elevation (ft): 579.16'
Water Level Elevation: 480.14'
Date Start/Finish: 9/28/06,10/2/06
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hole Diameter (in): 10" to 18'/6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	WELL CONSTRUCTION	DESCRIPTION
		At 160 feet: Wet, brown, medium to coarse SAND with gravel, few silt (not in sample but in discharge water).
165		At 165 feet: As above.
	K-packer 2-foot riser pipe 5-inch I.D. steel casing 5-inch I.D. stainless steel wire-wrapped screen 0.025-inch slot width 168 to 173 feet bgs	
170		At 170 feet: As above.
	Pea gravel from 173 to 177 feet	
		$Qpon_{lf}$ - Pre-Olympia Non-Glacial Deposits, Fine-Grained
175		At 175 feet: Wet, gray, CLAY/SILT, trace fine to coarse sand, trace gravel.
180		At 180 feet: Wet, gray, fine to medium sandy SILT/CLAY.
		Driller notes sand layer at 183 feet producing water.
185	Pure Gold medium bentonite chips 177 to 220 feet bgs	At 185 feet: Wet, gray, fine to coarse SAND, little clay nodules, trace gravel.
		Driller notes ~1 to 2 foot layers of clay and sand similar to MW-7.
190		At 190 feet: Wet, gray, fine to medium sandy SILT/CLAY; black organic silt floating on sample and discharge water.
195		At 195 feet: Wet, gray, CLAY/SILT, trace sand and gravel.
		Driller notes sand layer at 196 feet producing water.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-10	6 of 6

Project Name: The Villages
Elevation (Top of Well Casing): 581.90'
Water Level Elevation: 480.14'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 579.16'
Date Start/Finish: 9/28/06 10/2/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 200 feet: Wet, gray, CLAY with fine to coarse sand, trace gravel; possible organics. Driller notes all clay at 201 feet.
205		Hole plug medium bentonite chips 177 to 220 feet bgs				At 205 feet: Wet, gray, CLAY, little fine to coarse sand, trace gravel. Black film on discharge water from 200' to 220', possible organics.
210						At 210 feet: Wet, gray, CLAY, trace fine to coarse sand.
215						At 215 feet: As above except few fine to coarse sand.
						At 220 feet: As above except trace fine to coarse sand.
220						Boring terminated at 220 feet on 10/2/06
225						
230						
235						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-11	1 of 8

Project Name: The Villages
Elevation (Top of Well Casing): 532.95'
Water Level Elevation: 462.26'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 530.61'
Date Start/Finish: 10/2/06,10/4/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road Fill**
						Qvr - Vashon Recessional Outwash
						Driller added water to keep dust down.
5						At 5 feet: Very moist, brown, GRAVEL with medium to coarser sand, few silt; abundant cuttings, rounded gravels.
10						At 10 feet: Moist, brown, medium to coarse SAND, little gravel, few silt; oxidation around some gravels.
		10" diameter bentonite chip surface seal from 0 to 18 feet				**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
						Driller notes increased moisture in formation.
15						At 15 feet: Moist, brown, GRAVEL, little medium to coarse sand, little silt; rounded gravels.
20						At 20 feet: As above, oxidation around some gravels.
		6-inch I.D. steel blank casing from approximately 2.5 feet ags to 298.46 feet bgs				
25						At 25 feet: Moist, brown, medium to coarse SAND, little gravel, little silt.
						Increased moisture at ~30 feet.
30						At 30 feet: Very moist, brown, medium to coarse SAND with gravel, little silt, abundant cuttings.
						Driller notes large cobbles and boulders.
35						At 35 feet: Moist, brown, GRAVEL, little fine to coarse sand, little silt; abundant cuttings.
						Driller notes formation is "loose" and caving.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-11	2 of 8

Project Name: The Villages
Elevation (Top of Well Casing): 532.95'
Water Level Elevation: 462.26'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 530.61'
Date Start/Finish: 10/2/06,10/4/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
45						At 40 feet: Very moist, grayish brown, medium to coarse SAND with gravel, few silt. Driller notes formation is fairly "loose" - large cobbles and boulders. At 45 feet: Very moist, grayish brown, GRAVEL, little medium to coarse sand, few silt.
50		6-inch steel blank casing from approximately 2.5 feet ags to 298.46 feet bgs				Driller notes possibly "till" - increase in silt (oxidation) at 49 feet. At 50 feet: Moist, brown, silty medium to coarse SAND, little gravel, increased oxidation around gravels (rounded to subangular gravels) (more fines, fewer coarse) (sticks together in clumps).
55	▼					At 55 feet: Moist, brown, silty GRAVEL (rounded to subangular), little fine to coarse sand; oxidation around many gravels (numerous granitic gravels), possible trace organics (charcoal). Small amount of water seeped in during welding with BOH/BOC at 56 feet. Water level at 55.95' bgs on 10/4/06 after sitting overnight with BOC/BOH at 116 feet.
60						At 60 feet: Very moist, brown, as above (no evidence of organics). Driller notes too "clayey" to be till.
65						At 65 feet: Very moist, brown, silty fine to coarse SAND with gravel; oxidized.
70	▽					At 70 feet: Very moist, brown, silty GRAVEL, little coarse sand; oxidized.
75						Free water in discharge at 77 feet, rose to 54.1 feet after ~10 minutes; driller notes producing ~12 gpm - very orange/oxidized color.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
▽ Water Level (12/14/06)
▼ Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-11	3 of 8

Project Name: The Villages
Elevation (Top of Well Casing): 532.95'
Water Level Elevation: 462.26'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 530.61'
Date Start/Finish: 10/2/06,10/4/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 80 feet: Wet, brown, medium to coarse SAND with gravel, little silt; oxidized, trace clay nodules.
						$Qpon_{1c}$ - Pre-Olympia Non-Glacial Deposits, Coarse-Grained
85						At 85 feet: Wet, gray, fine to coarse SAND, trace gravel, trace wood, little silt.
90		6-inch steel blank casing from approximately 2.5 feet ags to 298.46 feet bgs				At 90 feet: As above except few gravel, few silt.
95						At 95 feet: Wet, gray, fine to medium SAND, trace coarse sand, trace gravel, trace wood, few silt. With BOH at 96 feet, water level rose to 59.45 feet and rising after ~4.5 hours. Wood at 96 feet. Conventional radiocarbon age of >47,500 BP
100						At 100 feet: As above.
105						At 105 feet: As above.
						$Qpon_{1f}$ - Pre-Olympia Non-Glacial Deposits, Fine-Grained
110						At 110 feet: Gray, SILT/CLAY, trace fine to medium sand. Driller added small amount of water to lift cuttings.
115	▼					At 115 feet: Wet, gray, silty fine to medium SAND, trace silt/clay nodules, trace wood. Water level at 55.95' bgs on 10/4/06 after sitting overnight with BOH/BOC at 116'.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-11	4 of 8

Project Name: The Villages
Elevation (Top of Well Casing): 532.95'
Water Level Elevation: 462.26'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 530.61'
Date Start/Finish: 10/2/06,10/4/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 120 feet: Wet, gray, silty fine SAND, trace silt/clay nodules; trace organics (wood flecks and black film on discharge water).
125						At 125 feet: Wet, gray, silty fine SAND, trace medium to coarse sand, trace organics.
130		6-inch steel blank casing from approximately 2.5 feet ags to 298.46 feet bgs				At 130 feet: As above.
135						At 135 feet: As above except few organics (wood).
						Driller notes a few thin lenses of clay 120 to 135 feet but predominantly fine sand with water.
140						At 140 feet: As above.
145						At 145 feet: As above except trace organics.
150						At 150 feet: Gray, SILT/CLAY, little fine sand, trace organics.
						Driller adding water to lift cuttings.
155						At 155 feet: As above with trace medium to coarse sand, few gravel.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-11	5 of 8

Project Name: The Villages
Elevation (Top of Well Casing): 532.95'
Water Level Elevation: 462.26'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 530.61'
Date Start/Finish: 10/2/06,10/4/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 160 feet: Gray, SILT/CLAY, few fine sand, trace organics.
						Driller adding water to lift cuttings.
165						At 165 feet: As above.
170		6-inch steel blank casing from approximately 2.5 feet ags to 298.46 feet bgs				At 170 feet: Gray, silty fine SAND, trace medium sand; trace organics.
175						At 175 feet: As above.
						Driller notes gravel with no free water at 176 feet.
180						At 180 feet: Gray, SILT/CLAY, trace sand and gravel; trace organics.
						Driller adding water to lift cuttings.
185						At 185 feet: As above except few sand and gravel.
190						At 190 feet: Gray, SILT/CLAY, trace sand and gravel; trace organics.
195						At 195 feet: As above.
						Driller notes formation is fairly hard.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-11	6 of 8

Project Name: The Villages
Elevation (Top of Well Casing): 532.95'
Water Level Elevation: 462.26'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 530.61'
Date Start/Finish: 10/2/06 10/4/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 200 feet: Gray, SILT/CLAY, trace sand and gravel (as dropstones); trace organics.
						Driller adding water to lift cuttings.
205						At 205 feet: Gray, SILT/CLAY, few gravel, few sand.
210		6-inch steel blank casing from approximately 2.5 feet ags to 298.46 feet bgs				At 210 feet: Gray, CLAY, few fine to medium sand, trace gravel.
215						At 215 feet: As above.
						Driller notes fine to medium SAND, trace coarse sand with gravel, few silt; few wood at 216 feet, and free water.
220						At 220 feet: Wet, gray, fine to medium SAND, few silt, trace large wood pieces.
225						At 225 feet: As above.
230						At 230 feet: As above.
235						At 235 feet: Wet, gray, fine SAND, few silt; trace wood, trace silt nodules.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-11	7 of 8

Project Name: The Villages
Elevation (Top of Well Casing): 532.95'
Water Level Elevation: 462.26'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 530.61'
Date Start/Finish: 10/2/06,10/4/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 240 feet: Wet, gray, fine SAND with silt/clay (nodules), trace coarse sand; trace organics.
245						At 245 feet: Wet, gray, fine SAND, few silt; trace organics, trace gravel.
250		6-inch steel blank casing from approximately 2.5 feet ags to 298.46 feet bgs				At 250 feet: Wet, gray, fine SAND with silt/clay (nodules); few organics (wood). Increased gravel at ~252 feet.
						Th - Upper Tertiary Hammer Bluff Formation
255						At 255 feet: Gray, SILT/CLAY, few fine to coarse sand, few gravel. Driller adding water to lift cuttings.
260						At 260 feet: Gray, SILT/CLAY, trace sand and gravel (hard clay nodules are laminated).
265						At 265 feet: As above.
270						At 270 feet: As above.
275						At 275 feet: As above - laminated hard silt/clay nodules.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-11	8 of 8

Project Name: The Villages
Location: Black Diamond, WA
Elevation (Top of Well Casing): 532.95'
Surface Elevation (ft): 530.61'
Water Level Elevation: 462.26'
Date Start/Finish: 10/2/06,10/4/06
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hole Diameter (in): 10" to 18'/6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	WELL CONSTRUCTION	DESCRIPTION
		At 280 feet: Gray, SILT/CLAY, trace sand and gravel.
		Driller adding water to lift cuttings.
285		At 285 feet: As above.
290	6-inch steel blank casing from approximately 2.5 feet ags to 298.46 feet bgs	At 290 feet: As above - laminated silt/clay nodules.
295	8-inch long K-packer 2-foot - 5-inch I.D. blank steel riser pipe	At 295 feet: As above - laminated.
300	5-inch I.D. wire-wrapped stainless steel screen 0.010-inch slot width from 298.5 to 303.5 feet bgs Driller notes screen may have torn during installation	At 300 feet: Wet, grayish brown, silty SAND with gravel, little silt/clay nodules; trace organics (formation is probably cleaner than sample). Driller estimates airlifting ~5 gpm before screen installed and ~7 to 10 gpm during well development.
	Colorado silica sand ~303.5 to 305.5 feet	**Tp - Lower Tertiary - Puget Group**
305	Hole plug medium bentonite chips 305.5 to 308.5 feet bgs	At 305 feet: Wet, grayish brown, silty (or ashey) fine to medium SAND (coal, pumice present) (weathered sandstone).
	Natural slough	
310		Wet, light gray to white, medium SAND (pumice, coal, plagioclase and quartz crystals), little ash/silt.
315		At 315 feet: Wet, light gray to white, silty (ashey), fine to medium SAND.
		Boring terminated at 318 feet on 10/4/06

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-12	1 of 2

Project Name: The Villages
Elevation (Top of Well Casing): 532.94'
Water Level Elevation: 480.63'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 530.52'
Date Start/Finish: 10/5/06,10/5/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road Fill**
						Qvr - Vashon Recessional Outwash
5						At 5 feet: Dry, brown, fine to coarse SAND, little silt, few gravel (rounded); abundant cuttings.
						Driller added small amount of water to keep dust down.
10						At 10 feet: Moist, brown, GRAVEL with fine to coarse sand, little silt (rounded gravels).
		10-inch-diameter bentonite chip surface seal from 0 to 18 feet				Large cobbles.
						$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained
15						Very moist, grayish brown, fine to coarse SAND with gravel, little silt (rounded gravels).
						Very moist to wet at ~17 feet.
20						At 20 feet: Moist, grayish brown, GRAVEL (rounded), few fine to coarse sand, little silt.
25		6-inch I.D. steel blank casing from approximately 2.5 feet ags to 71.9 feet bgs				At 25 feet: Moist, grayish brown, fine to coarse SAND (mostly medium), little silt, few gravel (subrounded).
						Increased moisture just before 30 feet, visible wetness but not free draining, increase in silt.
30						At 30 feet: Very moist, grayish brown, coarse SAND with gravel, little silt, few fine to medium sand.
35						Very moist, as above with few oxidized granitic gravels.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-12	2 of 2

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	532.94'	Surface Elevation (ft)	530.52'
Water Level Elevation	480.63'	Date Start/Finish	10/5/06,10/5/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
45						At 40 feet: Moist, brownish gray, silty fine to medium SAND with gravel; abundant cuttings (rounded gravel). Clean, dry gravel above 45 feet?; large boulder, air drying out cuttings. At 45 feet: Moist, brownish gray, silty GRAVEl with fine to coarse sand (subrounded gravel).
50	▽	6-inch steel blank casing from approximately 2.5 feet ags to 71.9 feet bgs				At 50 feet: Slightly moist, brownish gray, silty fine SAND, little medium to coarse sand, few gravel (subangular to subrounded). Driller notes formation staying open 49 to 54 feet.
55						At 55 feet: Moist, brown, medium SAND, little gravel, few fine and coarse sand, few silt. Large boulders.
60						At 60 feet: Slightly moist, brownish gray, fine to coarse SAND, little gravel, little silt.
65						Moist, brownish gray, silty medium to coarse SAND with gravel (oxidized gravels); trace light gray and tan clay nodules.
70		K-packer 5-inch I.D. steel casing 71.75 to 73.75 feet bgs				At 70 feet: Very moist, brown, silty GRAVEL to gravelly SILT, little medium to coarse sand; clay present?, some oxidation.
75	▼	5-inch I.D. stainless steel wire-wrapped screen 0.020-inch slot width 73.75 to 78.75 feet bgs				At 75 feet: Very moist, brown, silty coarse SAND, little gravel. Producing water at 77 feet.
						Boring terminated at 79 feet on 10/5/06

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-13	1 of 2

Project Name: The Villages
Elevation (Top of Well Casing): 532.88'
Water Level Elevation: 484.86'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 530.41'
Date Start/Finish: 10/6/06,10/6/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road Fill**
						Qvr - Vashon Recessional Outwash
5						At 5 feet: Dry, brown, fine to coarse (predominantly fine sand) SAND, few gravel, little silt (rounded to subrounded gravels).
						Driller notes increased moisture at 8 feet.
10						At 10 feet: Moist, grayish brown, GRAVEL with fine to coarse sand, little silt (rounded to subrounded gravels).
		10-inch-diameter bentonite chip surface seal from 0 to 18 feet bgs				**$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**
15						At 15 feet: Moist, grayish brown, fine to coarse SAND, little silt, few gravel (subrounded to rounded).
20						Moist, grayish brown, GRAVEL with medium to coarse sand, little silt.
		6-inch I.D. steel blank casing from approximately 2.5 feet ags to 39.5 feet bgs				
25						At 25 feet: Moist, grayish brown, medium to coarse SAND with gravel (subrounded), little silt. Large cobbles and boulders.
						Increased moisture between 25 and 30 feet and increase in silt? around gravels.
30						Very moist, GRAVEL with medium to coarse sand (predominantly coarse sand), little silt (rounded to subrounded gravels).
						Large cobbles and boulders.
35						At 35 feet: Very moist, as above, abundant cuttings.
		K-packer 2-foot 5-inch I.D. steel casing from 36.9 to 38.9 feet				Dried out between 35 to 40 feet.
						Formation staying open at 40 feet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-13	2 of 2

Project Name: The Villages
Elevation (Top of Well Casing): 532.88'
Water Level Elevation: 484.86'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 530.41'
Date Start/Finish: 10/6/06 10/6/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
45	▽	Two 5-foot lengths of 5-inch I.D. 0.010-inch slot width wire-wrapped stainless steel screen 38.9 to 48.9 feet				At 40 feet: Slightly moist, brownish gray, GRAVEL with medium to coarse sand, little silt; abundant cuttings. Formation not staying open. At 45 feet: Slightly, moist, brownish gray, medium to coarse SAND with gravel, little silt; possible organics.
50						At 50 feet: Dry, brown (minor oxidation), fine SAND with silt, little gravel, few medium to coarse sand. Formation staying open. Increased oxidation at 50 feet; abundant orange sand, mostly cuttings. Boring terminated at 51 feet on 10/6/06
55						
60						
65						
70						
75						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
▽ Water Level (12/14/06)
▼ Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-14	1 of 4

Project Name: The Villages
Elevation (Top of Well Casing): 644.54'
Water Level Elevation: 558.25'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 641.72'
Date Start/Finish: 10/31/06 11/1/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road Fill/Topsoil**
						$Qpog_{2c}$ - Older Pre-Olympia Glacial Deposits, Coarse-Grained
5		10-inch diameter bentonite chip surface seal from 0 to 18 feet				At 5 feet: Moist, brown, silty fine to medium SAND to sandy SILT, few gravel, few silt/clay nodules; few roots/organics, trace oxidation.
10		6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 106.1 feet				At 10 feet: Moist, orangish brown, silty fine to medium SAND, trace gravel, trace coarse sand, trace silt/clay nodules; trace organics, moderate oxidation.
15						At 15 feet: As above.
20						At 20 feet: Slightly moist, orange-brown, silty fine SAND; moderate oxidation.
25						At 25 feet: Moist, orange-brown, silty fine to medium SAND, trace gravel, trace silt/clay nodules; moderate oxidation.
30						At 30 feet: As above, except slightly more coarse sand and gravel.
35						At 35 feet: Slightly moist, orange-brown, silty fine SAND, trace gravel; moderate oxidation.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-14	2 of 4

Project Name: The Villages
Elevation (Top of Well Casing): 644.54'
Water Level Elevation: 558.25'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 641.72'
Date Start/Finish: 10/31/06 11/1/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 40 feet: Moist, orangish brown, silty fine SAND, trace dense clasts of fine to sandy SILT; moderate oxidation, clay present.
45						At 45 feet: As above.
50		6-inch steel blank casing from approximately 2.5 feet above ground surface to 106.1 feet				At 50 feet: As above.
55						At 55 feet: As above.
60						At 60 feet: Moist, orange-brown, silty fine SAND, few medium to coarse SAND; moderate oxidation, clay present.
65						At 65 feet: Moist, orange-brown (slightly more brown), silty fine SAND, few medium to coarse sand, clay present; moderate oxidation.
70						At 70 feet: As above with trace gravel.
75						At 75 feet: As above with few gravel. Cleaning clasts with water.
						Driller notes change at 77 feet.
						Driller notes more dense and gravelly at 77 feet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-14	3 of 4

Project Name: The Villages
Elevation (Top of Well Casing): 644.54'
Water Level Elevation: 558.25'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 641.72'
Date Start/Finish: 10/31/06 11/1/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	WELL CONSTRUCTION	DESCRIPTION
		At 80 feet: Moist, orange-brown, silty fine SAND, few medium to coarse sand, few gravel, trace silt/clay nodules, abundant cuttings; moderate oxidation.
85		At 85 feet: Moist, gray-brown, silty fine SAND, little gravel, few medium to coarse SAND (till?).
		Driller notes change at 87 feet, clay. Adding water to clean casing. Brown, SILT/CLAY.
90	6-inch steel blank casing from approximately 2.5 feet above ground surface to 106.1 feet	At 90 feet: Wet, brown, silty fine to coarse SAND with gravel, moderate oxidation, abundant cuttings, trace silt/clay nodules. (Washed abundant orange and gray gravels)
95		At 95 feet: Wet, brown, fine to coarse sandy SILT, little gravel, silt/clay nodules; moderate oxidation. With BOC at 96 feet, driller notes producing ~1 to 2 gpm water, probably began at 89 feet.
		No free water at 98 feet.
100		At 100 feet: Moist, light orange-brown, silty fine SAND, few medium to coarse sand and gravel; moderate oxidation. No free water.
		Driller notes more gravel and small boulders at 102 feet.
105	K-packer 8 inches long 2-foot riser, 5-inch I.D. steel blank casing from 103.5 to 105.5 feet 5-inch I.D. stainless steel wire-wrapped screen 0.010-inch slot width 105.5 to 110.5 feet	Increased moisture. Driller adding water. At 105 feet: Orange-brown, SILT/CLAY with few fine to coarse sand and gravel; minor oxidation.
		Driller notes from 108 to 110 feet formation producing 3 to 4 gpm.
110	1 foot silica sand Oglebay Norton 110.5 to 111.5 feet	**$Qpon_{2f}$ - Older Pre-Olympia Non-Glacial Deposits, Fine-Grained** At 110 feet: Wet, gray, SILT/CLAY, few fine to coarse sand and gravel.
		Sandstone boulder at ~114 feet, looks like bedrock at MW-11.
115	Hole plug and hydro plug 3/8-inch medium bentonite chips 111.5 to 155.5 feet	At 115 feet: Wet, gray, silty fine to coarse SAND with gravel (rounded); ~90 percent volcanic gravels. (Note sandstone boulder)
		Color change to olive-gray at ~119 feet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-14	4 of 4

Project Name: The Villages
Elevation (Top of Well Casing): 644.54'
Water Level Elevation: 558.25'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 641.72'
Date Start/Finish: 10/31/06 11/1/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 120 feet: Very moist to wet, olive-gray, CLAY/SILT with few fine to coarse sand and gravel; possible trace organics.
125						At 125 feet: Wet, as above except little gravel and sand. Driller notes "good clean clay" at 126 feet.
130						At 130 feet: Very moist, gray and brown, fine sandy SILT/CLAY laminated.
135		Hole plug and hydro plug 3/8-inch medium bentonite chips 111.5 to 155.5 feet				At 135 feet: Very moist to wet, olive/blue-gray, fine sandy SILT/CLAY with few medium to coarse sand, trace gravel.
140						At 140 feet: Very moist, olive-gray/brown, SILT/CLAY, trace fine to medium sand.
145						At 145 feet: Very moist, gray, SILT/CLAY with fine sand; trace organics.
150						At 150 feet: Very moist, dark gray, SILT/CLAY with fine sand scattered (ash too?).
155		Natural slough 155.5 to 157.5 feet				At 155 feet: Very moist, greenish gray, SILT/CLAY with fine sand.
						Boring terminated at 157.5 feet on 11/1/06

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-15	1 of 9

Project Name: The Villages
Elevation (Top of Well Casing): 574.82'
Water Level Elevation: 385.53'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 571.97'
Date Start/Finish: 11/2/06 11/7/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Forest Duff/Topsoil**
						Qvic - Vashon Ice-Contact Deposits
5		10-inch diameter bentonite chip surface seal from 0 to 18 feet				At 5 feet: Dry, brown, fine to medium SAND, few gravel, silt, coarse sand; minor oxidation, rounded gravels.
10		6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 336 feet				At 10 feet: As above.
						At 13 feet: No more gravels.
15						At 15 feet: Dry, brown, fine to medium SAND, few silt, trace coarse sand.
						Driller notes change at 18 feet, slightly more dense.
20						At 20 feet: Dry, grayish brown, silty fine SAND, little gravel, medium to coarse sand; abundant cuttings.
25						At 25 feet: Slightly moist, grayish brown, silty fine to coarse SAND, little gravel (rounded).
30						At 30 feet: Dry, brown, silty fine SAND, little medium to coarse sand, few gravel; abundant cuttings.
35						At 35 feet: Slightly moist, brown, fine to medium SAND, little coarse sand, few gravel, trace silt; abundant cuttings.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.	Geologic & Monitoring Well Construction Log		
	Project Number	Well Number	Sheet
	KG060601A	MW-15	2 of 9

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	574.82'	Surface Elevation (ft)	571.97'
Water Level Elevation	385.53'	Date Start/Finish	11/2/06 11/7/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 40 feet: Dry, brownish gray, fine to coarse SAND with gravel, trace silt; abundant cuttings.
						Driller added small amount of water to keep dust down.
45						At 45 feet: Moist, dark brown, fine SAND, little silt, gravel, few medium to coarse sand.
						Driller notes feels like formation is layered.
50		6-inch steel blank casing from approximately 2.5 feet above ground surface to 336 feet				At 50 feet: Slightly moist, brown, GRAVEL with fine to coarse sand, few silt.
55						At 55 feet: Moist, brown, silty fine SAND, trace gravel.
60						At 60 feet: As above with trace sandy SILT nodules.
65						At 65 feet: As above.
						Driller notes fairly "dense" sand.
70						At 70 feet: Slightly moist, brown, fine SAND, little silt.
						Silt at 73 feet.
75						At 75 feet: Moist, brown, fine sandy SILT.
						Increased gravel and more dense at 76 feet. Driller checking for water, no free water after casing weld at 76 feet. Abundant metamorphic gravels in washed sample at 76 feet. Color change at 78 feet.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-15	3 of 9

Project Name: The Villages
Location: Black Diamond, WA
Elevation (Top of Well Casing): 574.82'
Surface Elevation (ft): 571.97'
Water Level Elevation: 385.53'
Date Start/Finish: 11/2/06 11/7/06
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hole Diameter (in): 10" to 18'/6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 80 feet: Grayish brown, silty fine to coarse SAND, little gravel.
85						At 85 feet: Moist, gray-brown, silty fine SAND, few gravel, medium to coarse sand. Driller notes formation very "tight/hard".
90		6-inch steel blank casing from approximately 2.5 feet above ground surface to 336 feet				At 90 feet: As above except trace gravel and medium to coarse sand.
						Qvt - Vashon Lodgement Till
95						At 95 feet: As above except slightly moist, little medium to coarse SAND; abundant cuttings.
100						At 100 feet: Moist, grayish brown, silty fine SAND, little medium to coarse sand, few gravel.
105						At 105 feet: As above except light gray-brown.
	▼					Driller notes change at 108 feet. WL at 109.3' on 11/3/06 after sitting overnight with BOC/BOH at 156 feet.
110						At 110 feet: Slightly moist, grayish brown, fine to coarse SAND with gravel, few silt.
115						At 115 feet: Moist, brown, silty fine SAND, little medium to coarse sand, few gravel.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-15	4 of 9

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	574.82'	Surface Elevation (ft)	571.97'
Water Level Elevation	385.53'	Date Start/Finish	11/2/06 11/7/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 120 feet: Slightly moist, light brown, silty fine SAND, few medium to coarse sand, gravel.
125	▼					At 125 feet: As above, grayish brown, little medium to coarse SAND, gravel. WL at 125.2' bgs on 11/6/06 after sitting over weekend with BOC/BOH at 256'.
130		6-inch steel blank casing from approximately 2.5 feet above ground surface to 336 feet				At 130 feet: Slightly moist, light brown, fine to coarse SAND, little gravel, silt.
						$Qpon_{1c}$ - Pre-Olympia Non-Glacial Deposits, Coarse-Grained
135						At 135 feet: Moist, greenish gray, fine to medium SAND, few coarse sand, gravel. No free water produced after casing weld at 136 feet.
140						At 140 feet: Slightly moist, greenish gray, silty fine SAND, little medium to coarse sand, few gravel.
						Free water in discharge at 144 feet.
145						At 145 feet: Wet, greenish gray, silty fine to coarse SAND, little gravel.
150						At 150 feet: Wet, gray, GRAVEL with fine to coarse sand, little silt (turbid discharge water).
						Predominantly volcanic gravels; abundant gray, blue, red. WL rose to 153.4 feet bgs after ~40 minutes with BOC at 177 feet.
155						At 155 feet: Wet, gray, silty fine to coarse SAND, little gravel.
						At 156 feet: Increased silt/clay. WL at 109.3 feet bgs on 11/03/06 after sitting overnight with BOC/BOH at 156 feet.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-15	5 of 9

Project Name: The Villages
Elevation (Top of Well Casing): 574.82'
Water Level Elevation: 385.53'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 571.97'
Date Start/Finish: 11/2/06 11/7/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 160 feet: Wet, gray, fine to coarse SAND, little silt, few gravel.
						No free water at 162' - gray silt/clay.
165						At 165 feet: Wet, gray, fine to medium sandy SILT, trace gravel, trace organics (black film on discharge water).
170		6-inch steel blank casing from approximately 2.5 feet above ground surface to 336 feet				At 170 feet: Wet, gray, fine SAND, trace gravel.
175						At 175 feet: Wet, gray, fine to coarse SAND with gravel, little silt. WL rose to 153.4' bgs after ~40 min w/BOC/BOH at 177'.
180						At 180 feet: Wet, gray, silty fine to coarse SAND, few gravel, trace organics (blue, green, and red gravels).
						$Qpon_{lf}$ - Pre-Olympia Non-Glacial Deposits, Fine-Grained Driller notes clay at 182 feet - water shut off. Driller adding water to lift cuttings.
185	▽					At 185 feet: Gray, SILT/CLAY, few fine to coarse sand, gravel, trace organics (black film on sampler). Driller notes layered clay and sand and gravel, no water in sand and gravel layers.
190						At 190 feet: Gray, SILT/CLAY with fine to coarse sand and gravel; trace organics.
195						At 195 feet: Gray, fine sandy SILT/CLAY, few medium to coarse sand, trace gravel; trace organics. No free water produced after casing weld at 196 feet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
▽ Water Level (12/14/06)
▼ Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-15	6 of 9

Project Name: The Villages
Location: Black Diamond, WA
Elevation (Top of Well Casing): 574.82'
Surface Elevation (ft): 571.97'
Water Level Elevation: 385.53'
Date Start/Finish: 11/2/06,11/7/06
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hole Diameter (in): 10" to 18'/6" to TD
Hammer Weight/Drop: N/A

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 200 feet: Gray, fine sandy SILT/CLAY, few medium to coarse sand, gravel (many apparent "gravels" are hard silt/clay nodules); trace organics.
205						At 205 feet: Gray, as above.
210		6-inch steel blank casing from approximately 2.5 feet above ground surface to 336 feet				At 210 feet: Gray, SILT/CLAY, trace fine to coarse sand, gravel; trace organics.
215						At 215 feet: Gray, fine sandy SILT/CLAY, trace medium to coarse sand, gravel (many apparent "gravels" are silt/clay nodules).
						Driller notes free water produced after casing weld at 216'.
220						At 220 feet: Wet, gray, SILT/CLAY with hard clay nodules, trace sand.
225						At 225 feet: As above.
230						At 230 feet: Wet, gray, fine to medium SAND, trace coarse sand, gravel, trace silt, discharge water very turbid; trace organics (wood flecks).
235						At 235 feet: As above except with few coarse sand, trace gravel (silt and fine sand washed out of sample).
						Driller notes formation producing ~40 gpm.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-15	7 of 9

Project Name: The Villages
Elevation (Top of Well Casing): 574.82'
Water Level Elevation: 385.53'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 571.97'
Date Start/Finish: 11/2/06,11/7/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 240 feet: Wet, gray, fine to medium SAND, little silt, trace coarse sand, gravel, few wood flecks.
245						At 245 feet: Wet, gray, SILT/CLAY, trace fine to coarse sand, gravel; trace organics (black film).
250		6-inch steel blank casing from approximately 2.5 feet above ground surface to 336 feet				At 250 feet: As above with solid clay nodules.
255						At 255 feet: Wet, gray, SILT/CLAY, few fine to coarse sand, trace gravel. WL at 125.2 feet bgs on 11/6/06 after sitting over weekend with BOC at 256 feet.
260						At 260 feet: Wet, gray, SILT/CLAY, few fine to medium sand; trace organics (dark film).
265						At 265 feet: Wet, gray, SILT/CLAY, trace fine to medium sand; trace organics.
270						At 270 feet: Wet, gray, SILT/CLAY with fine sand, few medium sand; trace organics.
						Th - Upper Tertiary Hammer Bluff Formation
275						At 275 feet: Gray, SILT/CLAY, trace fine to medium sand. Driller adding water to lift cuttings.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-15	8 of 9

Project Name: The Villages
Elevation (Top of Well Casing): 574.82'
Water Level Elevation: 385.53'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 571.97'
Date Start/Finish: 11/2/06 11/7/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 280 feet: Gray, SILT/CLAY, trace fine to medium sand.
						Driller notes "hard, solid" clay.
285						At 285 feet: As above.
290		6-inch steel blank casing from approximately 2.5 feet above ground surface to 336 feet				At 290 feet: Gray, SILT/CLAY, few fine to coarse sand and small gravels (all the same rock type - sandstone?).
295						At 295 feet: Gray, SILT/CLAY, trace fine to coarse sand, laminated with very fine tan laminae (ash?).
						Driller notes no free water, "smooth drilling" 280 to 295 feet.
300						At 300 feet: As above, trace fine to medium sand.
305						Sandier lens 306 to 309 feet.
310						At 310 feet: Gray, SILT/CLAY, little fine to medium sand.
315						At 315 feet: Gray, SILT/CLAY, trace fine to medium sand.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-15	9 of 9

Project Name: The Villages
Elevation (Top of Well Casing): 574.82'
Water Level Elevation: 385.53'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 571.97'
Date Start/Finish: 11/2/06 11/7/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 320 feet: Gray, SILT/CLAY, trace fine to medium sand.
325						At 325 feet: As above except few fine to medium sand, trace gravel. Boulder at 326 feet.
330		6-inch steel blank casing from approximately 2.5 feet above ground surface to 336 feet				At 330 feet: Wet, brownish gray, silty fine to coarse sand with gravel (rounded, volcanic gravels); abundant organics (a lot of dark brown film on discharge).
		K-packer 8 inches long				
335		3-foot riser, 5-inch I.D. steel blank casing 333.4 to 336.4 feet				At 335 feet: As above, predominantly coal sand and gravels, few wood fragments.
		5-inch I.D. stainless steel wire-wrapped screen 0.015-inch slot width 336.4 to 341.4 feet				
340		Colorado silica sand 341.4 to 343.4 feet				**Tp - Lower Tertiary Puget Group** At 340 feet: Wet, grayish brown, silty fine to coarse SAND, little gravel (coal and volcanics), few organics (dark brown film) (weathered sandstone).
345		Hole plug medium 3/8-inch bentonite chips 343.4 to 350 feet				At 345 feet: Wet, white, silty fine to coarse SAND, little gravel (coal and volcanics).
350		Natural slough 350 to 357 feet				At 350 feet: Wet, white, silty/ashey fine SAND, trace medium to coarse sand, trace gravel (volcanic and coal gravels and sand).
355						At 355 feet: As above with volcanic sandstone clasts.
						Boring terminated at 357 feet on 11/7/06

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-16	1 of 2

Project Name: The Villages
Elevation (Top of Well Casing): 566.36'
Water Level Elevation: Dry
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 563.80'
Date Start/Finish: 11/7/06,11/8/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Topsoil**
						Qvr - Vashon Recessional Outwash
5		10-inch diameter bentonite chip surface seal from 0 to 18 feet				At 5 feet: Moist, brown, fine to coarse SAND (predominantly medium) with gravel, few silt (rounded); minor oxidation.
10		6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 26.6 feet				At 10 feet: As above.
						Increased moisture, larger cobbles and boulders ~14 feet.
15						At 15 feet: Very moist, brown, GRAVEL with medium to coarse sand, silt.
						(Clean and dry at ~17 feet) Driller notes formation is "loose".
20						At 20 feet: Dry, gray, GRAVEL, few fine to coarse sand, trace silt.
		K-packer 8 inches long				
25		5-inch I.D. steel blank riser casing from 24.6 to 26.6 feet				At 25 feet: As above with little fine to coarse sand.
						Boulder 26 to 27.5 feet.
		5-inch I.D. stainless steel wire-wrapped screen 0.010-inch slot width from 26.6 to 31.6 feet				Driller added small amount of water to keep dust down.
30						At 30 feet: Wet, brown, GRAVEL, few medium to coarse sand, little silt.
		Oglebay Norton Colorado silica sand 31.6 to 38 feet				**Qvt - Vashon Lodgement Till**
35						At 35 feet: Moist, brownish gray, silty fine SAND with gravel, few medium to coarse sand.
		Hole plug 3/8-inch medium bentonite chips 38 to 50 feet				Drilling "hard".

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (Dry 12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-16	2 of 2

Project Name: The Villages
Elevation (Top of Well Casing): 566.36'
Water Level Elevation: Dry
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 563.80'
Date Start/Finish: 11/7/06 11/8/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 40 feet: Moist, brownish gray, silty fine SAND, little gravel, few medium to coarse sand.
		Hole plug 3/8-inch medium bentonite chips 38 to 50 feet				
45						At 45 feet: Moist, brown, silty fine SAND, as above.
						$Qpog_{1c}$ - Pre-Olympia Glacial Deposits
50		Natural slough/caving 50 to 52 feet				At 50 feet: Very moist, grayish brown, medium to coarse SAND with gravel, few silt, trace charcoal. Cleaner at 52 feet.
						Boring terminated at 52 feet on 11/8/06
55						
60						
65						
70						
75						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (Dry 12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 6/9/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-17	1 of 3

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	545.33'	Surface Elevation (ft)	542.59'
Water Level Elevation	490.40'	Date Start/Finish	11/8/06,11/9/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Forest Duff/Topsoil/Road Material**
						Qvr - Vashon Recessional Outwash
						12-inch boulder at 1.5 feet.
5		10-inch diameter bentonite chip surface seal 0 to 18 feet				At 5 feet: Slightly moist, grayish brown, GRAVEL, little fine to coarse sand, few silt.
						Driller notes formation is "loose" with large gravels, cobbles, and small boulders. Slight increase in moisture.
10		6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 82.5 feet				At 10 feet: Moist, grayish brown, GRAVEL (rounded), little fine to coarse sand, few silt.
15						At 15 feet: Very moist, grayish brown, fine to coarse SAND with gravel, few silt. No free water produced after casing weld at 16 feet.
20						At 20 feet: Slightly moist, grayish brown, silty fine to medium SAND, little gravel and coarse sand.
						Driller notes formation "more dense" at 23 feet.
						Qvt - Vashon Lodgement Till
25						At 25 feet: As above except slightly more fine grained.
30						At 30 feet: Slightly moist, grayish brown, silty fine to medium SAND, little gravel and coarse sand.
35	▼					At 35 feet: As above except slightly more coarse grained.
						$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained
						Small amount of free water after casing weld at 36 feet.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 9/11/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-17	2 of 3

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	545.33'	Surface Elevation (ft)	542.59'
Water Level Elevation	490.40'	Date Start/Finish	11/8/06,11/9/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	WELL CONSTRUCTION	ST	Blows/6"	Graphic Symbol	DESCRIPTION
	6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 82.5 feet				At 40 feet: Slightly moist, grayish brown, silty fine to medium SAND, little gravel and coarse sand.
45					At 45 feet: Moist, grayish brown, silty fine to coarse SAND, little gravel (subangular), clay present.
					Color change to orangish brown.
50					At 50 feet: Very moist, orangish brown, silty GRAVEL (rounded), little fine to coarse sand (mostly coarse sand); moderate oxidation. At 51 feet: Driller notes dry.
					Increased moisture at ~54 feet.
55					At 55 feet: Moist, orangish brown, silty fine to coarse SAND with gravel; moderate oxidation, numerous oxidized gravels, clay present. Small amount of free water after casing weld at 56 feet.
					WL at 59.15' bgs on 11/9/06 after sitting overnight with BOC/BOH at ~76'.
60					At 60 feet: Very moist, brown, silty fine to coarse SAND with gravel; minor oxidation, clay present.
65					At 65 feet: Moist, brown, fine to medium SAND, few coarse sand and gravel, little silt.
					Color change to brownish gray.
70					At 70 feet: Moist, brownish gray, medium to coarse SAND, little gravel, little silt.
75					At 75 feet: Moist, brownish gray, silty fine SAND with gravel, few medium to coarse sand.
					Driller notes free water in formation, airlifting.
					WL at 59.15 feet on 11/9/06 bgs after sitting overnight with BOC/BOH at ~76 feet.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 9/11/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-17	3 of 3

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	545.33'	Surface Elevation (ft)	542.59'
Water Level Elevation	490.40'	Date Start/Finish	11/8/06,11/9/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	WELL CONSTRUCTION	DESCRIPTION
	K-packer 8 inches long 5-inch steel blank riser casing from 80.5 to 82.5 feet	At 80 feet: Wet, brown, fine to coarse SAND with gravel, few silt (silty discharge); minor oxidation, abundant oxidized sand and gravels.
85	5-inch I.D. wire-wrapped stainless steel screen 0.030-inch slot width 82.5 to 87.5 feet	At 85 feet: As above, little gravel.
	Welded end cap	Producing ~15 to 20 gpm.
	Colorado silica sand (Oglebay Norton) 87.5 to 88.6 feet	Transition - no water - brown clay/silt.
90	Hole plug 3/8-inch medium bentonite chips 88.6 to 111 feet	**$Qpon_{1c}$ - Pre-Olympia Non-Glacial Deposits, Coarse-Grained** Gray clay with sand and gravel at 89 feet - not a thick layer, just clay nodules in sample. At 90 feet: Wet, brownish gray, fine to coarse SAND with gravel, few silt (silty discharge), few oxidized sand and gravels (less oxidation 90 to 104 feet).
95		At 95 feet: As above.
		WL 59.4' bgs with BOC at 96' after approximately 10 minutes.
100		At 100 feet: As above.
		Producing ~15 to 20 gpm.
105		**$Qpon_{1f}$ - Pre-Olympia Non-Glacial Deposits, Fine-Grained** Driller notes clean clay with no gravel at ~104 feet. At 105 feet: Wet, gray, SILT/CLAY, little fine to coarse sand, trace gravel.
110	Natural slough 50 to 52 feet	At 110 feet: Wet, gray, fine to coarse SAND, little gravel, few silt (silty discharge).
115		At 115 feet: Wet, gray, fine to medium SAND, trace coarse sand, trace organics (wood/coal). WL 60.1 feet bgs with BOC/BOH at 116 feet after ~35 minutes.
		Boring terminated at 116 feet on 11/9/06

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

Water Level (12/14/06)

Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 9/11/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-18	1 of 1

Project Name: The Villages
Elevation (Top of Well Casing): 545.36'
Water Level Elevation: 521.17'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 542.66'
Date Start/Finish: 11/10/06,11/10/06
Hole Diameter (in): 10" to ~10'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Forest Duff/Topsoil**
		10-inch diameter bentonite chip surface seal 0 to 10 feet				**Qvr - Vashon Recessional Outwash**
5		6-inch steel blank casing 2.5 feet above ground surface to 19 feet				At 5 feet: Moist, brown, fine to coarse SAND, few gravel, few silt, trace silt lenses; trace roots/organics.
10						At 10 feet: Moist, brown, GRAVEL with fine to coarse sand, few silt.
15		K-packer 2-foot 5-inch I.D. steel casing riser				At 15 feet: Moist, brown, fine to coarse SAND, little gravel, little silt. At 16 feet: As above, few silt with gravel.
20	▽	5-inch I.D. stainless steel wire-wrapped 0.010-inch slot screen 18.8 to 23.8 feet				At 19 feet: Slightly moist, brown, fine to coarse SAND with gravel, little silt. At 20 feet: Slightly moist, brown, fine to medium SAND with gravel, little silt, few coarse sand. At 21 feet: Slightly moist, brown, GRAVEL, little fine to coarse sand, few silt. At 22 feet: Slightly moist, brown, fine to medium SAND with gravel, few silty fine to coarse sand. At 23 feet: Moist, brown, fine to coarse SAND with gravel, few silt.
25		Colorado silica sand				**Qvt - Vashon Lodgement Till** At 24 feet: Dry, gray, fine SAND, little silt, medium to coarse sand, few gravel. Driller notes more dense at 24 feet. Boring terminated at 25 feet on 11/10/06
30						
35						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
▽ Water Level (12/14/06, dry every other reading)
▼ Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/3/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-19	1 of 6

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	604.79'	Surface Elevation (ft)	602.15'
Water Level Elevation	497.59'	Date Start/Finish	11/10/06 11/14/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	WELL CONSTRUCTION	DESCRIPTION
	Aboveground monument with bollards	**Surface Material: Topsoil/Road Material**
		Qvt - Vashon Lodgement Till
5	10-inch diameter bentonite chip surface seal 0 to 18 feet	At 5 feet: Very moist to wet, brown, SILT with gravel, little fine to coarse sand; minor oxidation.
10	6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 171.4 feet	At 10 feet: Very moist, brown, silty fine SAND, little gravel and medium to coarse sand. Driller notes formation is slightly "dense", not loose and not very hard.
15		At 15 feet: Moist, brown, silty fine SAND, little gravel, few medium to coarse sand. Small seepage during weld at 16 feet. Driller notes formation is relatively dense.
20		At 20 feet: Wet, light brown, silty fine to coarse SAND with gravel. Driller notes more dense at 20 feet.
		Driller notes more dense at 25 feet ("till-dense").
25		Slightly moist, light brown, silty fine SAND, few medium to coarse sand, gravel. Color change at ~27' to brownish gray.
30		At 30 feet: As above except brownish gray.
35		At 35 feet: As above. WL is 35.93' bgs on 11/13/06 after sitting over weekend with BOC/BOH at 56'.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-19	2 of 6

Project Name: The Villages
Elevation (Top of Well Casing): 604.79'
Water Level Elevation: 497.59'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 602.15'
Date Start/Finish: 11/10/06 11/14/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
45						At 40 feet: Moist, brownish gray, silty fine SAND, little gravel, few medium to coarse sand. At 45 feet: Moist, brownish gray, silty fine SAND, trace gravel, medium to coarse sand. **Qva(?) - Vashon Advance Outwash** Becomes very moist, silty GRAVEL with fine to coarse sand at 47 feet.
50		6-inch steel blank casing from approximately 2.5 feet above ground surface to 171.4 feet				At 50 feet: Moist, brownish gray, silty/clayey fine SAND, few gravel and medium to coarse sand (coming out in clumps). Driller notes formation is "sticky" and very dense. **Qo - Olympia Non-Glacial Deposits** Loose at 53 feet.
55						At 55 feet: Moist, gray, fine sandy SILT to silty fine SAND, trace gravel, medium to coarse sand. WL is 35.93 feet bgs on 11/13/06 after sitting over weekend with BOC/BOH at 56 feet.
60						At 60 feet: Moist, gray, silty fine to medium SAND to sandy SILT, few coarse sand, trace gravel.
65						At 65 feet: As above with silt/clay clumps, trace brown organic silt. Conventional radiocarbon age of 29,510 +/-300 B.P. Driller adding small amount of water to clean out casing.
70						**$Qpog_{1}$(?) - Pre-Olympia Glacial Till(?)** At 70 feet: Wet, gray, silty GRAVEL with fine to coarse sand.
75						At 75 feet: Moist, gray, fine sandy SILT, trace gravel. Small amount of free water after casing weld at 76 feet. **$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained**

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-19	3 of 6

Project Name: The Villages
Elevation (Top of Well Casing): 604.79'
Water Level Elevation: 497.59'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 602.15'
Date Start/Finish: 11/10/06,11/14/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 80 feet: Wet, grayish tan, silty fine to coarse SAND with gravel.
85						At 85 feet: Moist, brown, silty fine to medium SAND, trace medium to coarse sand, gravel. Still drilling "hard". More gravel 85 to 90 feet.
90		6-inch steel blank casing from approximately 2.5 feet above ground surface to 171.4 feet				At 90 feet: Moist, brown, silty fine to medium SAND, few coarse sand, few gravel, trace silt nodules.
95						At 95 feet: Moist, brown, silty fine SAND, few medium to coarse sand, gravel. No free water after casing weld at 96 feet.
100						At 100 feet: Moist, brown, silty fine to medium SAND, few coarse sand, gravel, trace silty nodules.
105	▼ ▽					WL at 103.6' bgs on 11/14/06 after sitting overnight with BOC/BOH at 136'. At 105 feet: Moist, olive-gray, silty fine SAND to fine sandy SILT, trace medium to coarse sand, gravel.
110						**$Qpon_{1c}$ - Pre-Olympia Non-Glacial Deposits, Coarse-Grained** Increased sand and gravel ~108 feet. At 110 feet: Moist, olive-gray, silty fine to medium SAND, few coarse sand, gravel.
115						At 115 feet: Moist, gray, silty fine SAND, few medium to coarse sand, gravel. Small amount of free water after casing weld at 116 feet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
▽ Water Level (12/14/06)
▼ Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-19	4 of 6

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	604.79'	Surface Elevation (ft)	602.15'
Water Level Elevation	497.59'	Date Start/Finish	11/10/06,11/14/06
Drilling/Equipment	Tacoma Pump & Drilling/Air Rotary	Hole Diameter (in)	10" to 18'/6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
125		6-inch steel blank casing from approximately 2.5 feet above ground surface to 171.4 feet				At 120 feet: Very moist, gray, silty fine to coarse SAND with gravel. Driller notes increased moisture from 122 feet (free water). Increased gravel at ~124 feet. At 125 feet: Very moist, gray, silty GRAVEL with fine to coarse sand. Turning more brown at ~128 feet.
130						At 130 feet: Very moist, olive-gray, silty GRAVEL, little coarse sand.
135						At 135 feet: Very moist, olive-gray, silty medium to coarse SAND with gravel. * See note at end of log. WL 103.6' bgs on 11/14/06 after sitting overnight with BOH/BOC at 136'.
140						At 140 feet: Wet, greenish gray, silty fine to coarse SAND with gravel.
145						**$Qpon_{tf}$ - Pre-Olympia Non-Glacial Deposits, Fine-Grained** Driller notes "softer" at 143 feet. At 145 feet: Wet, olive-gray, fine to medium sandy SILT/CLAY, trace gravel; trace organics (dark film on discharge water).
150						At 150 feet: Wet, olive-gray, fine sandy SILT/CLAY, trace medium sand; few organics.
155						At 155 feet: As above. Sand and gravel at 156 feet. Driller notes producing ~5 gpm.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (12/14/06)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-19	5 of 6

Project Name: The Villages
Elevation (Top of Well Casing): 604.79'
Water Level Elevation: 497.59'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 602.15'
Date Start/Finish: 11/10/06,11/14/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
						At 160 feet: Wet, light olive-gray, fine to medium sandy SILT/CLAY; few organics (dark brown film on discharge water).
165		6-inch steel blank casing from approximately 2.5 feet above ground surface to 171.4 feet K-packer				At 165 feet: Wet, gray, SILT/CLAY, few fine to medium sand, trace gravel, few clay nodules; few organics.
170		3-foot 5-inch I.D. sttel casing riser from 163.4 to 171.4 feet				At 170 feet: As above, light olive-gray, without clay nodules.
175		5-inch I.D. stainless steel wire-wrapped 0.020-inch slot width screen 171.4 to 176.4 feet Colorado silica sand 176.4 to 179 feet				At 175 feet: Wet, light olive-gray, fine to medium sandy SILT, few gravel (some well-rounded gravels) (green, gray, black). Driller notes producing ~1 to 2 gpm.
180						At 180 feet: As above, fine sandy SILT, trace gravel; organics.
						Driller notes water shut off, no free water. Driller adding small amount of water to aid cuttings return.
185		Hole plug 3/8-inch medium bentonite chips 179 to 198 feet				At 185 feet: Wet, gray, silty fine to coarse SAND, few gravel; trace organics. Producing water again at 187 feet.
190						At 190 feet: Wet, gray, SILT/CLAY with fine to coarse sand, few gravel.
195						At 195 feet: Wet, gray, SILT/CLAY, trace fine to coarse sand, gravel. Sand and gravel again at 196', producing water.
						Boring terminated at 198 feet on 11/14/06 * Note: Lost drive shoe at 140 feet. Had to pull all casing out, weld new drive shoe, and re-install casing. After pulling casing, hole

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601A	MW-19	6 of 6

Project Name: The Villages
Elevation (Top of Well Casing): 604.79'
Water Level Elevation: 497.59'
Drilling/Equipment: Tacoma Pump & Drilling/Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 602.15'
Date Start/Finish: 11/10/06 11/14/06
Hole Diameter (in): 10" to 18'/6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
						collapsed from 115 to 140 feet. During second casing install, ended the day with the bottom of casing at 136 feet to check static WL. Welded next joint 11/14/06.
205						
210						
215						
220						
225						
230						
235						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (12/14/06)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601A.GPJ BORING.GDT 7/2/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601D	MW-20	1 of 3

Project Name: The Villages
Elevation (Top of Well Casing): 566.20'
Water Level Elevation: 491.60'
Drilling/Equipment: Tacoma Pump-Drilling/Dual Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 564.00'
Date Start/Finish: 6/4/08,6/4/08
Hole Diameter (in): 10' to 18', 6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road Material/Drill Pad**
						Qvr - Vashon Recessional Outwash
5		10-inch-diameter bentonite chip surface seal from 0 to 18 feet				Moist, brown, fine to coarse SAND, with gravel, few silt, abundant cuttings, trace roots, minor oxidation.
10						Slightly moist, brown, GRAVEL, little fine to coarse sand, trace silt.
15						Moist, brown, GRAVEL, few fine to coarse sand, trace silt.
						Transition to fine to medium SAND at 18 feet. No free water after casing weld at 18 feet.
20						Very moist, brown, fine to medium SAND, trace coarse sand, gravel, and silt.
						Qvt - Vashon Lodgement Till
						Driller notes change at ~22 feet - increased density, drills like till.
25		6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 115 feet				Moist, grayish-brown, silty fine SAND, few gravel.
30						As above.
						Driller notes formation seems looser for till and gravelly.
35						Moist, brownish-gray, silty fine SAND, little gravel, few coarse sand.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (6/19/08)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601D.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601D	MW-20	2 of 3

Project Name: The Villages
Elevation (Top of Well Casing): 566.20'
Water Level Elevation: 491.60'
Drilling/Equipment: Tacoma Pump-Drilling/Dual Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 564.00'
Date Start/Finish: 6/4/08 6/4/08
Hole Diameter (in): 10' to 18', 6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Moist, brownish-gray, silty fine SAND, little gravel, few coarse sand.
45						As above except few gravel.
						Driller notes coarse material; cobbles, small boulders.
50						As above.
		6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 115 feet				
55						Moist, brownish-gray, silty fine SAND, few gravel, trace coarse sand.
60						Moist, brownish-gray, silty fine SAND, few gravel.
						$Qpog_{1c}$- Pre-Olympia Glacial Deposits, Coarse-Grained
65						Moist, gray, silty fine to medium SAND, little gravel, trace silty nodules.
70	▼					Moist, gray, silty GRAVEL, with medium to coarse sand.
						Increased moisture, driller notes free water at ~71 to 72 feet.
75						Very moist, silty coarse SAND, with gravel, few fine to medium sand.
						Airlifted small amount of water after casing weld at ~78 feet. Not free draining yet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
▽ Water Level (6/19/08)
▼ Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601D.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601D	MW-20	3 of 3

Project Name: The Villages
Elevation (Top of Well Casing): 566.20'
Water Level Elevation: 491.60'
Drilling/Equipment: Tacoma Pump-Drilling/Dual Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 564.00'
Date Start/Finish: 6/4/08,6/4/08
Hole Diameter (in): 10' to 18', 6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Wet, gray, silty GRAVEL, with medium to coarse sand (sample wet due to accumulated water after casing weld).
85						Very moist, as above (effervesces with HCl).
90		6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 115 feet				As above (effervesces with HCl). Becoming finer-grained.
95						Very moist, gray, silty fine to coarse sand, with gravel (effervesces with HCl). Driller using water to clean out casing. Notes formation producing water at ~96 feet.
100						Wet, grayish-brown, fine to coarse SAND, few gravel (abundant orange sand), trace silt and silt nodules. Free draining water after casing weld at ~98 feet, producing ~5 gpm (airlift).
105						As above. Driller notes formation producing ~15 gpm (airlift). Increased gravel and possible trace organics at 108 feet (black film on discharge pile).
110						Wet, gray-brown, fine to coarse SAND, little gravel, trace to few silt. Increased gravels up to 1.5-inch diameter. As above with abundant orange, green, and red sands and gravels. Driller notes formation producing ~30 gpm (airlift).
115		Bottom of casing left open, no well screen installed				Boring terminated at 115 feet on 6/4/08 Leaving open bottom - no screen installed.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (6/19/08)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601D.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601D	MW-21	1 of 1

Project Name: The Villages
Elevation (Top of Well Casing): 565.64'
Water Level Elevation: 544.08'
Drilling/Equipment: Tacoma Pump-Drilling/Dual Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 563.40'
Date Start/Finish: 6/4/08 6/5/08
Hole Diameter (in): 10' to 18', 6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road/Drill Pad Material**
						Qvr - Vashon Recessional Outwash
5		10-inch-diameter bentonite chip surface seal from 0 to 18'				Dry, brown, GRAVEL, few fine to coarse sand, trace silt; abundant cuttings.
10		6-inch I.D. steel casing from approximately 2' above ground surface to 16.8'				Slightly moist, GRAVEL, little fine to coarse sand, trace silt.
15		K-packer and riser from approximately 14.8' to 16.8'				As above.
		5-inch I.D. stainless steel screen, 0.015-inch slot with welded end plate from 16.8' to 21.8'				At 18 feet transitions to fine to medium SAND, trace gravel. No free water after casing weld at 18 feet.
20	▼					**Qvt - Vashon Lodgement Till** Moist, brown, silty fine to coarse SAND, little gravel.
		Pea gravel 21.8' to 23.2'				
25		Bentonite chips 23.2' to 37'				Moist, brown, silty fine SAND, few gravel and coarse sand.
30						Moist, brownish-gray, silty fine SAND, few to little gravel.
						Driller notes cobbly zone, looser at ~32 feet.
35						As above.
						Boring terminated at 37 feet on 6/5/08 Well installed 6/5/08.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
- Water Level (6/19/08)
- Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601D.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601D	MW-22	1 of 3

Project Name: The Villages
Elevation (Top of Well Casing): 557.75'
Water Level Elevation: 492.43'
Drilling/Equipment: Tacoma Pump-Drilling/Dual Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 555.15'
Date Start/Finish: 6/5/08,6/5/08
Hole Diameter (in): 10' to 18', 6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Aboveground monument with bollards				**Surface Material: Road/Drill Pad Material**
						Qvr - Vashon Recessional Outwash
5		10-inch-diameter bentonite chip surface seal from 0 to 18 feet				Slightly moist, brown, GRAVEL, little fine to coarse sand, trace silt (clean formation).
10						As above.
15						Moist, brown, GRAVEL, with fine to coarse sand, trace silt.
						At 18 feet: Predominately fine to medium SAND, trace gravel. No free water at 18-foot casing weld.
20						Moist, brown, fine to medium SAND, trace coarse sand, gravel, and silt.
25		6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 96 feet				Moist, brown, fine SAND, trace silt.
						Slight increase in moisture.
30						Moist to very moist, brown, silty fine SAND.
						Increased gravels at 34 feet - drilling slightly harder.
35						As above except with few medium to coarse sand and gravel.
						Able to airlift small amount of water after casing weld at ~37 feet.
						Becoming more gray.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (6/19/08)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601D.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601D	MW-22	2 of 3

Project Name: The Villages
Elevation (Top of Well Casing): 557.75'
Water Level Elevation: 492.43'
Drilling/Equipment: Tacoma Pump-Drilling/Dual Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 555.15'
Date Start/Finish: 6/5/08 6/5/08
Hole Diameter (in): 10' to 18', 6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Moist to very moist, brownish-gray, silty fine to medium SAND, little coarse sand and gravel.
						Qvt - Vashon Lodgement Till
						Driller notes becoming more dense and "till-like" at ~41 feet.
45						Moist, brownish-gray, silty fine SAND, few coarse sand and gravel.
50						As above except gray.
		6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 96 feet				
55						As above.
						$Qpog_{1c}$ - Pre-Olympia Glacial Deposits, Coarse-Grained
						Becoming coarse and increased moisture at ~58 feet.
60						Moist, brownish-gray, silty medium to coarse SAND, few to little gravel.
	▼					Water level came up to 62.41 feet bgs with BOH/BOL at 95 feet after 10 minutes.
65						As above.
70						As above.
						Increased moisture.
75						Very moist, brown-gray, silty coarse SAND, few medium sand and gravel.
						Airlifted small amount of water after casing weld at 77 feet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (6/19/08)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601D.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601D	MW-22	3 of 3

Project Name: The Villages
Elevation (Top of Well Casing): 557.75'
Water Level Elevation: 492.43'
Drilling/Equipment: Tacoma Pump-Drilling/Dual Air Rotary
Hammer Weight/Drop: N/A

Location: Black Diamond, WA
Surface Elevation (ft): 555.15'
Date Start/Finish: 6/5/08 6/5/08
Hole Diameter (in): 10' to 18', 6" to TD

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
						Wet, gray-brown, silty fine to coarse SAND, few gravel.
85						Very moist to wet, gray-brown, silty fine to coarse SAND, few gravel.
		6-inch I.D. steel blank casing from approximately 2.5 feet above ground surface to 96 feet				
90						Wet, gray-brown, fine to coarse SAND, little gravel, trace silt (washed).
						Driller estimates airlifting ~5 gpm. Trace organic black film on discharge pile.
95		Bottom of casing left open, no well screen installed				As above. Driller notes coarse gravel from ~90 to 96 feet.
						Boring terminated at 96 feet on 6/5/08 Leaving open bottom - no screen installed.
100						
105						
110						
115						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (6/19/08)
Water Level at time of drilling (ATD)

Logged by: BAA
Approved by:

NWWELL 060601D.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601D	MW-23	1 of 2

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	558.00'	Surface Elevation (ft)	555.40'
Water Level Elevation	527.67'	Date Start/Finish	6/6/08 6/6/08
Drilling/Equipment	Tacoma Pump-Drilling/Dual Air Rotary	Hole Diameter (in)	10' to 18', 6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	WELL CONSTRUCTION	DESCRIPTION
	Aboveground monument with bollards	**Surface Material: Road/Drill Pad Material**
		Qvr - Vashon Recessional Outwash Cobbles present at ground surface.
5		Moist, brown, fine to coarse SAND, few silt, trace gravel, trace cobbles; minor oxidation, trace roots/organics (formation contains more gravel than indicated by sample).
	10-inch-diameter bentonite chip surface seal from 0 to 18'	
10		Moist, brown, fine to coarse SAND, trace gravel and silt (formation contains more gravel than indicated by sample).
15		Moist, brown, fine to coarse SAND, with gravel, trace silt.
		At 18 feet: Becomes predominantly fine to medium SAND.
20		Moist, brown, fine SAND, trace to few silt.
	6-inch I.D. steel casing from approximately 2.5' above ground surface to 36.1'	
25		As above.
		Increased moisture, slightly finer-grained.
30		Very moist to wet, brown, silty fine SAND to fine sandy SILT.
	K-packer and riser from approximately 32.3' to 36.1'	Becoming slightly coarser.
35		Very moist, silty fine SAND, trace to few gravel and coarse sand (drilling indicates increased gravels at ~35 feet).
	5-inch I.D. stainless steel screen, 0.015-inch slot width, with welded end plate from 36.1' to 41.1'	Airlifting small amount of water after casing weld at 35 to 36 feet; color changes at ~39 feet.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

- Water Level (6/19/08)
- Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601D.GPJ BORING.GDT 7/10/08

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KG060601D	MW-23	2 of 2

Project Name	The Villages	Location	Black Diamond, WA
Elevation (Top of Well Casing)	558.00'	Surface Elevation (ft)	555.40'
Water Level Elevation	527.67'	Date Start/Finish	6/6/08 6/6/08
Drilling/Equipment	Tacoma Pump-Drilling/Dual Air Rotary	Hole Diameter (in)	10' to 18', 6" to TD
Hammer Weight/Drop	N/A		

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Pea gravel 41.1' to 42.1'				Wet, brown-gray, silty fine to coarse SAND, little gravel.
						Qvt - Vashon Lodgement Till
						Driller notes change in drilling at 41 feet, drying up.
45		Bentonite chips 42.1' to 47'				Moist, gray, silty fine to medium SAND, little gravel.
						Slightly moist, silty fine SAND, few gravel and coarse sand.
						Boring terminated at 47 feet on 6/6/08 Well installed on 6/6/08.
50						
55						
60						
65						
70						
75						

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

Water Level (6/19/08)

Water Level at time of drilling (ATD)

Logged by: BAA

Approved by:

NWWELL 060601D.GPJ BORING.GDT 7/10/08

Appendix 4
Exploration Logs by Others

"ICE-MW" Series Borings/Wells

Icicle Creek Engineers, Inc., 1990

HOLT DRILLING, INC.

ENTERED

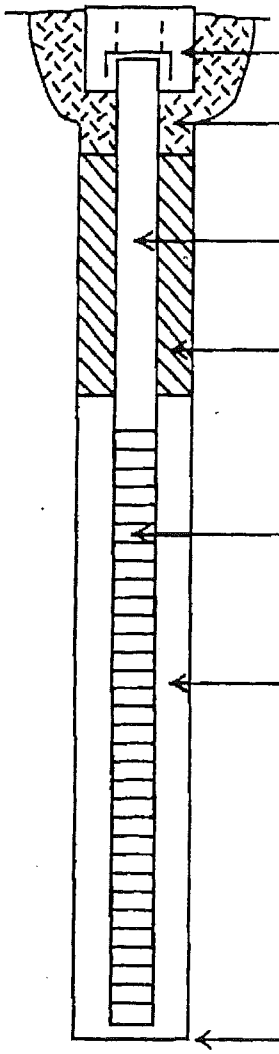
9

Resource Protection Well Report

Project Name The Lakes at Black Diamond
Well Identification # MW-1
Drilling Method 4" HSA
Driller Clyde Moore
License # 1939

Date 2-15-98
County King, SW ¼ SE ¼
Section 22 T. 21N R. 6E
Street Address Green Valley Rd.
Start Card R036839
Consulting Firm Icicle Creek Eng.

AS-BUILT | WELL DATA | FORMATION DESCRIPTION



MONUMENT TYPE: 6" Stand up
CONCRETE SURFACE SEAL: 3 ft.00
PVC BLANK: 2 "x 38'
BACKFILL: 27ft.00
TYPE: Bentonite Chips + Native
PVC SCREEN: 2 "x 10'00
SLOT SIZE: 020
TYPE: PVC
GRAVEL PACK: 15 ft.00
MATERIAL: 10-20 Silica Sand
WELL DEPTH: 45'00 "

0 - 43 ft. Sand + gravel
43 - 45 ft. Till
- ft.
- ft.
- ft.

REMARKS

RECEIVED
WR
MAR 16 1998
DEPT OF ECOLOGY

Signature Clyde Moore

D15332.FDB/D41029.EPS

HOLT DRILLING, INC.

ENF

9

Resource Protection Well Report

Project Name The Lakes at Black Diamond

Well Identification # MW-2 MW-3

Drilling Method 4" HSA

Driller Clyde Moore

License # 1939

Date 2-15-98

County King, SW ¼ SE ¼

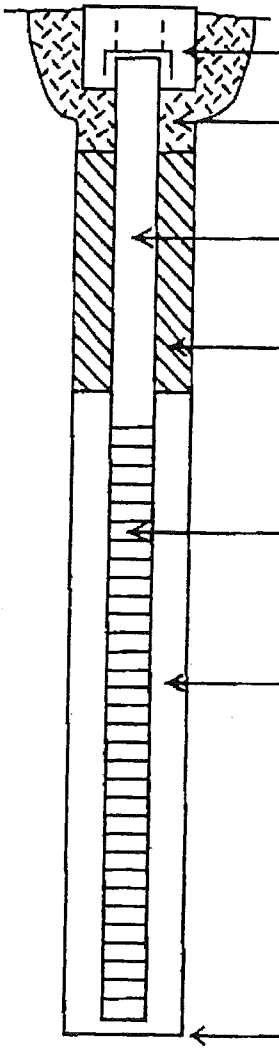
Section 22 T. 21N R. 6E

Street Address Green Valley Rd.

Start Card # 036839

Consulting Firm Laide Creek Eng.

AS-BUILT



WELL DATA

MONUMENT TYPE: 6" Standup

CONCRETE SURFACE SEAL 3 ft. 00

PVC BLANK 2 "x 16'00

BACKFILL 18 ft. 00

TYPE: Bentonite Chips + Native

PVC SCREEN 2 "x 10'00

SLOT SIZE: 020

TYPE: PVC

GRAVEL PACK 13 ft. 00

MATERIAL: 10-20 Silica Sand

WELL DEPTH 23'00 "

FORMATION DESCRIPTION

0 - 23 ft. Sand + gravel

@ - 23 ft. Till

- ft.

- ft.

- ft.

REMARKS

RECEIVED

WR

MAR 16 1998

DEPT OF ECOLOGY

Signature Clyde Moore

015332.FDB/D41029.EPS

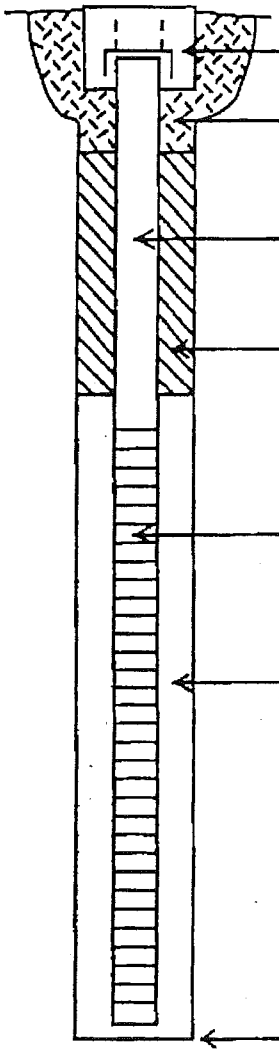
HOLT DRILLING, INC.

Resource Protection Well Report

21-6-22Q

Project Name The Lakes at Black Diamond
Date 2-15-98
Well Identification # MW-4
County King, SW ¼ SE ¼
Drilling Method 4" HSA
Section 22 T. 21N R. 6E
Driller Clyde Moore
Street Address Green Valley Rd.
License # 1939
Start Card R036839
Consulting Firm Icicle Creek Eng.

AS-BUILT | WELL DATA | FORMATION DESCRIPTION



MONUMENT TYPE: 6" Stand up
CONCRETE SURFACE SEAL 3 ft. 00
PVC BLANK 2 "x 30'
BACKFILL 22ft.00
TYPE: Bentonite Chips + NATive
PVC SCREEN 2 "x 20'00
SLOT SIZE: 020
TYPE: PVC
GRAVEL PACK 23 ft.00
MATERIAL: 10-20 Silica Sand
WELL DEPTH 48'00 "

0 - 45 ft. Sand+gravel
45-48 ft. Till
- ft.
- ft.
- ft.

REMARKS

RECEIVED
WR
MAR 16 1998
DEPT OF ECOLOGY

Signature Clyde Moore

D15332.FDB/D41029.EPS

"W" Series Borings/Wells

Water District 105 Well Log, 1988
Robinson and Noble, Inc., 1990
Icicle Creek Engineers, Inc., 1996

#3

21/06-22K

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No.
Water Right Permit No.

(1) OWNER: Name WATER DISTRICT 105 Address 30033 188TH AVE S E KENT, WA 98031-

(2) LOCATION OF WELL: County KING - NW 1/4 SE 1/4 Sec 22 T 21 N., R 6E WM
(2a) STREET ADDRESS OF WELL (or nearest address) GRADDON PROPERTY

(3) PROPOSED USE: TEST WELL

(4) TYPE OF WORK: NEW WELL
Owner's Number of well (If more than one) 00010
Method: ROTARY

(5) DIMENSIONS: Drilled 244 ft. Diameter of well 8 - 6 inches Depth of completed well 244 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: WELDED 8" Dia. from 0 ft. to 36 ft.
6" Dia. from 0 ft. to 131 ft.
Dia. from ft. to ft.

Perforations: YES
Type of perforator used TORCH CUT
SIZE of perforations 1/4 in. by 8 in.
100 perforations from 116 ft. to 126 xxxxx ft.
perforations from ft. to xxxxx ft.
perforations from ft. to xxxxx ft.

Screens: NO
Manufacturer's Name
Type Model No.
Dian. slot size from ft. to ft.
Dian. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 20 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 79 ft. below top of well Date 04/27/88
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO	
FILL MATERIAL	0	1	
TOPSOIL	1	2	
BR GLACIAL TILL	2	31	
BL GLACIAL TILL	31	58	
BL CEMENTED SAND & GRAVEL	58	83	
SM AMT H20	78	81	Small water
BL SILTY SAND	83	92	
BL SILT SAND & GRAVEL	92	98	
BL CEMENTED SAND & GRAVEL	98	104	
SM AMT H20	98	104	Small
WATER BEARING SAND & GRAVEL	104	126	- perf
WATER BEARING SAND DCC. GRAVEL	126	167	116-126'
BL SILT DCC. GRAVEL	167	212	
GR SANDSTONE	212	244	

GRADDON

Work started 04/22/88 Completed 06/02/88

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? YES If yes, by whom? AQUA-FLO
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time | Water Level | Time | Water Level | Time | Water Level

Date of test
Bailer test gal/min. ft. drawdown after hrs.
Air test 150 gal/min. w/ stem set at 120 ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? YES

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

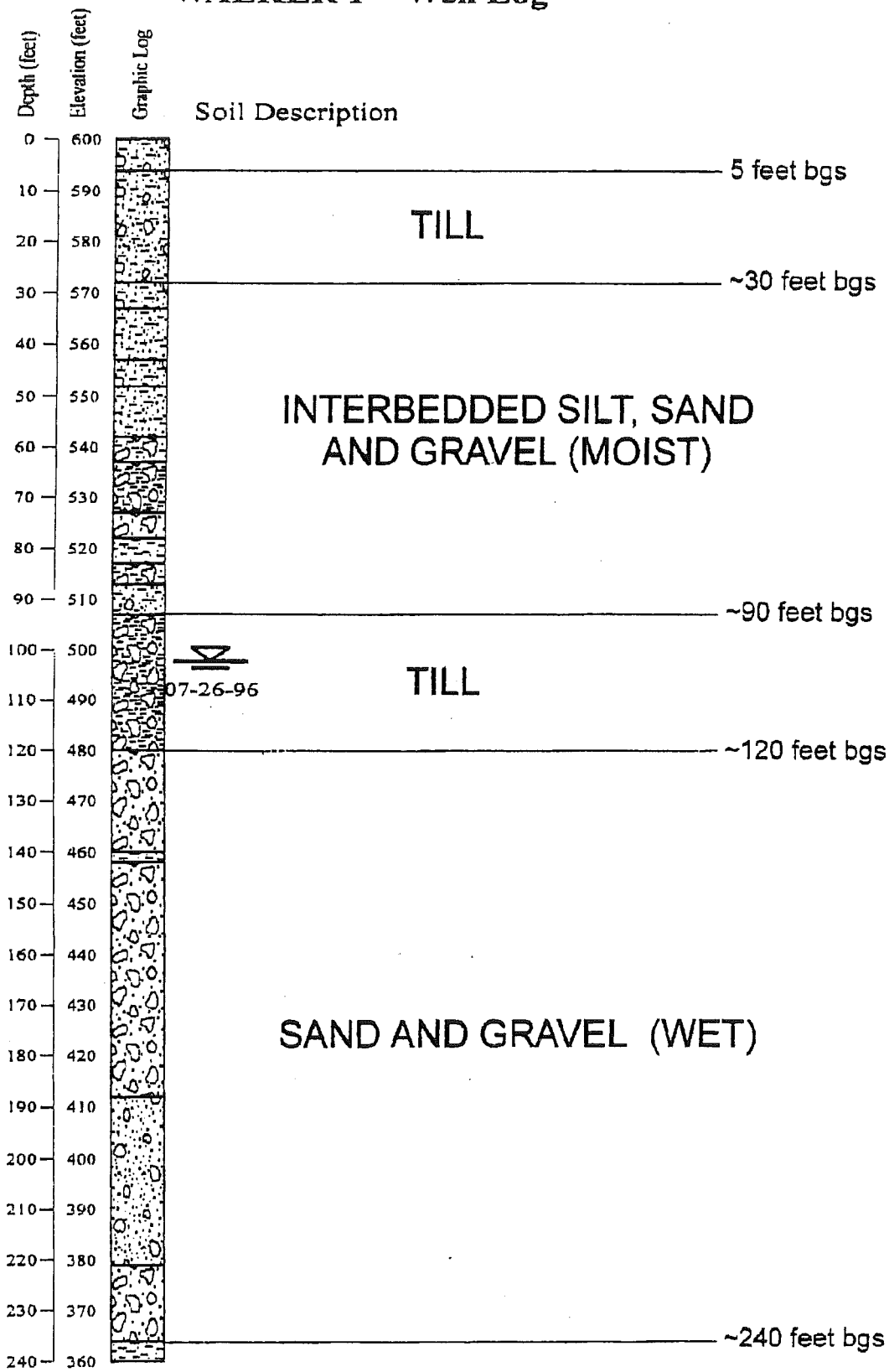
ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] [illegible] License No. 0097

Contractor's Registration No NORTHPD137PQ Date 06/03/88

JUN 15 1988

WALKER 1 - Well Log



File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

#7

JUL 07 1989

WATER WELL REPORT

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY
NORTHWEST REGION

W-2

Application No. 014550

Permit No. ....

(1) OWNER: Name John Walker Address Green Valley Rd. Black Diamond

(2) LOCATION OF WELL: County King NW¼ SE¼ Sec. 22 T. 21 N. R. 6E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☒ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) #2
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 8&6 inches. Drilled 600 ft. Depth of completed well 600 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8 " Diam. from +1 ft. to 250 ft.
Threaded ☐ 6 " Diam. from +1 ft. to 480 ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used star wheel
SIZE of perforations 118 in. by 2 in.
600 perforations from 75 ft. to 150 ft.
100 perforations from 20 ft. to 30 ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☐ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

WATER LEVELS: Land-surface elevation above mean sea level....
Static level 50 ft. below top of well Date 7-1-89
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
Tested by Agua Flow "
(no info) Puyallup "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Tan gravel-sand	0	15
Brown gravel-water	15	32
Brown gravel-sand-clay	32	36
Tan gravel sand	36	42
Brown sand gravel	42	67
Gray gravel-clay	67	76
Gray gravel water	76	105
Gray hardpacked gravel-clay	105	115
Gray water sand & gravel	115	160
Gray sand-clay	160	195
Gray gravel-clay	195	200
Gray sand silt	200	209
Gray hardpan	209	212
Gray clay gravel	212	236
Gray gravel sand	236	241
Gray hardpacked gravel clay	241	252
Brown hardpacked gravel clay	252	255
Tan hardpacked gravel clay	255	285
Gray gravel-clay	285	310
Gray silt clay	310	342
Tan clay silt	342	395
Brown clay silt	395	447
Gray silt	447	456
Gray clay ~~silt~~	456	478
Brown clay	478	487
Tan clay silt	487	521
Tan clay	521	525
Brown clay	525	530
Gray clay sand	530	550
Gray sand - seepage	550	560
Gray clay	560	600

Clay 5½

Work started 5-27 19 89 Completed 7-1 19 89

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton

[Signed] (Well Driller)

License No. 0277 Date 7-1 19 89

(USE ADDITIONAL SHEETS IF NECESSARY)

50-1-20

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

#2

WATER WELL REPORT

STATE OF WASHINGTON

W-3

Application No. 074550

Permit No. ....

(1) OWNER: Name John Walker Address 240 YY Green Valley Rd, Black Diamond

(2) LOCATION OF WELL: County King

Bearing and distance from section or subdivision corner NW¼ SE¼ Sec. 22 T. 21 N., R. 6 E W.M.

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☒ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .... # 3
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 160 ft. Depth of completed well 160 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 160 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☒ ." Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used star wheel
SIZE of perforations 1/8 in. by 2 in.
400 perforations from 67 ft. to 101 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

) PUMP: Manufacturer's Name
Type: H.P.

) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
tic level 50 ft. below top of well Date 7-1-89
esian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
a pump test made? Yes ☒ No ☐ If yes, by whom?
d: gal./min. with ft. drawdown after hrs.
Tested by Aqua-Flow "
(no info) "Royal Up "
overy data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
r test gal./min. with ft. drawdown after hrs.
dian flow g.p.m. Date
perature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown gravel sand	0	12
Brown sand gravel	12	17
Tan gravel sand-clay	17	21
Gray gravel sand-clay	21	36
Gray gravel - water	36	43
Brown gravel - water	43	48
Brown gravel - sand-cly	48	67
Gray water sand - gravel	67	91
Brown water sand - clay	91	94
Gray watersand-gravel	94	101
Gray clay	101	104
Gray gravel clay	104	116
Gray clay sand-gravel	116	126
Gray gravel	126	137
Gray sand silt	137	147
Gray clay sand	147	160

RECEIVED
JUL 07 1989
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 6-9, 19 89 Completed 6-19, 19 89

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)

Address 19415 108TH Ave SE Renton 98055

[Signed] Brad Johnson
(Well Driller)

License No. 0233 Date 6-19, 19 89

050-1-20

(USE ADDITIONAL SHEETS IF NECESSARY)

#1

21/06-22 K

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

W-4

Application No. 014575
Permit No. ....

(1) OWNER: Name John Walker Address 240XX Green Valley Rd, Black Dr.

(2) LOCATION OF WELL: County King — NW ¼ SE ¼ Sec. 22 T. 21 N., R. 6E W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☒ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 280 ft. Depth of completed well 280 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 8" Diam. from 0 ft. to 280 ft.
Threaded ☐ ____" Diam. from ____ ft. to ____ ft.
Welded ☒ ____" Diam. from ____ ft. to ____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ____ ft.
Static level — ft. below top of well Date —
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown sand	3	9
Tan hardpacked gravel	9	27
Tan gravel-sand clay	27	39
Tan sand clay gravel	34	42
Tan gravel sand	42	61
Tan sand gravel-clay	61	120
Brown sand	120	145
Tan sand-gravel	145	161
Tan sand gravel-clay	161	175
Gray clay-silt	175	240

RECEIVED
OCT 16 1989
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 9-26, 1989 Completed 9-30, 1989

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)
Address 19415 108th Ave SE Renton 98055
[Signed] Brad Johnson (Well Driller)
License No. 0233 Date 9-30, 1989

(USE ADDITIONAL SHEETS IF NECESSARY)

GY 050-1-20

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

#5

21/06-22K

WATER WELL REPORT

STATE OF WASHINGTON

(W-5)

Application No. 019920

Permit No. ....

(1) OWNER: Name John Walker Address 240xx Green Valley Rd, Bl. Di

(2) LOCATION OF WELL: County King NW¼ SE¼ Sec 22 T. 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☒ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Drilled 195 ft. Diameter of well 6 inches. Depth of completed well 195 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 195 ft.
Threaded ☐ ____" Diam. from .... ft. to .... ft.
Welded ☒ ____" Diam. from .... ft. to .... ft.

Perforations: Yes ☒ No ☐
Type of perforator used star wheel
SIZE of perforations 1/8 in. by 2 in.
160 perforations from 135 ft. to 150 ft.
320 perforations from 155 ft. to 180 ft.
____ perforations from .... ft. to .... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name....
Type.... Model No....
Diam. .... Slot size .... from .... ft. to .... ft.
Diam. .... Slot size .... from .... ft. to .... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ....
Gravel placed from .... ft. to .... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? .... Depth of strata....
Method of sealing strata off....

(7) PUMP: Manufacturer's Name....
Type: .... H.P....

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level 95 ft. below top of well Date 10-5-89
Artesian pressure .... lbs. per square inch Date....
Artesian water is controlled by .... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?....
Yield: .... gal./min. with .... ft. drawdown after .... hrs.
" 150 gpm stem set at 180' "
" " 4 hrs "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
....	....	....	....	....	....
....	....	....	....	....	....
....	....	....	....	....	....

Date of test ....
Bailer test .... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date....
Temperature of water .... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown sand-gravel	3	9
Tan sand-gravel	9	25
Tan gravel-sand-clay	25	55
Gray sand-clay	55	64
Tan sand	64	75
Gray gravel-sand	75	95
Gray water sand-gravel	95	125
Gray gravel-sand-clay	125	134
Gray water sand-gravel	134	150
Gray water sand	150	155
Gray water sand-gravel	155	195
Gray sand-gravel-clay	195	—

RECEIVED
OCT 16 1989
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 10-6 19 89 Completed 10-5 19 89

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton

[Signed] .... (Well Driller)

License No. 0233 Date 10-5 19 89

ECY 050-1-20

(USE ADDITIONAL SHEETS IF NECESSARY)

"BH" Series Borings/Wells

King County Surface Water Management, 1991

Test Pit 1 BH-1

TEST PIT LOCATION
SE 331ST STREET
COUNTY MAINTAINED DIRT ROAD.
ADJACENT TO STREAM THAT FEEDS
HORSESHOE LAKE.

JOB NO.: 089496 DATE: 4/26/91

LOCATION: HORSESHOE LAKE MONITORING WELL

CLIENT: KING COUNTY SURFACE WATER MGT.

CONTRACTOR: SOIL SAMPLING SERVICE

BY:

ELEVATION: ROAD ELEV.

surface conditions

sample type	sample depth (ft)	depth (ft)	water	USCS	
		10			0-10.0 FT - BROWN GRAVELLY SILTY SAND, MOIST
		20			10-20.0 FT - GRAYISH BROWN SILTY FINE SAND W/ GRAVEL TO FINE SAND W/ SILT AND GRAVEL, MOIST
		30			20 FT.+ - GRAY SILTY SAND W/ GRAVEL, MOIST VERY DENSE (TILL)
		40			REFUSAL - 35.0 FT
		50			NO GROUNDWATER ENCOUNTERED
		60			
		70			

TEST PIT TERMINATED AT NA FEET BELOW EXISTING GRADE

GROUNDWATER SEEPAGE ENCOUNTERED AT 35 DURING

Test Pit 2 B11-2

TEST PIT LOCATION:
AUBURN BLACK DIAMOND ROAD.
NORTH ROAD EDGE.
STATION 30+70 ~
20' LT ℄.

JOB NO.: 089496 DATE: 4/24/91
LOCATION: HORSESHOE LAKE MONITORING WELL
CLIENT: KING COUNTY SURFACE WATER M&T.
CONTRACTOR: SOIL SAMPLING SERVICE
BY: AC

ELEVATION: ROAD ELEV.

surface conditions

sample type	sample depth (ft)	depth (ft)	water	USCS
		10		
		20		
		30		
		40		
		50	▽	
		60		
		70		
		80		

0-20.0 FT - BROWN GRAVELLY SAND W/ SILT TO GRAVELLY SILTY SAND, MOIST

20-30.0 FT - BROWN GRAVELLY FINE SAND W/ SILT TO GRAVELLY SILTY FINE SAND, MOIST

30-55.0 FT - GRAY GRAVELLY/ SILTY FINE SAND, MOIST BECOMING WET AT ~ 50.0 FT (TILL)

55.0-75.0 FT - GRAY VERY GRAVELLY SILTY SAND, WET

75.0 FT + - GRAY GRAVELLY SAND TO SANDY GRAVEL

NOTE: SCREEN 50-80 FT (1" x 30' x .010
SAND 47-80 FT
PELLETS REMAINDER

TEST PIT TERMINATED AT 80.0 FEET BELOW EXISTING GROUND SURFACE ENCOUNTERED AT 50.0 FEET

WL 72.5' bgs based on Herrera rpt

Test Pit 3 BH-3

TEST PIT LOCATION:
AUBURN BLACKDIAMOND ROAD
NORTH ROAD SHOULDER
STATION 45+50 ~
20 FT LT : 4

JOB NO.: 089496 DATE: 4/25/91

LOCATION: HORSESHOE LAKE MONITORING WELL

CLIENT: KING COUNTY SURFACE WATER MGT.

CONTRACTOR: SOIL SAMPLING SERVICE

BY: AC

ELEVATION: ROAD ELEV.

surface conditions

sample type	sample depth (ft)	depth (ft)	water	USCS
		10		
		20		
		30		
		40		
		50		
		60	▽	
		70		
		80		

0-30.0FT - BROWN GRAVELLY SAND W/SILT TO GRAVELLY SILTY SAND, MOIST

30.0-50.0FT - BROWN GRAVELLY MEDIUM SAND W/SILT TO MEDIUM SAND W/GRAVEL AND SILT

50.0-70.0 FT - BROWN TO GRAYISH BROWN SILTY SAND W/ GRAVEL BECOMING GRAVELLY SILTY SAND, MOIST BECOMING WET AT ~ 70.0FT

SCREEN 60-80.0 FT (1" x 20.0' x .010)
SAND 57-80 FT
PELLETS REMAINDER

FEET PIT TERMINATED AT 80.0 FEET BELOW EXISTING GRADE

GROUNDWATER SEEPAGE ENCOUNTERED AT 60.0FT. DURING

Test Pit 4 BH 4

JOB NO.: 089496 DATE: 4/26/91

LOCATION: HORSESHOE LAKE MONITORING WELL

CLIENT: KING COUNTY SURFACE WATER M&T.

CONTRACTOR: SOIL SAMPLING SERVICE

BY: M

EST PIT LOCATION:
LAKE SAWYER ROAD
EAST ROAD SHOULDER
~.25 MI FM INTERSECTION W/
AUBURN BLACK DIAMOND ROAD.
1320'

ELEVATION: ROAD ELEV.

surface conditions

sample type	sample depth (ft)	depth (ft)	water	USCS
		10		
		20		
		30		
		40		
		50	▽	
		60		
		70		
		80		

0-30.0FT - BROWN GRAVELLY SAND W/SILT TO GRAVELLY SILTY SAND, MOIST

30.0-40.0FT - BROWN MEDIUM SAND W/SILT AND GRAVEL MOIST.

40.0 - 50.0FT - BROWN GRAVELLY SAND W/ SILT, MOIST

50.0 - 60.0FT - BROWN GRAVELLY SILTY SAND, MOIST BECOMING WET AT 55.0 FT.

60.0 FT + - GRAY SANDY GRAVELS TO GRAVELLY SANDS

NOTE: SCREEN 50 - 70 FT (1" x 20' x .010)
COLORADO SAND FROM 47 - 70'
BENTONITE PELLETS REMAINDER

TEST PIT TERMINATED AT 70.0 FEET BELOW EXISTING GRADE

GROUNDWATER SEEPAGE ENCOUNTERED AT 55.0 DURING EXCAVATION

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399

FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO

(206) 927-3173
TELEX: 466762
FAX: (206) 927-3478

Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

RESOURCE PROTECTION WELL REPORT

21/6E/15C

PROJECT NAME: Horseshoe Lake
WELL IDENTIFICATION NO.: BH-2
DRILLING METHOD: Air Rotary
DRILLER: Harold Niswander

SIGNATURE: Harold Niswander
CONSULTING FIRM: King County
REPRESENTATIVE: Alan Corwin

JOB #: W2960 START CARD NO.: [redacted]
COUNTY: King CITY: Black Diamond
LOCATION: NE 1/4 NW 1/4 1/4
SEC.: 15 TOWN: 21N RANGE: 6E
DATUM:
WATER LEVEL ELEVATION: 50'
INSTALLED: 4-24-91
DEVELOPED:

WELL DATA	AS BUILT	FORMATION DESCRIPTION
0' Flush Monument		0'
3' Concrete		
Chips	1"x50' sch 80 blank	Brown Gravelly Sands & Silts 30'
47'	50'	Till 52'
Colorado Sand	1"x20'x.010 screen	Gravels silts & sands 70'
80'	80'	Gravels & Sands 80'

RECEIVED
JUL 08 1991
DEPT. OF ECOLOGY

SCALE: 1" = _____ PAGE _____ OF _____

...Department of Ecology does NOT warrant the Data and/or the Information on this Well Report.

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399

FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO

(206) 927-3173
TELEX: 466762
FAX: (206) 927-3478

Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

21/6E/15C

RESOURCE PROTECTION WELL REPORT

PROJECT NAME: Horseshoe Lake
WELL IDENTIFICATION NO.: BW-3
DRILLING METHOD: Air Rotary
DRILLER: Harold Niswander

SIGNATURE: Harold Niswander
CONSULTING FIRM: King County
REPRESENTATIVE: Alan Corwin

JOB #: W2960 START CARD NO.: 062476
COUNTY: King CITY: Black Diamond
LOCATION: NE 1/4 NW 1/4 ____ 1/4
SEC.: 15 TOWN: 21N RANGE: 6E
DATUM:
WATER LEVEL ELEVATION: 55'
INSTALLED: 4-25-91
DEVELOPED:

WELL DATA	AS BUILT	FORMATION DESCRIPTION
0' Flush monument		0'
2' concrete		
Chips	1"x60' sch 80 blank	Gravelly Sands
		40'
		Medium Sands & Gravels
57'		50'
Colorado Sand 10-20	60'	Gravelly Silty Sands
	1"x20'x.010	70'
		Sandy Gravels
80'	80'	80'

RECEIVED
JUL 08 1991
DEPT. OF ECOLOGY

SCALE: 1" = _____

PAGE _____ OF _____

Department of Ecology does NOT warrant by the Data and/or the information on this Well Report.

SOIL SAMPLING SERVICE, INC.

1415 MERIDIAN EAST, PUYALLUP, WA 98371-1399

FEDERAL ID #: 91-0762274 WA CONT. #SOIL SS*344LO

(206) 927-3173
TELEX: 486762
FAX: (206) 927-3478

Geotechnical, Engineering & Mineral Exploration Drilling • Instrumentation • Horizontal Drains
Ground Water Monitoring • Hazardous Waste Identification • Well Abandonments

RESOURCE PROTECTION WELL REPORT 21/6E/15 D

PROJECT NAME: Horseshoe Lake
WELL IDENTIFICATION NO.: BH-4
DRILLING METHOD: Air Rotary
DRILLER: Harold Niswander

SIGNATURE: Harold Niswander
CONSULTING FIRM: King County
REPRESENTATIVE: Alan Corwin

JOB #: W2960 START CARD NO.: 062478
COUNTY: King CITY: Black Diamond
LOCATION: NW 1/4 NW 1/4 ____ 1/4
SEC.: 15 TOWN: 21N RANGE: 6E
DATUM: ____
WATER LEVEL ELEVATION: 42'
INSTALLED: 4-26-91
DEVELOPED: ____

WELL DATA	AS BUILT	FORMATION DESCRIPTION
0' Flush Monument 1' Concrete Chips 47'	1" x 50' Sch 80 blank 50'	0' Brown Gravelly Fine Sands 30' Gray Sandy Gravel
Colorado Sand 70'	1" x 20' x .010 Screen 70'	70'

RECEIVED
1111 08 1991
DEPT. OF ECOLOGY

SCALE: 1" = ____ PAGE ____ OF ____

Ecology does not verify the data and/or the information on this Well Report.

"DH" Series Borings/Wells

McLucas and Associates, 1990

DH-1

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BECKER DRILL, REVERSE CIRCULATION

SAMPLING METHOD:

CONTINUOUS RETURN. SAMPLES COLLECTED IN 5-FOOT INCREMENTS, THEN COMBINED FOR LABORATORY ANALYSIS AS APPROPRIATE

WATER LEVEL	45'			
DATE 6/28/90				
TIME 9:00 a.m.				

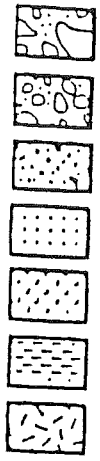
STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	5	0 - 5' Fine pebbly fine sandy silt. Dry. Includes gray-brown soil horizon full of woody debris. Pebbles heavily silt coated. Basalt pebbles have 1/16 inch thick weathering rind. 20-to-30% +¼" material; 2" maximum size. Drove a boulder.	
	10	5' - 10' Dry gray-brown pebbly coarse sandy fine sand and silt. 50% +¼". Medium silt coating. No boulder chips in sample return. Overall, 1" minus material.	
	15	10' - 15' Dry material, as above. Clumps of fine sand. Boulder chips in return. No medium sand, as above. Very silty (5-10%?).	
	20	15' - 20' Dry. Bouldery, pebbly (1" minus) silty fine sand. Silt 5%?. One large andesite boulder. Heavy silt coating. 50% +¼" material.	
	25	20' - 25' Fine sandy silty cobble-pebble gravel. Heavy silt coating. Subround-to-subangular. 60-to-70% +¼". Mostly 1" minus. Silt 5%?	

NOTES: Drill hole placed adjacent to Backhoe Pit No. 5 at northern extreme of area of mining interest.

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 1
ELEVATION 594'
PAGE 1 OF 3

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND



SANDY GRAVEL WITH COBBLES
SANDY GRAVEL
POORLY SORTED SAND
WELL SORTED SAND
DIAMICTON
SILT - CLAY
PEAT
BEDROCK
SILTY

DRILLING METHOD:

BECK DRILL, REVERSE CIRCULATION METHOD

SAMPLING METHOD:

CONTINUOUS SAMPLE. SAMPLES COLLECTED IN 5-FOOT INCREMENTS, THEN COMBINED FOR SUBMISSION TO LAB, AS APPROPRIATE

WATER LEVEL	45'				
DATE 6/28/90					
TIME 9:00 a.m.					

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	30	25' - 30' Encountered fine sand at 27', full of pebbles and -4" cobbles. Fine sand - very silty. No medium or coarse sand. +¼" material 25-to-30%. Cobbles heavily silt coated. Very little broken mtrl. Dry-to-moist. Cobbles 3" to 4" in diameter. Material balls up in hand. Almost clayey. Very fine silt. 30' - 35' Same as above.	
	35		
	40	35' - 40' Same as above. Sand dryer and a little coarser. 50% +¼". No obvious broken rock (3" minus). At 39' gravel finer and dropped to approximately 20-to-25%. Sand clumps. 1" minus material.	
	45	40' - 45' Same as above, except gravel coarser (3"-), and some coarse sand. +¼" material 50%.	
	50	45' - 50' Hard.. Glacial till boundary. All sand to this point has been gray (medium gray). Driller says ground harder since 45'.	▼

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 1
ELEVATION 594'
PAGE 2 OF 3

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BECKER DRILLS, REVERSE CIRCULATION

SAMPLING METHOD:

CONTINUOUS

WATER LEVEL				
DATE 6/28/90				
TIME 9:00 a.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	55 60 65 70	50' - 55' Glacial till. Picked up very fine silt/clay on pebbles and in sand (balls up). Not much broken cobble. Sand is gummy and moist. Not wet. At 53' became very hard to drill - drill advance is very slow and not due to presence of boulder. Sand almost fluffy. Very fine sand. Silty sand with 3"- pebbles and some broken cobbles. Gravel 20-to30%. No medium or coarse sand. Almost dry. Sand now dark gray. No water. Pebbles extremely silt coated. 55' - 60' Extremely fine sand and coarse silt. Dry. Dark gray. Heavy silt coating on gravel surfaces. Very cobbly and bouldery. Drilling still very hard. Return powdery. Gravel 40-to-50%. 60' - 63' Cobbly bouldery pebbly very fine sandy silt and clay. Powdew dry. Heavy silt coating on pebbles. Gravel 30-to-40%. Bottom hole 63'. Convinced that material is glacial till.	

NOTES: Drilling got progressively harder from 45-to-63' depth. Rock sound and Unweathered. Predominantly basalt lithology in till. Rock all heavily silt coated. No obvious ground water. When in sand, it was wetter (moist to damp), but till dry and powdery. Finished drilling at 12:30 p.m.

PROJECT NO. M & H DEVELOPMENT, INC.

BORING NO. DRILL HOLE NO. 1

ELEVATION 594'

PAGE 3 OF 3

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

DH-2

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BECKER DRILLS, REVERSE CIRCULATION

SAMPLING METHOD:

CONTINUOUS SAMPLE, COLLECTED IN 5-FOOT INCREMENTS, THEN COMBINED AS APPROPRIATE FOR SUBMISSION TO TESTING LABORATORY

WATER LEVEL	65'			
DATE 6/28/90				
TIME 2:30 p.m.				

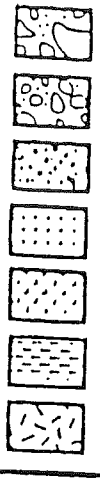
STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	5	0 - 5' Pebbly cobbly fine silty sand. Brown in color. Moist. 3" minus material. Subangular-to-subround.	
	10	5' - 10' 70% gravel. Silty fine sandy cobble-pebble gravel. Light silt coating on clasts.	
	15	10 - 15' Same as above.	
	20	15' - 20' Fresh undisturbed material. Moist-to-damp. Cobbly (3" maximum) pebble-pea-granule gravelly medium-to-coarse sand. Brown-gray. Heavy silt coating on clasts. 80-to-90% +¼" material. Predominantly ½"-. Sound, unweathered rock.	
	25	20' - 25' Same as above except minor fine sand and material a little damper.	

NOTES: Drill hole sited adjacent to Backhoe Pit No. 14 at confluence of two site access roads near eastern site boundary. From 0 -to-16' in material disturbed by backhoe.

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 2
ELEVATION 598'
PAGE 1 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND



SANDY GRAVEL WITH COBBLES
SANDY GRAVEL
POORLY SORTED SAND
WELL SORTED SAND
DIAMICTON
SILT - CLAY
PEAT
BEDROCK
SILTY

DRILLING METHOD:

BECKER DRILL, REVERSE CIRCULATION

SAMPLING METHOD:

CONTINUOUS

WATER LEVEL	65'			
DATE 6/28/90				
TIME 2:30 p.m.				

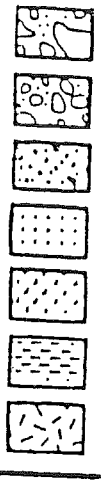
STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	30	25' - 30' Silty fine sandy cobble-pebble gravel. Gravel 80-to-90%. Heavily silt coated. Broken material represented by 1-to-2 large cobbles. Predominantly andesite and basalt lithologies. Moist-to-dry. Much more gravelly than previous 5-foot sequence. No coarse sand and -¼" mtrl.	
	35	30' - 35' Silty fine-to-coarse cobble-pebble gravel. Heavily silt coated. No clay. +¼" material 70-to-80%. 10-to-20% chips in ¼" range. Predominantly ½" to 2". Broken cobbles above 3".	
	40	35' - 40' Same as above except gravel larger. Predominantly 1" material. ¼" material largely chips. Moist-to-dry. Very silty (pulverized dust?).	
	45	40' - 45' Same as above.	
	50	45' - 50' Same as above. Cobbly silty gravel.	

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 2
ELEVATION 598'
PAGE 2 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND



SANDY GRAVEL WITH COBBLES
SANDY GRAVEL
POORLY SORTED SAND
WELL SORTED SAND
DIAMICTON
SILT - CLAY
PEAT
BEDROCK
SILTY

DRILLING METHOD:
BECKER DRILL; REVERSE CIRCULATION

SAMPLING METHOD:
CONTINUOUS RETURN.

WATER LEVEL	65'			
DATE 6/28/90				
TIME 2:30				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		50' - 55' Pushed boulder.	
	55	55' - 60' Pushed boulder and basalt cobble. Cobbly, silty, fine sand. Dirty. Dry. Rock sound.	
	60	60' - 65' Cobbly pebbly silty fine sand. 50:50 sand: gravel ratio, or 40:60 sand:gravel. Moist. Heavy silt coating on gravel clasts. 10-to20% ¼" material. Predominantly 2"- material. No coarse sand. Significant chips in ¼" size in return. Very dirty. Change at 65' to greenish gray cobble-pebble relatively clean medium sand with 10-to-20% granules (3/8"). Pebbles heavily silt coated. No clay. Damper. 50:50 sand:gravel. This is glacial till boundary.	
	65	65' - 70' Heavy silt coated pebble-cobble fine sand. 10-to-15% -¼" material. Maximum size 4". Very few chips Gravel predominantly 2" size. Balls up in hand, but not clayey. Moist.	
	70	70' - 75' Same as above. Driller says it got much harder to drill.	
	75		

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 2
ELEVATION 598'
PAGE 3 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

SANDY GRAVEL WITH COBBLES
SANDY GRAVEL
POORLY SORTED SAND
WELL SORTED SAND
DIAMICTON
SILT - CLAY
PEAT
BEDROCK
SILTY

DRILLING METHOD:
BECKER DRILL, REVERSE CIRCULATION

SAMPLING METHOD:
CONTINUOUS RETURN

WATER LEVEL	65'			
DATE 6/28/90				
TIME 2:30 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	80	75' - 80' Dry-to-moist cobbly, pebbly fine sand (silty Pebbles heavy silt coated. No clay. Gravel 60-to-50%. Very fine sand/coarse silt. No water. Very silty. Glacial till.	
	85'	Bottom hole 81'. Refused on boulder.	
	90'	Water in hole to 26' of surface on 6/29/90. Set piezometer screen from 60-to-70' depth. Backfilled to approximately 5' above screen with silica sand and one 5-gallon bucket of bentonite pellets (3/8" crushed) Then backfilled to surface. Used 4 100-lb silica sand bags. Set 72' of PVC pipe, 2' of which sticks up above land surface with 6" clearance. Slurry/grout mixture is 26 gallons water to 4 bags of cement to 15 lbs of bentonite. Driller said when he put casing back down hole prior to setting the PVC pipe, he hit a 3-to-4" lens of soft clayey material between 57 and 61' depth. This may be water-bearing unit above glacial till. By backfilling hole to 15' with silica sand, we have included this soft lens (55' is its top surface). Sand pack is from 56' to 70'. Set locking monument and 3 steel guard posts to protect monument.	

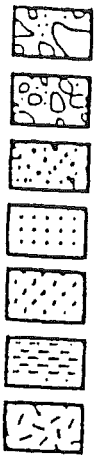
NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 2
ELEVATION 598'
PAGE 4 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

DH-3

LEGEND



SANDY GRAVEL WITH COBBLES
SANDY GRAVEL
POORLY SORTED SAND
WELL SORTED SAND
DIAMICTON
SILT - CLAY
PEAT
BEDROCK
SILTY

DRILLING METHOD:

BECKER DRILL, REVERSE CIRCULATION

SAMPLING METHOD:

CONTINUOUS RETURN. SAMPLES COLLECTED AT 5-FOOT INCREMENTS, THEN COMBINED AS APPROPRIATE FOR SUBMISSION TO COMMERCIAL TESTING LABORATORY.

WATER LEVEL					
DATE 6/29/90	72'				
TIME 4:00 p.m.					

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	5	0 - 5' Dry tan cobble-pebble very silty fine sand; Gravel 70-to-80%. Few ¼" chips. Gravel lightly silt coated. Coarse sand, but no medium sand.	
	10	5' - 10' Gravel in sand 3"-. Got into softer material (sand) at 5-to-9'. Olive greenish-gray medium-to-fine sand. Cobbly and pebbly, but sand 60-to-70%. Dry. Few cobble chips in return. Both sand and gravel have medium silt coating. No clay.	
	15	10' - 15' Moist pebbly medium sand. 2"- gravel 5-to-10 percent. Light silt coating on gravel, medium on sand. No cobbles. Some ¼" pea/granule gravel, but nothings between that and 1".	
	20	15' - 20' Same as above, except sand a little finer (medium-to-fine) with no coarse sand. Good range between 3/8" and ½" and on up to 3"-. Gravel 20-to-30%. Still moist. Pebbles heavy silt coated.	
	25	20' - 25' Same as above, except gravel 40-to-50% and sand in fine range and more silty.	

NOTES: Drill hole sited adjacent to Backhoe pit No. 11.

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 3
ELEVATION 568'
PAGE 1 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

SANDY GRAVEL WITH COBBLES

SANDY GRAVEL

POORLY SORTED SAND

WELL SORTED SAND

DIAMICTON

SILT - CLAY

PEAT

BEDROCK

SILTY

DRILLING METHOD:
BECKER DRILL, REVERSE CIRCULATION

SAMPLING METHOD:
CONTINUOUS

WATER LEVEL	72'			
DATE 6/29/90				
TIME 4:00 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	25'-30'	Dry. Light brown. Moderate silt coating. Gravel much finer. Predominantly 3/8" to 3/4" with pebbles to 3". +1¼" 50-to-60%. Very silty.	
	30		
		30' - 35' Big change. Damp. Silty medium-to-coarse sandy -2" pebble gravel with scattered cobbles. (3"). Heavy silt coating. Dark brownish gray in color. Gravel 50-to-60%. Predominantly ¼" to 3/4" material (40%).	
	35		
		35' - 40' Change back to moist-to-dry very silty fine sandy gravel with broken cobbles. Gravel 30%. Heavily silt coated. Predominantly fine silty sand with most gravel in ¼-to-1" size, and cobble fragments. Some silt may be from cobble pulverization.	
	40		
		40' - 45' At 43' changed to dry, fine silty sand to damp medium sand with scatter pebbles and cobbles (10%). Fairly clean but sand grains have light-to-medium silt coating. Olive greenish-brown. Change at 43'.	
	45		
		45' - 50' Same as above. 5% gravel. Damp.	
	50		

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 3
ELEVATION 568'
PAGE 2 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BECKER DRILL, REVERSE CIRCULATION

SAMPLING METHOD:

CONTINUOUS RETURN

WATER LEVEL	72'				
DATE	6/29/90				
TIME	4:00 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	55	50' - 55' At 53', sand became fine. Damp. Balls up slightly in hand but overall, as above. SAnd is fluffy and very well graded so that individual grains are obvious. Excellent concrete sand. Gravel is predominantly ¼" material (granule gravel), but up to 1" and ground up cobbles. Fairly clean (2-to-3% silt?).	
	60	55' - 60' Same as above, except a little damper and have both fine and medium sand. Granule gravel may occur up to 10%.	
	65	60' - 65' Change at 63 feet back to fine sand from medium-to-fine sand. Still balls up in hand slightly and damp and same color.	
	70	65' - 70' Pure gravel-free (less than 2% granules in top 1-to-2') sand. Fine sand. Discrete unit. Came out of bucket slightly balled up. Damp. Same color. Clean muck sand.	
	75	70 - 75' Significant change at 72'. Got much harder to drill. Materials wet but not saturated. Gravel (40-to-50%) is extremely heavy silt coated with fine silt and clay? to thickness of 1/8" or more. Fine gummy sand and coarse sand/granules but no medium sand. Gravel predominantly 1"- This is zone where ground water will come in	▼

6-43 Gvr
43-olive
72-till

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 3
ELEVATION 568'
PAGE 3 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BECKER DRILL, REVERSE CIRCULATION

SAMPLING METHOD:

CONTINUOUS

WATER LEVEL				
DATE	6/29/90			
TIME	4:00 p.m.			

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	80	75' - 80' Silty (very) coarse silt to fine sand with 30-to-40% gravel. Abundant 1/8" to 1" material and 3" cobbles and pebbles. Heavily silt coated. Damp but not wet as 70-to-75 foot sequence. Greenish gray in color.	
	85	80' - 85' 80-to-83 feet same as above in sand range but more gravel (50%) with significant amount of drill chips. Damp. At 83' got sandier (finer sand) and 10% gravel.	
	90	All material after 72' probably cobbly, pebbly fine sandy till with lots of silt (clay not apparent). Bottom hole 89'. No obvious water. Started to set piezometer next day at 8:00 a.m. Completed at 11:30 a.m. Screen set between 68' and 78'. Set locking monument and 3 steel guard posts to protect monument. Backfilled hole to 78' to set piezometer.	
	95		
	100		

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 3
ELEVATION 568'
PAGE 4 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BECKER DRILL, REVERSE CIRCULATION

SAMPLING METHOD:

CONTINUOUS RETURN
SAMPLES BAGGED AT 5-FOOT INCREMENTS
THEN COMBINED AS APPROPRIATE FOR LAB

WATER LEVEL	73'				
DATE 6/30/90					
TIME 12:45 p.m					

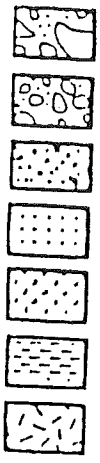
STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	5	0 - 5' Pebble-cobble fine sandy organic-rich silt. As in other holes, soils are approximately 6" - 1' thick. Pebbles medium silt coated. Gravel 30%. Predominantly ¼" to 2" with 5" cobble maximum size. Abundant chips in ¼"-to-½" range. Dry.	
	10	5' - 10' Same as above without organics and gravel 50-to-60%. Gravel predominantly ¼"-to-2", but several cobbles and associated chips. Dry. Light-to-heavy silt coating on clasts. No clay. A cobbley, gravelly silty fine sand.	
	15	10' - 15' Silty fine sandy pebble-cobble gravel. Dry. Gravel 90%. Full range of gravel sizes. No medium-to-coarse sand, but good 1/8"-to-2" size range. Light brownish-gray in color.	
	20	15' - 20' Same as above except less gravel (80%).	
	25	20' - 25' Gravel wetter. Gravel heavy silt coated and dark brown (medium brownish gray). Gravel finer and sand coarser. A cobbly fine-to-coarse sandy pebble-granule gravel. Gravel 50% +¼". Granules probably 30%. Sand 20%. Well graded material. Mostly 2" minus with scattered 3-4" cobbles.	

NOTES: Hole drilled adjacent to BHP-8

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 4
ELEVATION 599'
PAGE 1 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND



SANDY GRAVEL WITH COBBLES
SANDY GRAVEL
POORLY SORTED SAND
WELL SORTED SAND
DIAMICTON
SILT - CLAY
PEAT
BEDROCK
SILTY

DRILLING METHOD:

BECKER DRILL; REVERSE CIRCULATION

SAMPLING METHOD:

CONTINUOUS SAMPLING

WATER LEVEL				
DATE 6/30/90				
TIME 12:45 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	30	25' - 30' Still damp as previous hole. Gravel smaller, not so cobbly. Heavy silt coating. Still predominantly a granule gravel but more material in ½"- 1" range. Cobbles to 3" - 4" range. Good size distribution. Sand medium-to-coarse.	
	35	30' - 35' Material dark chocolate brown and a little damper than above. Otherwise, same as above. Heavy silt coating. Material predominantly 1/8" to ½" size (60 - 70%) with cobbles to 4-5". A change occurred here in terms of moisture and color.	
	40	35' - 40' Same as above, except no gravel about 1" and above, except for three 4-5" cobbles. Predominantly ¼" material (60%) and medium-to-coarse silty sand (40%).	
	45	40' - 45' Change. Cobbly pebbly silty fine-to-coarse sandy granule-pea gravel (40:60 sand:gravel). Dryer than above. Extra silt may be result of drilling cobbles. Lighter brown in color.	
	50	45' - 50' Back to same material as at 35' - 40' level. Wet, but not saturated. More gray than before. A pebbly (2"-) medium-to-coarse sand-granule gravel. Gravel heavily silt coated. All material subangular-to-angular. +¼" 30%. Most between coarse sand and 5/8".	

NOTES:

Much of this 25-foot sequence excellent Portland cement concrete aggregate.

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 4
ELEVATION 599'
PAGE 2 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

SANDY GRAVEL WITH COBBLES

SANDY GRAVEL

POORLY SORTED SAND

WELL SORTED SAND

DIAMICTON

SILT - CLAY

PEAT

BEDROCK

SILTY

DRILLING METHOD:
BECKER DRILL, REVERSE CIRCULATION

SAMPLING METHOD:
CONTINUOUS SAMPLE RETURN

WATER LEVEL				
DATE 6/30/90				
TIME 12:45 p.m.				

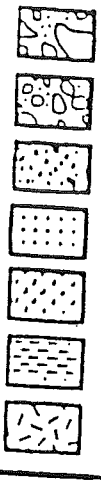
STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	55	50' - 55' Change to cobbly (very) silty fine sand/ granule gravel. +¼" is 60%. Dryer. Most pebbles 1-2". Tough drilling due to big cobbles and boulders.	
	60	55' - 60' All broken boulder/cobbles and fines from drilling them. Andesite boulder.	
	65	60' - 65' To 63', same as above. Thenrapid change to silty fine-to-medium sand with no gravel. Moist. Silt content is minor. Sand clean. Quartz, quartzite, and basalt and andesite rock fragments, and magnetite. Sand subangular-to-angular. Olive green-brown in color as in Drill Hole No. 3. Some sand subround. Well graded.	
	70	65' - 70' Pure fine sand with no gravel. Well graded. Moist-to-damp. Clean. Same color as above.	
	75	70' - 75' Change at 73' to medium gray cobbly pebbly coarse silt. Very hard drilling. Undoubtedly glacial till boundary. From 70' - 73', 2" pebbly fine sand (sand as above). Wet but not saturated. Heavy silt coating. Gravel 20% and contains cobbles. No clay, but sand balls up slightly in hand (doesn't hold ball).	▼

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 4
ELEVATION 599'
PAGE 3 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND



SANDY GRAVEL WITH COBBLES

SANDY GRAVEL

POORLY SORTED SAND

WELL SORTED SAND

DIAMICTON

SILT - CLAY

PEAT

BEDROCK

SILTY

DRILLING METHOD: BECKER DRILL, REVERSE CIRCULATION

SAMPLING METHOD: CONTINUOUS RETURN

WATER LEVEL				
DATE	6/30/90			
TIME	12:45 p.m.			

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	80	75' - 80' Glacial till. Cobbly pebbly coarse-to-fine silty glacial till with clay/silt coated gravel particles (up to 1/8"+ thick coating). Drills hard. Moist. Abundant ¼" - ½" material. Gravel 30-40% overall. Bottom hole 79'.	
	85		

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 4
ELEVATION 599'
PAGE 4 OF 4

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

SANDY GRAVEL WITH COBBLES

SANDY GRAVEL

POORLY SORTED SAND

WELL SORTED SAND

DIAMICTON

SILT - CLAY

PEAT

BEDROCK

SILTY

DRILLING METHOD:
BECKER DRILL
REVERSE CIRCULATION

SAMPLING METHOD:
CONTINUOUS RETURN

WATER LEVEL	20'			
DATE 6/30/90				
TIME 3:30 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	5	0 - 5' Charcoal-gray, moist, gravelly silty fine sand. Gravel (+¼") 30% representing 2" minus material. Moderate silt coating.	
	10	5' - 10' Top 2' same as above. At 7' gets finer (silty fine sand with larger (3" minus) gravel. Gravel 40%. Predominantly ¼" to 1" material. Moist. Medium silt coating.	
	15	10' - 15'. Moist gravelly silty fine sand. Brownish gray. 20% gravel. Predominantly 1" minus, but up to 3" in diameter. Pushed big boulder ahead of it.	
	20	15' - 20' Top 2' same as above. At 17' got more cobbly (35% gravel). Heavy silt coating. Moist. At 18', change to rusty brown damp cobble-pebble-granule fine-to-coarse sand. Heavy silt coating on clasts.	
	25	20' - 23' Glacial till. Cobble-pebble-granule fine sandy coarse-to-fine silt. No obvious clay, but coatings 1/8"+ thick. Moist, but not as moist as rust colored material above the till. Drilling very hard.	▼

NOTES: Drill hole sited adjacent to Backhoe Pit No. 12.
Adjacent to road surface.

PROJECT NO. M & H DEVELOPMENT COMPANY
BORING NO. DRILL HOLE NO. 5
ELEVATION 574'
PAGE 1 OF 2

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BECKER DRILL
REVERSE CIRCULATION

SAMPLING METHOD:

CONTINUOUS RETURN

WATER LEVEL				
DATE 6/30/90				
TIME 3:30 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	30	25' - 29' Glacial till, as above. Bottom of hole 29'. No obvious water in hole. Hole filled back in following removal of drill stem.	
	35		

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. DRILL HOLE NO. 5
ELEVATION 574'
PAGE 2 OF 2

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

"BP" Series Exploration Pits

McLucas and Associates, 1990

LEGEND

SANDY GRAVEL WITH COBBLES

SANDY GRAVEL

POORLY SORTED SAND

WELL SORTED SAND

DIAMICTON

SILT - CLAY

PEAT

BEDROCK

SILTY

DRILLING METHOD:
BACKHOE

REVERSE CIRCULATION

SAMPLING METHOD:

GRAB SAMPLE EVERY 5TH BUCKET

WATER LEVEL	10.5'				
DATE 6/21/90					
TIME 8:00 a.m.					

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	5 10 15 20 25	Moist bouldery pebble-cobble gravel with medium-to-coarse sand. Gravel particles light-to-medium silt coated. Overall, rock sound and unweathered. Gravel particles subround-to-subangular. 2-3% iron stained basalt. Some highly weathered granodiorite. Materials more stained and weathered than expected. Gravel non-compact and easy to excavate. Pit holds verticle side walls. Minor Puget Group sediments observed. Materials unsorted and unstratified. Cobbles 12" minus, but mostly 6"-to-8" material: One 2' boulder. Material contains uniform particle size distribution throughout depth. Materials appear to have been dumped in this area. +1½" material 50-to-60%. -1½" material 40-50%. Gravel predominantly andesite and basalt, but 5-to-10% granitics and metamorphics. Brownish gray color. Water in pit at 10.5'. Stayed in hole to depth. More bouldery and cobbley after 13.5 feet. No discrete sand lenses. General absence of fine sand. Appropriate and constant quantities of 3/8" and ½" material. 1' of fine gravelly silty fine sandy dark brown organic rich soils and forest duff and litter at surface. Roots extend into gravel to 3-to-4'. C soil horizon to about 2-to-3'. Bottom of hole 15.5 feet. Sand fraction of pit materials angular to subangular. Quartz and quartzite grains and basalt and andesite rock fragments in approximately equal quantities. Iron staining occurs on this fine aggregate fraction as well. -200-mesh material less than 2 percent. ¼" fraction 20-to-30%. No till observed. One coal fragment.	WATER ▼

NOTES:
M & H DEVELOPMENT COMPANY, INC.
BLACK DIAMOND SITE
SECTION 22, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., KING COUNTY, WA

PROJECT NO. 1990
BORING NO. BHP #1
ELEVATION 568'
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:
BACKHOE

SAMPLING METHOD:
GRAB SAMPLES EVERY FIVE BUCKETS

WATER LEVEL				
DATE 6/21/90				
TIME 9:45 a.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		0-2'. Fine gravelly fine sandy silty rust-brown organic-rich topsoil. C horizon to 2.5'.	
	5	2'- 10' Medium-to-coarse sandy pebble-cobble gravel identical to BHP #1. Very poorly sorted, no stratification. Predominantly 6" minus material with minor boulders to 2'. Cobbles very lightly silt coated. Material moist-to-damp. Less than 1-to-2% silt. No discrete sand lenses. 5% granitics and metamorphics. Predominantly andesite and basalt lithologies, with fairly even split between the two types.	
	10	-¼" material 60-to-70%. +1½" gravel 30-to-40%. Materials non-compact and easy to excavate. Uncemented. Hole holds walls, but easy to make ravel or slump. Same percent of iron stained material as in BHP #1. Some granitics highly weathered, and some not (70:30). Not even rude stratification. Materials generally clean. Less than 1% highly weathered or broken rock. Some broken basalt has weathering rinds less than 1/8" thick. Perhaps damper at 15'.	
	15	From 10-to-14' hit lense of 12-to-18" boulders. After 14' got into finer material, and ground much easier to excavate. Gravel wetter and has heavier silt coating. No clay observed in BHP 1 or 2. Overall, less than 1% highly weathered, iron stained, or broken rock.	
	20	Material after 14-15' predominant 2-3" with some mtrl. to 6", and wetter but not saturated. Sand still medium to coarse to this depth. Bottom hole 17'. No water standing in hole. Minor sandstone in hole. No coal observed. Iron staining may affect 2-5% of bas. particles.	
	25		

NOTES:
Minor very fine sand or coarse silt.
Color grayish brown. No till observed in pit.

PROJECT NO. M & H DEVELOPMENT
BORING NO. BHP #2
ELEVATION 600'
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BACKHOE

SAMPLING METHOD:

GRAB SAMPLES EVERY 5TH BUCKET

WATER LEVEL	6'			
DATE 6/21/90				
TIME 10:30 a.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		0-2.5' Dark brown organic-rich pebbly silty loam.	
	5	2.5'-6' Pebble-cobble silt. Gravel 40-to50%.Material damp-to-moist. Gravel clay coated, heavily. 6" minus material with occassional 12" boulders. Gummy - balls up. Very dirty sequence. ½"- low %	
	10	6' Hit ground water and surface of glacial till. Till is pebbly cobbley coarse-to-fine silty till with no sand. Cobbles and pebbles heavily clay and silt coated. Gravel sound and unweathered overall.	▼
	15	6' - 13'+ Glacial till. Harder excavating after 6'. Water running in hole. Clay and silt so heavy that can not tell gravel particle lithology. Silt fine-to-coarse. Bottom hole 13'. Water did not stand in bottom of hole, however. Not significant quantities of ground water. Till tough to excavate. Still in till when ceased excavating.	
	20		
	25		

NOTES: Material in top 6' only material that is mineable. Very little minus ½" material, however. Only silt and 1"-to-6" gravel, and nothing else.

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. BHP #3
ELEVATION 626'
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD: BACKHOE

SAMPLING METHOD: GRAB SAMPLE EVERY 5TH BUCKET

WATER LEVEL	19'			
DATE 6/21/90				
TIME 11:45				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		0-1' Dark sandy silty organic-rich soil.	
	5	1' - 8.5' Muck sand. No gravel. Very fine, moist, fluffy sand. Silty. Brown in color. Sand much finer in this pit. Roots to 10'.	
		8.5' - 9' Discrete bed of clayey? very fine silt.	
	10	Much damper. No gravel. 9' - 10' Fine-to-medium sand. Change from brown to gray in color. No gravel.	
	15	10'- 19' At 10', ground much harder to excavate. Into gravel at 10'. Greater iron staining of cobbles (10%). Sand is much finer in this hole. Predominantly basalt cobble gravel. Boulders to 12". Medium-to-heavy silt coating on particles. Gravel 40%:fine-to-medium sand 60%. May be shortage of minus 1" material. Some clay coating on some pebbles.	
	20	Below 10' depth, a pebbly cobbly fine-to-medium silty sand. Grayish brown sand fraction. Rock sound and unweathered, but iron staining common. Encountered insignificant ground water at 19'. Materials became more difficult to excavate and picked up clay balls, clay gravel coatings, and clay in sand.	▼
	25	Gravel became finer after 19'. 2" minus material with no cobbles. Bottom hole 21'. Holds water better than #1 and #2.	

NOTES: BHP #4 was excavated because fine sand was observed on road surface and because sand was generally absent in BHP #1 and #2. Sand about 10' deep, then turns into gravels identical in physical quality to materials in BHP #1 and #2. Till believed close to bottom of hole.

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. BHP #4
ELEVATION 585'
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BACKHOE

SAMPLING METHOD:

GRAB SAMPLE EVERY 5TH BUCKET

WATER LEVEL				
DATE	6/21/90			
TIME	1:00 p.m.			

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		0- 1.5' Rust-brown sandy gravelly silt loam.	
		1.5 - 4' Rusty grayish-brown sandy 2" minus pebble gravel with 40:60 sand:gravel split.	
	5	4'-15' Fine gravelly medium-to-coarse sand. ½ - 1"- material. No +1" material. Very clean. No silt, no sand that is fine. Gray in color. Moist-to-damp. Gravel subround-to-subangular. No flats or elongates. A birdseye-to-pea gravel. Contains 3-to-4" lenses. Brown in color. Silty, sandy gravel. Cobbles 3" minus. +¼" material is 30-to-40%; -¼" material 60-to-70%. Pebbles and coarse sand lightly silt coated. No clay. Overall, a fine gravelly coarse sand with scattered 3" minus cobbles. Clean - silt less than 1%. Sand angular to subangular. Composed of quartz and quartzite and andesite and basalt rock fragments. Clean sand. Moderately stratified - observed bedding dipping 5-to-10 degrees to north. Moderately well sorted materials. No iron staining observed. Scattered cobbles to 8" (3%). Principally a 1" minus hole. Bottom hole 14-to-15'. No water, but materials much damper at bottom of hole.	
	10		
	15		
	20		
	25		

NOTES:

Best Portland cement concrete aggregate backhoe pit observed on site. Materials clean, well sorted, and sound. No iron staining observed.

PROJECT NO. M & H DEVELOPMENT, INC.

BORING NO. BHP #5

ELEVATION 594'

PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:
BACKHOE

SAMPLING METHOD:
GRAB SAMPLES EVERY 5TH BUCKET.

WATER LEVEL	10'			
DATE 6/21/90				
TIME 2:45 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	5	0 - 5' below existing pit floor. Very cobbley (8"-10") coarse sandy gravel to 5' depth. 60to-70% 6" - 8" gravel. Upper 2' of 5' gravel zone is finer gravel (2"-) while lower 3' of 5' gravel zone is cobbly.	
	10	5' - 11.5' Medium-to-coarse clean sand with no gravel. Cobbles round-to-subangular with light-to-medium silt coating. Sand well sorted and stratified. Encountered water at 10'. Not significant water, but small flow from bank.	▼
	15	Rock sound and unweathered. Saw abundant iron staining in surface materials. 11' - 12' Encountered glacial till with abundant ground water. Bottom hole 14'.	
	20		
	25		

NOTES: Pit excavated in existing gravel borrow pit. Drew samples out of existing pit bank from 0-to-15 -to-20'. Also excavated below existing pit floor.

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. BHP #6
ELEVATION 562'
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD: BACKHOE

SAMPLING METHOD: GRAB SAMPLES EVERY 5TH BUCKET

WATER LEVEL				
DATE 6/22/90				
TIME 7:30 a.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		0 - 1.5' Rust brown cobbly coarse sandy silty loam.	
	5	1.5' - 10' Unstratified, unsorted, medium-to-coarse sandy pebble-cobble gravel. Sand:gravel is 50:50 split. Pebbles medium silt coated. Subround-to-subangular. No flats or elongates observed. Brown-gray color. Damp. Abundant iron staining (5%). 2-to-3% silt. No clay observed. Most gravel 3-to-4" minus with up to 16" boulders (scattered). Not a lot of material in the 1"-to-¼" range (5-to-10%?). Approximately 20% +2½" oversize material. Materials non-compact. No cementation. Easy to excavate. Pit walls hold moderately well.	
	10		
	15	10-19' Material becomes much finer - a medium-to-coarse sandy 2" minus pebble gravel. A marked change at 10'. Sand quite coarse.	
	20	19' Gravel got wet and picked up finer sand and silt, and excavation became much more difficult. Bottom hole 20'. No water in bottom of hole. Probably very close to till boundary.	
	25		

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. BHP #7
ELEVATION 571'
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

SANDY GRAVEL WITH COBBLES

SANDY GRAVEL

POORLY SORTED SAND

WELL SORTED SAND

DIAMICTON

SILT - CLAY

PEAT

BEDROCK

SILTY

DRILLING METHOD:
BACKHOE

SAMPLING METHOD:
GRAB SAMPLES EVERY 5TH BUCKET

WATER LEVEL				
DATE 6/22/90				
TIME 9:00 a.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
	5	0 - 6' Coarse gravelly silty loam. 6" minus material. Fine-to-coarse sandy fine gravel. Predominantly 1"- with less than 5% 3"- cobbles. Damp grayish brown. Clean. Less than 2% silt. Pea gravel. Gravel subround-to-subangular. Gravel light silt coated. After 4-to-6' depth, beds dip 15-to-20 degrees to north. Predominantly 3"- rock with boulders to 12". Sand to gravel ratio may be 50:50 or 40:60. Predominant rock size is 1"-. Abundant ½" and 3/8" material. Fine sand represents 1-to-2%. Uncompact and gravelly materials - may be worst hole to date in this regard. Rather rude stratification. Moderately well sorted. No flat or elongate gravel clasts observed. Predominantly andesite and basalt. Granitics 5-to-10%. Rock sound and unweathered. Less than 1% weathered, broken, iron stained, or Puget Group sediments.	
	10		
	15		
	20	Hole is fairly uniform in particle size. Good size distribution. 6" minus deposit, but predominantly 2" minus. Not much fine sand. Very clean sequence with less iron staining than other holes. This pit is most equivalent to BHP #5. Very good hole. Not excessive oversize as in other pits (except #5).	
	25	Bottom of hole 23'. No water and no signals that it is close to any ground water or glacial till. Materials damp throughout entire depth of materials excavated.	

NOTES: Pit excavated in shallow (10' deep) borrow pit at bottom of 10' exposure. Southwesterly steep dip in bedding near top of face, and 1-to-2' sequence of fine muck sand at top. See attached photographs.

PROJECT NO. M & H DEVELOPMENT COMPANY
BORING NO. BHP #8
ELEVATION 589'
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BACKHOE

SAMPLING METHOD:

GRAB SAMPLES EVERY 5th BUCKET

WATER LEVEL	9'			
DATE 6/22/90				
TIME 10:30 a.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		0 - 2' Soil. Blackish brown clayey, silty humus.	
	5	2' - 3' C soil horizon with 40% pebble gravelly sand and silt with organic material. Contains large pebbles to 15% of total materials.	
		3' - 5' Fine-to-medium sand. Brown sand. Damp. Water started into hole at 5'.	
	10	5' - 9' Fine medium silty sand with 6" lense of clay and hard yellowish tan medium-to-fine sand just above gravel at 9'. Standing water in hole at 9'. Sand is clean with less than 2 percent silt. No clay.	▼
	15	Below 9', gravel sound and unweathered, moderately silty. Good range between ¼" and 2" material, except coarse sand is missing. Sand fine-to-medium in size. Sand moderately to very silty. Noted iron staining on some pebbles. The hard sand lens is fine-to-medium in size. Clean. Breaks up in hard but uncemented pieces. This pit holds walls better than any other pit dug to this point.	
	20	Last bucket pulled up 6"-to-8" cobbles. More cobbley at 14'. Bottom hole 14'. Top of standing water about 12'. The gravelly phase in this hole is approximately 50:50 or 60:40 gravel to sand. 2-3"-pebble gravel with few cobbles until 14' when they occur to 15-to20% of total. The sand fraction in upper 10' does not contain any gravel. Good muck sand. Interesting hole.	
	25	No till observed and no real clay. One coal fragment seen.	

NOTES: This pit excavated in bottom of intermittent stream (wetland) near northwestern corner of study area.

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. BHP #9
ELEVATION 557'
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

SANDY GRAVEL WITH COBBLES

SANDY GRAVEL

POORLY SORTED SAND

WELL SORTED SAND

DIAMICTON

SILT - CLAY

PEAT

BEDROCK

SILTY

DRILLING METHOD:

BACKHOE

SAMPLING METHOD:

GRAB SAMPLE EVERY 5TH BUCKET

WATER LEVEL				
DATE 6/22/90				
TIME 12:00 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		0 - 1' Medium brown silty loam.	
	5	1' - 6' Silty fine sand with no gravel. Moist.	
		6' - 8' Gradational zone of fine pebbly (2"-) fine-to-medium sand with 30% gravel.	
	10	8' - 10' Gray fluffy medium sand. Clean. Less than 2% silt. No gravel.	
	15	10' Change to pebble-cobble fine-to-medium sand. Maximum cobble size 10". Most is 2"-3" diameter. Pebbles light silt coated, round-to-subangular. Observed 2-to-3% iron stained gravel. Hole stratified in upper zone. Materials well sorted. Gravel zone less well sorted. No flat or elongated clasts noted. Less than 1% of gravel broken or weathered. Lithology identical to rest of site. Entire pbble gravel sequence below 9-to-10' has been uniformly hard to excavate, but not glacial till. No clay. No ground water. The gravel fraction does not have an abundance of ¼" to ½" material (10%?). Above that size range, the sequence is well graded. No coarse sand and little ¼" to ½" material. Bottom of hole 19' No water in hole. Gravel only damp More cobbly about 17'. 3-6" cobbles (20%?).	
	20		
	25		

NOTES: Hole holds vertical walls as in BHP #9. Compact and hard to excavate, but does not represent glacial till, as mapped.

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. BHP #10
ELEVATION 586'
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

- SANDY GRAVEL WITH COBBLES
- SANDY GRAVEL
- POORLY SORTED SAND
- WELL SORTED SAND
- DIAMICTON
- SILT - CLAY
- PEAT
- BEDROCK
- SILTY

DRILLING METHOD:

BACKHOE PIT EXCAVATION

SAMPLING METHOD:

GRAB SAMPLE EVERY 5th BUCKET

WATER LEVEL				
DATE 6/22/90				
TIME 1:00 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		0 - 1' Gravelly silt loam.	
		1 - 5' Rudely stratified poorly sorted medium-to-coarse sandy pebble-cobble gravel. Greenish gray in color.	
	5	Clean medium-to-coarse sand with 3-to-5% 2" minus gravel and less than 1% silt. Exceptionally clean sand. Quartz and quartzite predominantly, followed in content by andesite and basalt rock fragments. Very clean. Fine. 1" stringers (stratified) of fine gravel representing 5% of total. Moist. Ssnd holds vertical wall, but easy to excavate.	
	10	Upper 5' gravel phase is 60-to-70% gravel. Silty and dirty (3-to5% silt), but no clay. Average gravel size 2" minus; maximum size 6".	
	15		
	20	Bottom of hole 18.5'. No significant ground water or glacial till/clay. Bottomed in the sand unit that begins at 5'.	
	25		

NOTES:

Exceptionally clean hole. Both and gravel phses contain less than 1-2% silt. Gravel occurs as fine 1" stringers.

PROJECT NO. M & H DEVELOPMENT, INC.

BORING NO. BHP # II

ELEVATION 568'

PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

SANDY GRAVEL WITH COBBLES

SANDY GRAVEL

POORLY SORTED SAND

WELL SORTED SAND

DIAMICTON

SILT - CLAY

PEAT

BEDROCK

SILTY

DRILLING METHOD:

BACKHOE PIT EXCAVATION

SAMPLING METHOD:

GRAB SAMPLES EVERY 5TH BUCKET

WATER LEVEL				
DATE 6/22/90				
TIME 2:15 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		0 - 1' Fine ¼" minus gravelly silt loam. Dark rich chocolate brown.	
	5	1' - 10' Medium-brown fine gravelly silty fine sand. 2" minus gravel 1-to-2% or less. Moist. Balls up in hand, but no clay. At 5' and at 10' hit 6-to-12" band of fine 2" minus gravel with 50-to-60% fine sand. Biggest particle 3".	
	10		
	15	At 15' may be picking up more moisture. Sand gets grayer with depth. Found clay balls in sand.	
	20	At 17.5' observed big clumps of clay/till?; material becoming more difficult to excavate. Pit held absolutely vertical walls. Up to 12" boulder at 18', as well as two 6" cobbles. At 20' into usual coarse cobbly gravels. No 1" to fine sand particles. Only fine sand and pebble and cobble gravel until 17.5-to-18' when backhoe got into clay balls and cobbly material. Iron staining observed on cobbles. There's a 6" lens of clay over gravel phase at 20' (gray/tan) that underlies the sand.	
	25		

NOTES: Pit excavated on side of hill by gravel road.
Bottom hole 20'. No water in hole.

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. BHP #12
ELEVATION 578'
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

SANDY GRAVEL WITH COBBLES

SANDY GRAVEL

POORLY SORTED SAND

WELL SORTED SAND

DIAMICTON

SILT - CLAY

PEAT

BEDROCK

SILTY

DRILLING METHOD:

BACKHOE PIT EXCAVATION

SAMPLING METHOD:

GRAB SAMPLE IN OLD BORROW PIT. COLLECTED SAMPLE AT TOP OF EXISTING STOCKPILE. 20 foot exposure.

WATER LEVEL				
DATE 6/22/90				
TIME				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		No stratigraphic log required. Grab sample at top of existing borrow pit stockpile.	

NOTES:

Not a backhoe pit. Collected sample for lithologic analysis from surface of old borrow pit stockpile.

PROJECT NO. M & H DEVELOPMENT, INC.

BORING NO. BHP #13

ELEVATION

PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

LEGEND

SANDY GRAVEL WITH COBBLES

SANDY GRAVEL

POORLY SORTED SAND

WELL SORTED SAND

DIAMICTON

SILT - CLAY

PEAT

BEDROCK

SILTY

DRILLING METHOD:

BACKHOE PIT EXCAVATION

SAMPLING METHOD:

GRAB SAMPLE EVERY 5th BUCKET

WATER LEVEL				
DATE 6/22/90				
TIME 3:00 p.m.				

STRATA	DEPTH	DESCRIPTION	WATER TABLE(S)
		0 - 1' Chocolate brown soil. Pebbly silty loam with 3" minus pebbles.	
	5	1' - 3' Medium brown silty fine sandy C horizon with 20-to-30% gravel. Material from medium sand to 2" minus gravel scarce. Mostly pebble-cobble silt and fine sand. Moist.	
		3' - 4' Gray medium sand with 5% fine gravel.	
		4' - 6' Very cobbly bouldery medium sandy gravel. Dirty (5% silt). 40-50% fine-to-medium sand. Poorly sorted, not stratified.	
	10	6' - 10' Finer pebble-cobble gravel with 30-to-40% medium sand. Cleaner than above. Rock sound, unweathered. Light-to-moderately silt coated. Moist-to-damp. Gray brown. No flats or elongates.	
	15	10' Into material with coarse sand and abundant ¼" to 2" size (predominant) and boulders to 1'. Approximately 2-to-3% silt. Damper. Not much 1-to-3" gravel. Predominantly ¼" to 1" and cobble and boulders with coarse sand. Some iron staining observed. 10% 3"+ mtrl. 20-to-30% 1½"+ material.	
	20	Bottom hole 16'. No ground water observed. In gravelly coarse sand. Looks like other coarse gravel throughout site.	
	25		

NOTES:

PROJECT NO. M & H DEVELOPMENT, INC.
BORING NO. BHP #14
ELEVATION 598
PAGE 1 OF 1

McLUCAS AND ASSOCIATES, INC.
P.O. BOX 5352
LACEY, WA. 98503

"TP" Series Exploration Pits

Golder Associates, 2006

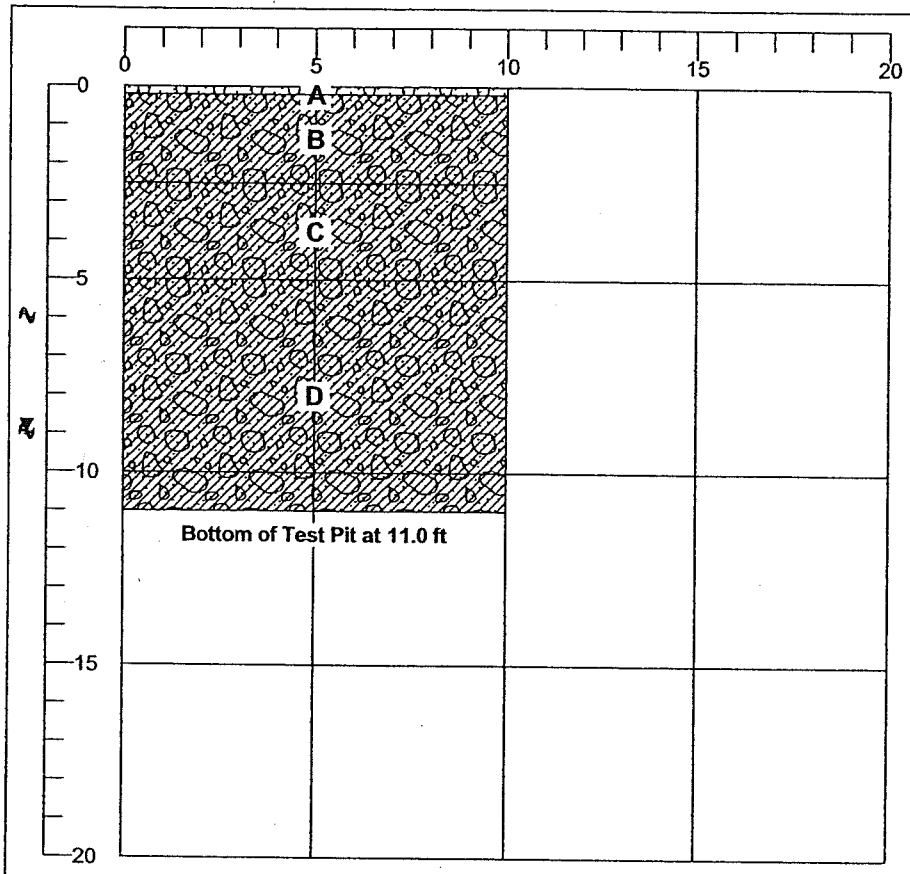
LOG OF TEST PIT TP-01

Golder Associates

Temp 45 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 584.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 13, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.5	
2	3.0	
3	8.0	7.9
4	11.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.2 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 0.2 - 2.5 ft: Loose, orange-brown, silty fine to coarse SAND with little to some, subrounded, fine to coarse gravel, little cobbles and trace boulders, moist (SM) (WEATHERED LODGEMENT TILL)

C 2.5 - 5.0 ft: Compact, brown-gray, non-stratified, iron-oxide stained, silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel and trace cobbles, moist (SM) (SLIGHTLY WEATHERED LODGEMENT TILL)

D 5.0 - 11.0 ft: Very dense, gray-brown, non-stratified, silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel and trace cobbles, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
08:20	0.0		
08:40			6.0
08:45			9.0
09:10	11.0		

SPECIAL NOTES:

No caving was observed.
Minor water seepage was observed at 6 and 9 feet.

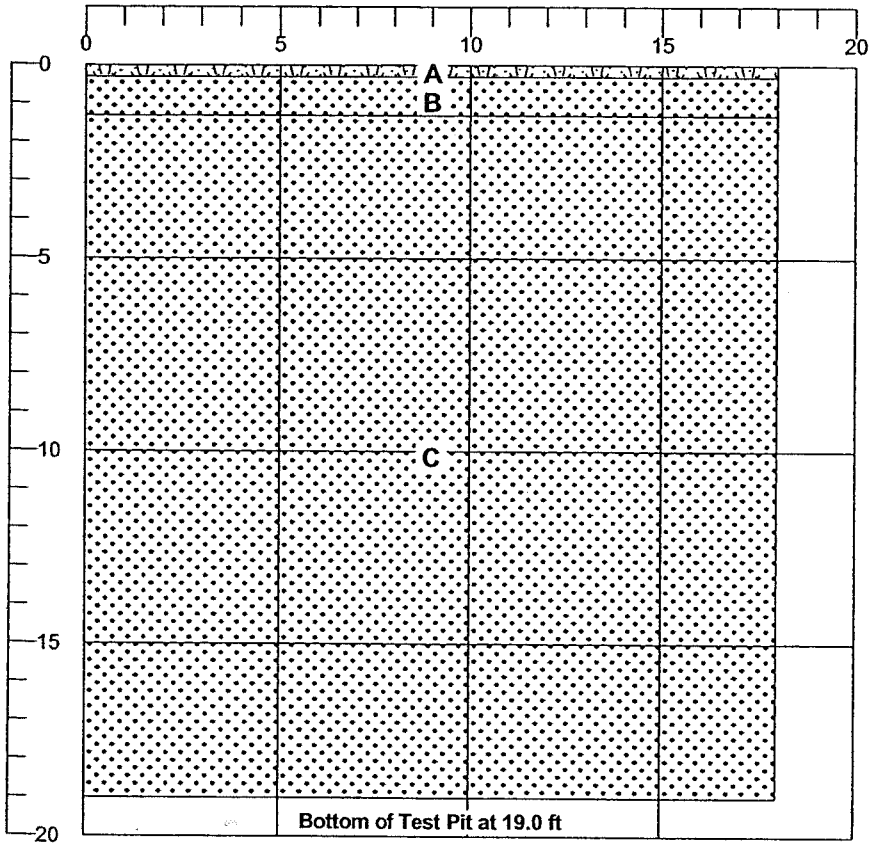
LOG OF TEST PIT TP-02

Golder Associates

Temp 50 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 515.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 13, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	0.7	
2	4.0	4.2
3	4.1	
4	8.0	
5	8.1	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL/GRASS)

B 0.3 - 1.3 ft: Loose, orange brown, non-stratified, silty fine to coarse SAND with some subrounded, fine to coarse gravel and little cobbles, damp (SM) (WEATHERED RECESSIONAL OUTWASH)

C 1.3 - 19.0 ft: Compact, brown, non-stratified, fine to coarse GRAVEL and medium to coarse sand with little cobbles and trace silt, damp (GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
10:15	0.0		
11:00	19.0		

SPECIAL NOTES:
Major caving was observed between 0 to 19 feet.
No water seepage was observed.

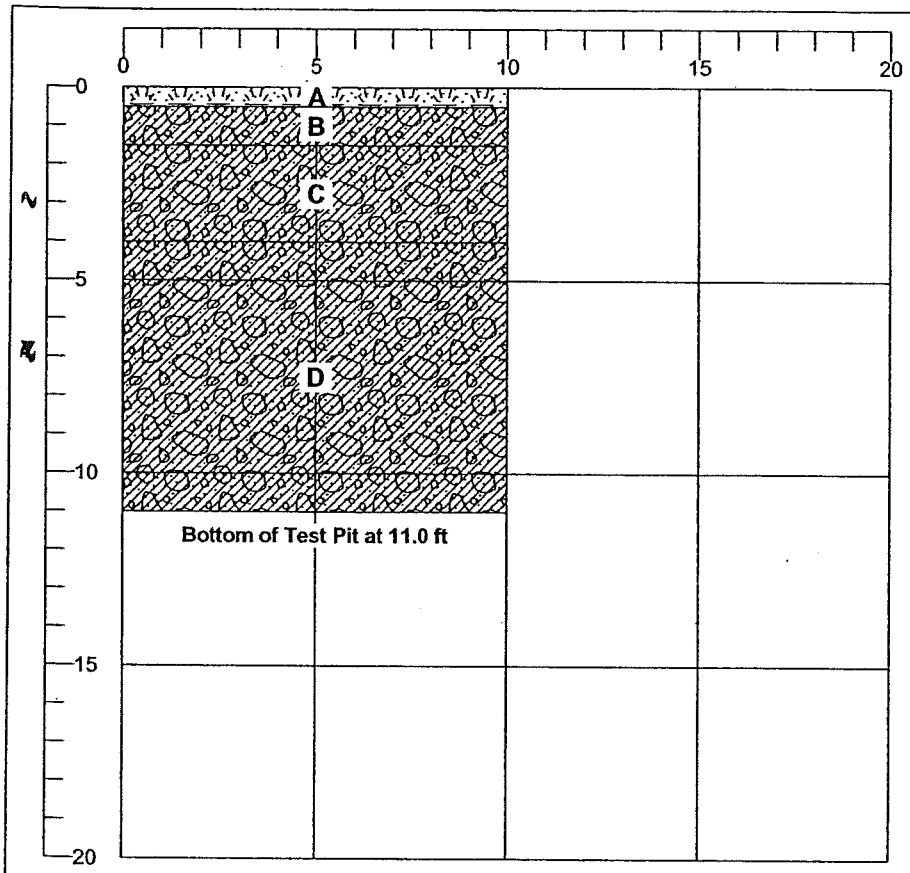
LOG OF TEST PIT TP-03

Golder Associates

Temp 50 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 584.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 13, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.0	
2	4.0	13.1
3	10.0	7.8

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 0.5 - 1.5 ft: Loose, orange-brown, silty fine to coarse SAND with little to some, subrounded gavel, moist (SM) (WEATHERED TILL)

C 1.5 - 4.0 ft: Compact to dense, brown-gray, non-stratified, fine to coarse GRAVEL and fine to coarse sand with little silt, trace cobbles, and trace boulders, moist to wet (SP/SM) (LODGEMENT TILL)

D 4.0 - 11.0 ft: Dense to very dense, gray, non-stratified, silty fine to coarse SAND with some subrounded, socketed, fine gravel and trace cobbles, damp (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
11:30	0.0		
11:40			3.0
11:45			7.0
12:00	11.0		

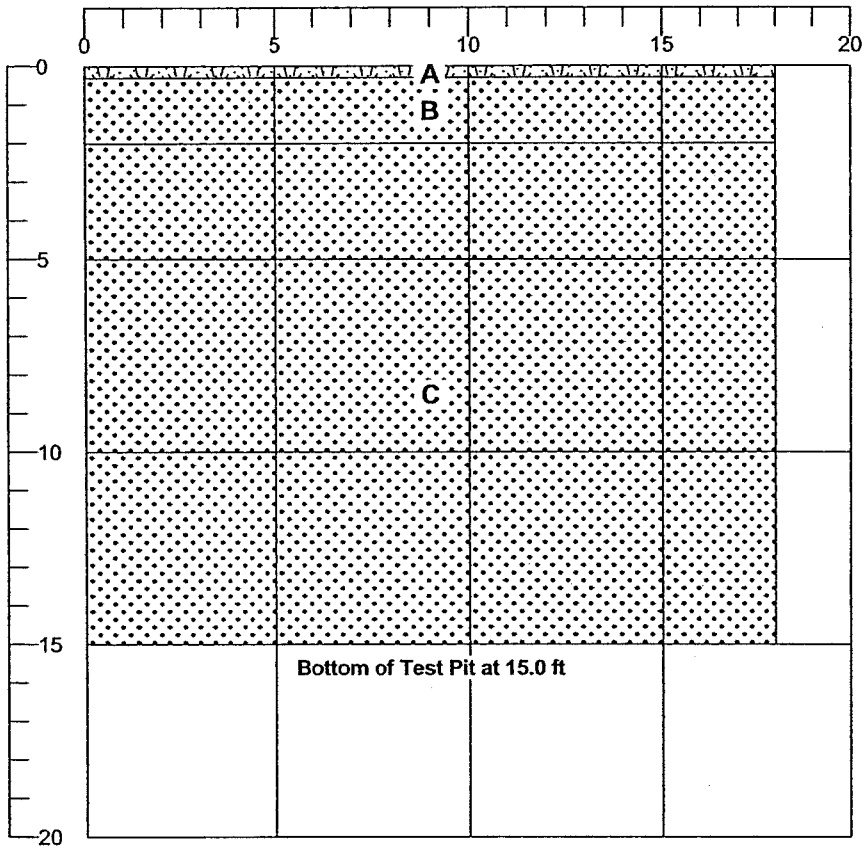
SPECIAL NOTES:

No caving was observed.
Minor water seepage was observed at 3 and 7 feet.

LOG OF TEST PIT TP-04

Golder Associates

Temp 50 °F Weather Sunny | Engineer A. Dennison | Operator Tim
Equipment 312 C Cat Trackhoe | Contractor MidMountain Contractors | Date March 13, 2006
Elevation 551.0 ft | Datum MSL | Job 063-1076.200
Location Black Diamond, WA



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.0	
2	4.0	
3	4.1	
4	14.0	4.1

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL/GRASS)

B 0.3 - 2.0 ft: Loose, orange brown, non-stratified, silty fine to coarse SAND with some subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 2.0 - 15.0 ft: Compact, brown, non-stratified, fine to coarse SAND and subrounded, fine to coarse GRAVEL with trace silt, damp (SW-GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
12:20	0.0		
13:00	15.0		

SPECIAL NOTES:
Major caving was observed between 0 to 14 feet.
No water seepage was observed.

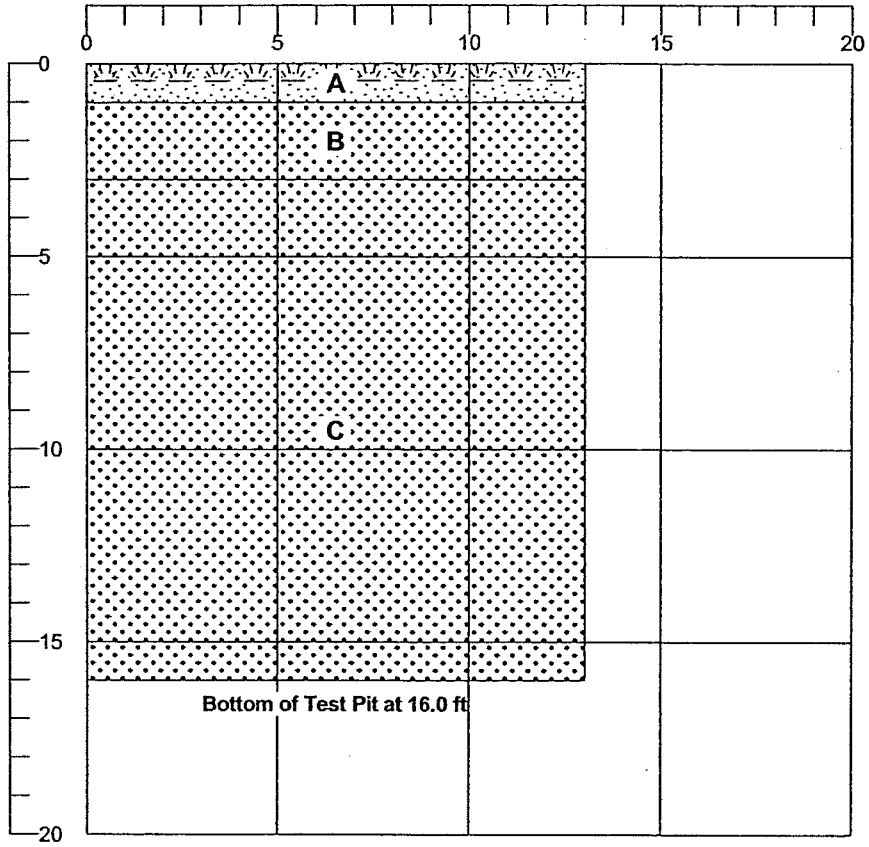
LOG OF TEST PIT TP-05

Golder Associates

Temp 50 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 538.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 13, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	4.0	
3	8.0	
4	8.1	
5	15.0	3.6

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown to black, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 1.0 - 3.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with some subrounded, fine to coarse gravel and little cobbles, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 3.0 - 16.0 ft: Compact, brown, non-stratified, fine to coarse SAND and subrounded, fine to coarse GRAVEL with little cobbles, trace boulders, and trace silt, damp (SW-GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
13:05	0.0		
13:45	16.0		

SPECIAL NOTES:

Minor caving was observed between 1 to 15 feet.
No water seepage was observed.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

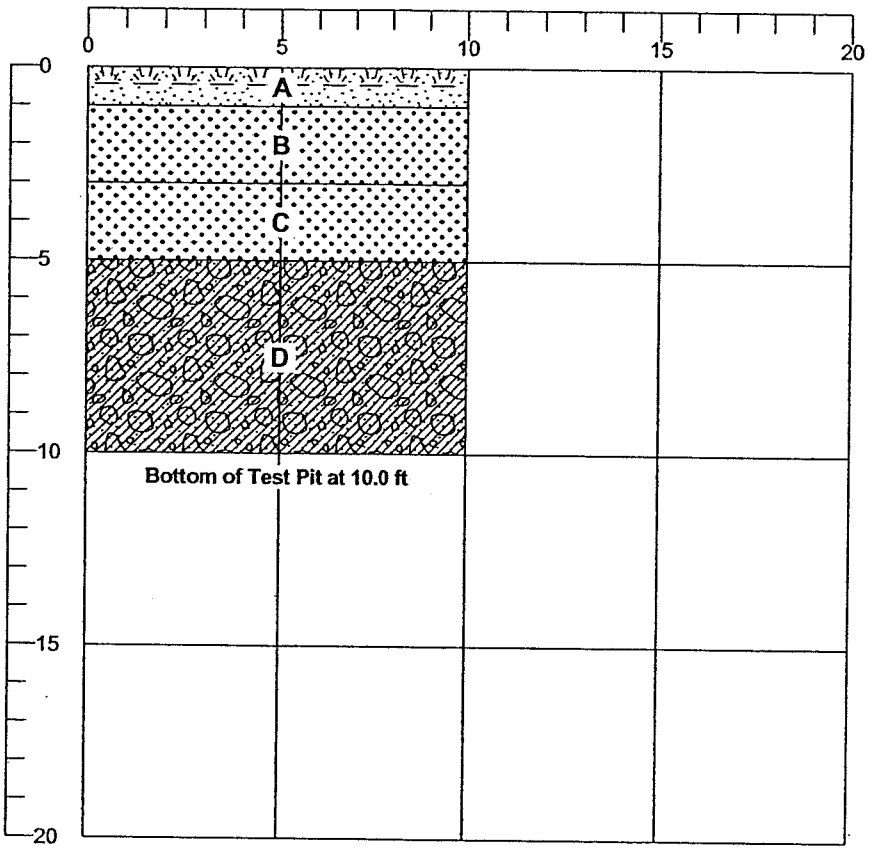
LOG OF TEST PIT TP-06

Golder Associates

Temp 50 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 540.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 13, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	4.0	
3	7.0	11

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown to black, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 1.0 - 3.0 ft: Loose, orange brown, non-stratified, silty fine to coarse SAND with some subrounded, fine to coarse gravel, little cobbles, and trace to little boulders, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 3.0 - 5.0 ft: Compact, brown, non-stratified, fine to meduim SAND with some subrounded, coarse sand and little fine to coarse gravel, damp to moist (SP) (RECESSIONAL OUTWASH)

D 5.0 - 10.0 ft: Very dense, brown-gray, non-stratifed, silty fine to coarse SAND with some, subrounded, socketed, fine to coarse gravel, little cobbles and trace boulders, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
14:15	0.0		
14:50	10.0		

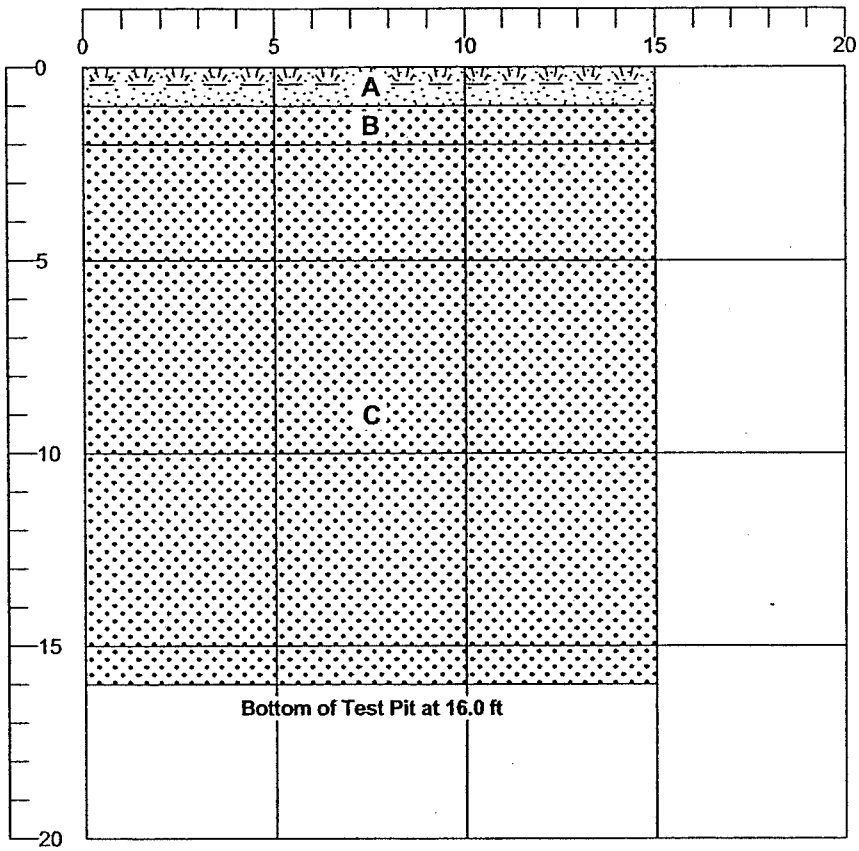
SPECIAL NOTES:
No caving was observed.
No water seepage was observed.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

LOG OF TEST PIT TP-07

Golder Associates

Temp 45 °F Weather Partly Cloudy Engineer A. Dennison Operator Tim
Equipment 312 C Cat Trackhoe Contractor MidMountain Contractors Date March 14, 2006
Elevation 535.0 ft Datum MSL Job 063-1076.200
Location Black Diamond, WA



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.5	
2	4.0	3.4
3	4.1	
4	14.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL)

B 1.0 - 2.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with little, subrounded, fine to coarse gravel, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 2.0 - 16.0 ft: Compact, brown, non-stratified, fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, dry to damp (SP) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
07:50	0.0		
08:20	16.0		

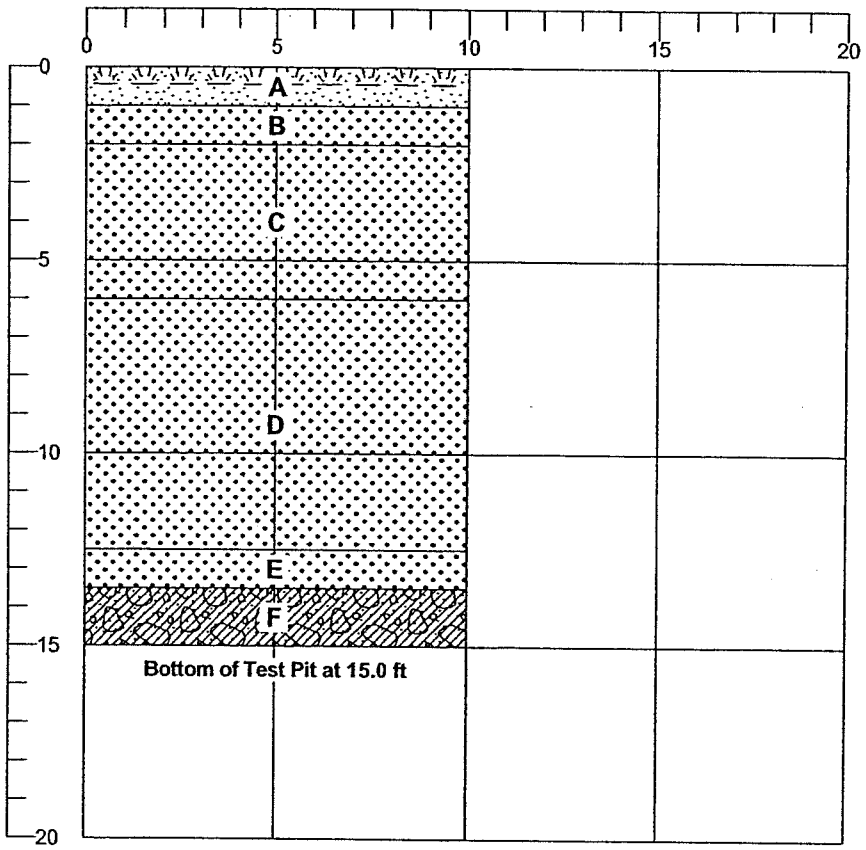
SPECIAL NOTES:

Moderate caving was observed between 2 to 10 feet.
No water seepage was observed.

LOG OF TEST PIT TP-08

Golder Associates

Temp 45 °F Weather Partly Cloudy Engineer A. Dennison Operator Tim
Equipment 312 C Cat Trackhoe Contractor MidMountain Contractors Date March 14, 2006
Elevation 535.0 ft Datum MSL Job 063-1076.200
Location Black Diamond, WA



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	4.0	
2	4.1	
3	7.0	
4	11.0	
5	13.0	3.3
6	14.0	
7	15.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with organics, moist (SM) (TOPSOIL)

B 1.0 - 2.0 ft: Loose to compact, orange-brown, silty fine to coarse SAND with some fine to coarse gravel and trace cobbles, mosit (SM) (WEATHERED RECESSIONAL OUTWASH)

C 2.0 - 6.0 ft: Compact to dense, brown, non-stratified, fine to coarse SAND and fine to coarse GRAVEL with some cobbles, little boulders, and trace silt, moist (SP) (RECESSIONAL OUTWASH)

D 6.0 - 12.5 ft: Compact, gray, fine to medium SAND with little fine to coarse gravel and trace silt, moist (SP) (RECESSIONAL OUTWASH)

E 12.5 - 13.5 ft: Compact to dense, gray-brown, non-stratifed, fine to coarse GRAVEL with some fine to coarse sand and trace silt, damp (GP) (RECESSIONAL OUTWASH)

F 13.5 - 15.0 ft: Very dense, gray, non-stratified, silty fine to medium SAND with some, socketed, fine to coarse gravel, and trace to little cobbles, moist (SM) (LODGEMENTTILL)

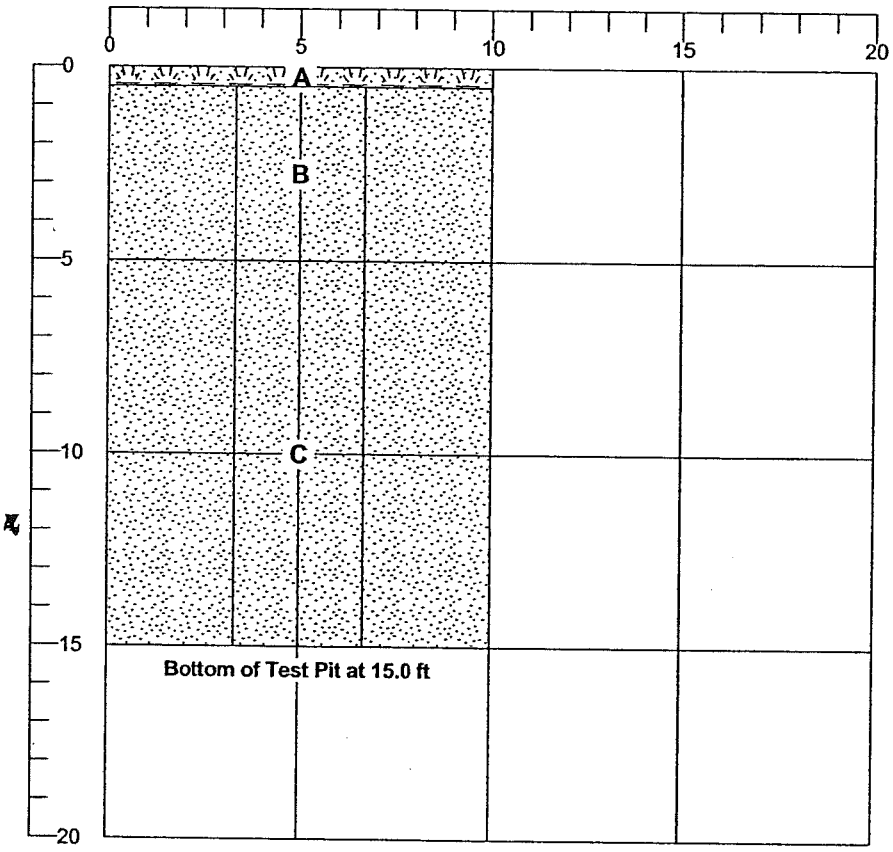
TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
08:30	0.0		
09:30	15.0		

SPECIAL NOTES:
No caving was observed.
No water seepage was observed.

LOG OF TEST PIT TP-09

Golder Associates

Temp 45 °F Weather Partly Cloudy Engineer A. Dennison Operator Tim
Equipment 312 C Cat Trackhoe Contractor MidMountain Contractors Date March 14, 2006
Elevation 515.0 ft Datum MSL Job 063-1076.200
Location Black Diamond, WA



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	3.0	
2	6.0	9.1
3	12.0	9.2

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL)

B 0.5 - 5.0 ft: Loose to compact, orange-brown, non-stratifed, silty fine to coarse SAND with trace, subrounded, fine to coarse gravel, moist (SM) (WEATHERED DRIFT)

C 5.0 - 15.0 ft: Dense to very dense, brown-gray, non-stratified, iron-oxide stained, fine to coarse GRAVEL and fine to coarse sand with some silt and trace cobbles, moist (SP-SM) (DRIFT)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
10:00	0.0		
10:20			12.0
10:30	15.0		

SPECIAL NOTES:
No caving was observed.
Moderate water seepage was observed at 12 feet.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

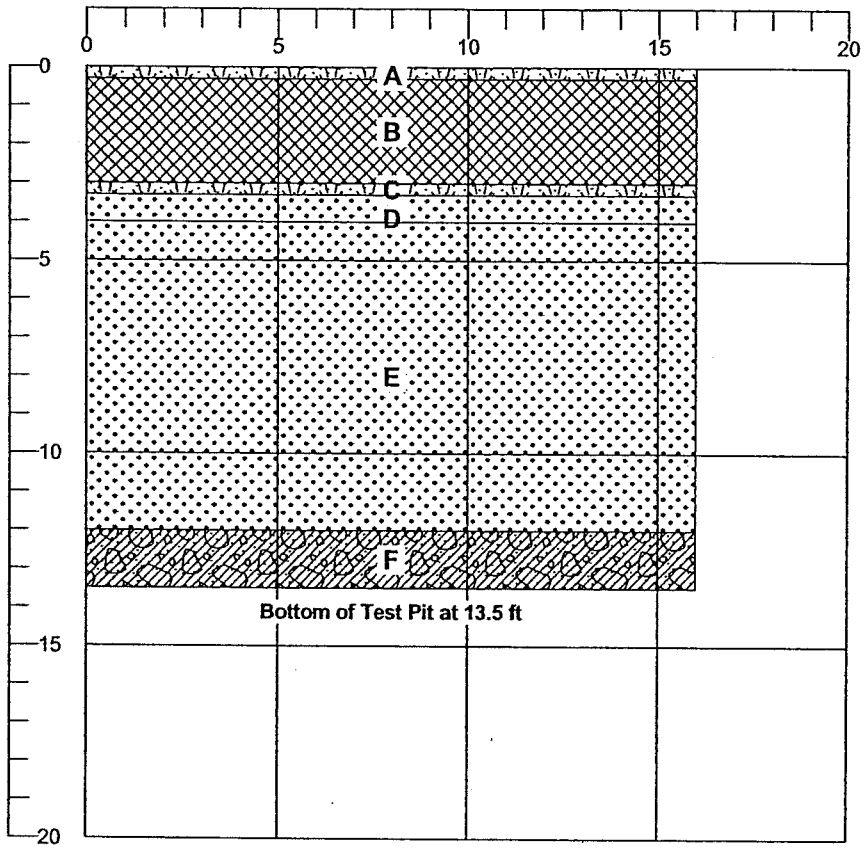
LOG OF TEST PIT TP-10

Golder Associates

Temp 50 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 541.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 14, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	6.0	
2	6.1	3.2
3	13.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL)

B 0.3 - 3.0 ft: Loose, brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace silt, moist (SM) (FILL)

C 3.0 - 3.3 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (BURIED TOPSOIL/FILL)

D 3.3 - 4.0 ft: Loose, orange-brown, non-stratifed, silty fine to coarse SAND with some, subrounded, fine to coarse gravel, and trace cobbles, moist (SP) (WEATHERED RECESSIONAL OUTWASH)

E 4.0 - 12.0 ft: Compact, brown-gray, non-stratified, fine to coarse SAND and subrounded, fine to coarse GRAVEL with trace cobbles, damp (SW-GW) (RECESSIONAL OUTWASH)

F 12.0 - 13.5 ft: Very dense, brown-gray, non-stratified, silty fine to coarse SAND with some, socketed, subrounded, fine to coarse gravel, little cobbles, and trace boulders, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
10:45	0.0		
11:15	13.5		

SPECIAL NOTES:
Moderate to major caving was observed between 3 to 10 feet.
No water seepage was observed.

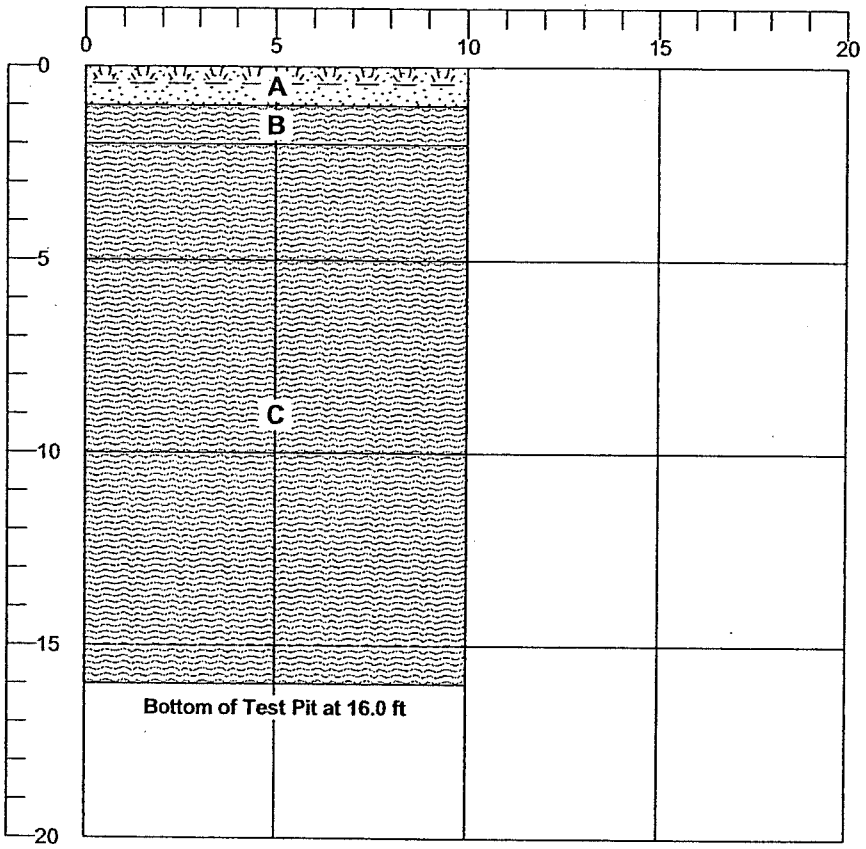
LOG OF TEST PIT TP-11

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 499.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 14, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	4.5	
3	11.0	27.8
4	16.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL)

B 1.0 - 2.0 ft: Compact, orange-brown, non-stratifed, silty fine to medium SAND, moist (SM) (KETTLE LAKE DEPOSIT)

C 2.0 - 16.0 ft: Compact, gray, laminated, iron-oxide stained, SILT with some fine sand, trace organcis, moist (ML) (KETTLE LAKE DEPOSIT)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
11:30	0.0		
12:15	16.0		

SPECIAL NOTES:
No caving was observed.
No water seepage was observed.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

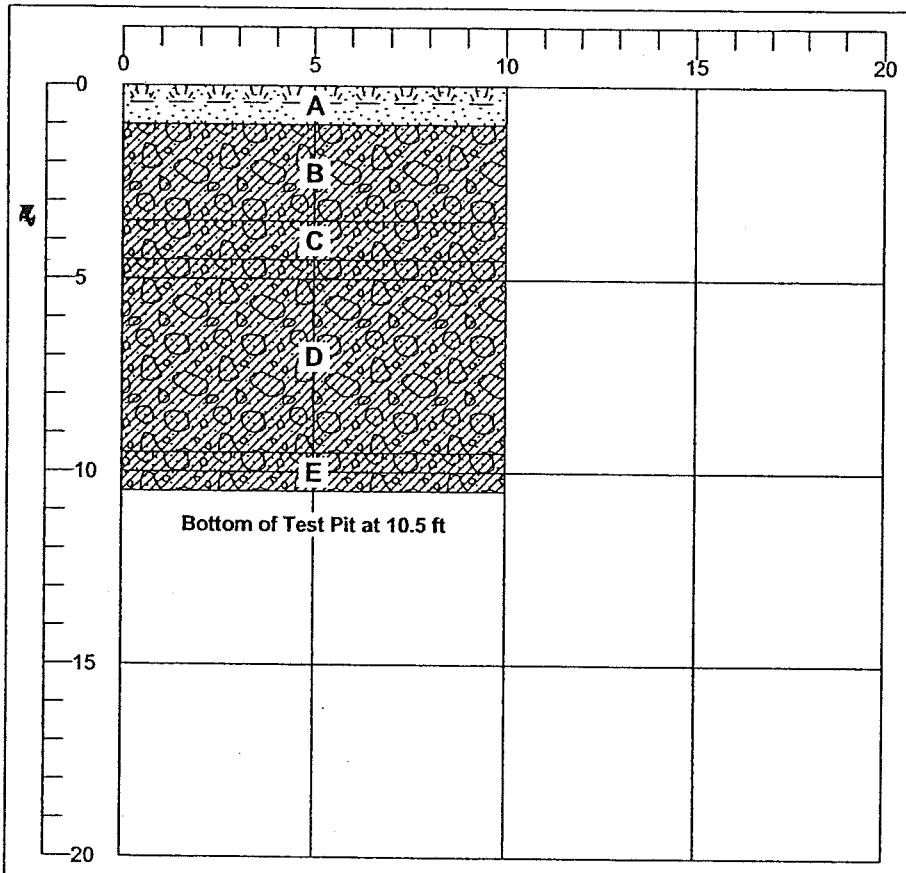
LOG OF TEST PIT TP-12

Golder Associates

Temp 45 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 565.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 15, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	6.0	
2	9.0	13.4
3	12.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL)

B 1.0 - 3.5 ft: Loose, orange-brown, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED LODGEMENT TILL)

C 3.5 - 4.5 ft: Compact, gray-brown, non-stratified, iron-oxide stained, silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel and trace cobbles, moist to wet (SM) (SLIGHTLY WEATHERED TILL)

D 4.5 - 9.5 ft: Dense to very dense, brown-gray, non-stratified, silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel and trace cobbles, moist (SM) (LODGEMENT TILL)

E 9.5 - 10.5 ft: Very dense, gray, non-stratified, silty fine to coarse SAND with some, socketed, subrounded, fine to coarse gravel, trace cobbles, and trace boulders, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
08:40	0.0		
08:50			3.5
09:20	10.5		

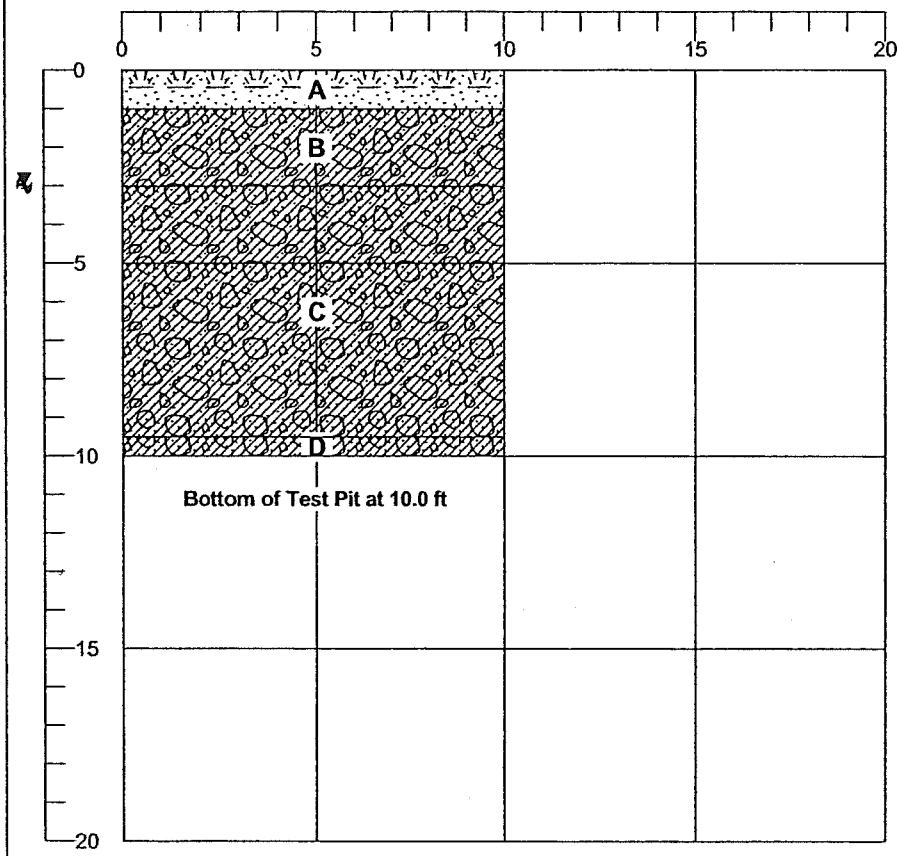
SPECIAL NOTES:

No caving was observed.
Minor water seepage was observed at 3.5 feet.

LOG OF TEST PIT TP-13

Golder Associates

Temp 45 °F Weather Overcast | Engineer A. Dennison | Operator Tim
Equipment 312 C Cat Trackhoe | Contractor MidMountain Contractors | Date March 15, 2006
Elevation 636.0 ft | Datum MSL | Job 063-1076.200
Location Black Diamond, WA



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	4.0	
3	7.0	
4	10.0	9.5

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 1.0 - 3.0 ft: Compact, orange-brown, silty fine to coarse SAND with some, subrounded, fine to coarse gravel, trace cobbles, and trace 3-ft diameter boulders, moist (SM) (WEATHERED LODGEMENT TILL)

C 3.0 - 9.5 ft: Dense to very dense, brown-gray, non-stratified,silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel, trace cobbles, and trace boulders, moist (SM) (LODGEMENT TILL)

D 9.5 - 10.0 ft: Very dense, gray to blue-gray, non-stratified, silty fine to coarse SAND with some, socketed, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (LODGEMENT TILL)

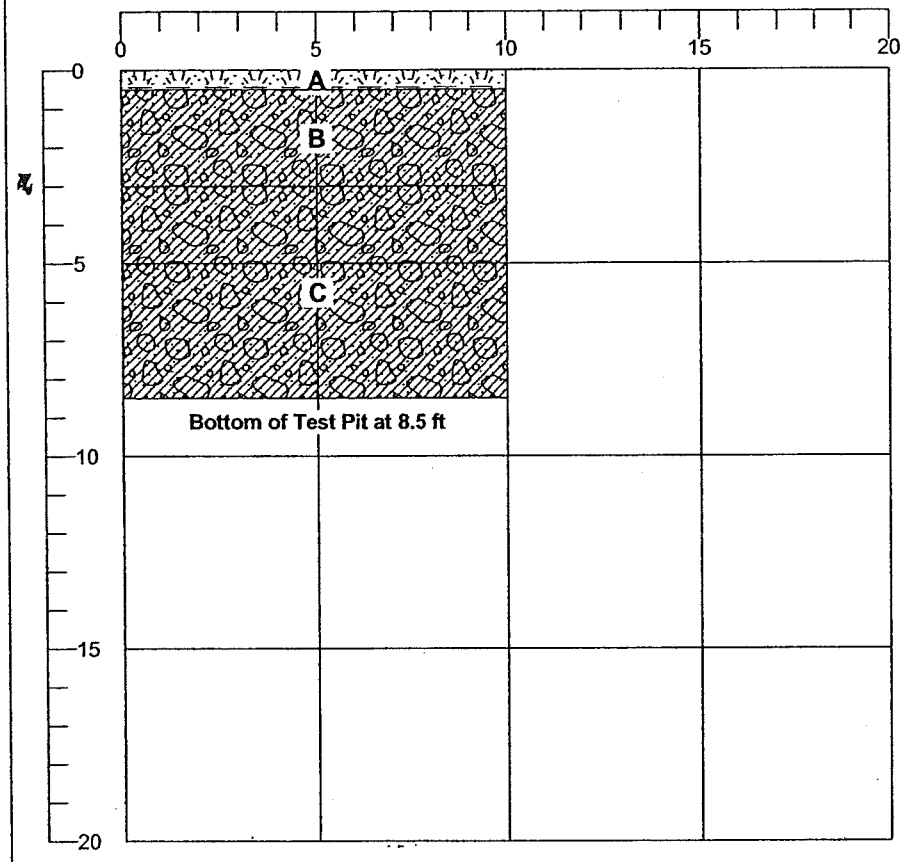
TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
09:50	0.0		
10:00			3.0
10:40	10.0		

SPECIAL NOTES:
No caving was observed.
Minor water seepage was observed at 3 feet.

LOG OF TEST PIT TP-14

Golder Associates

Temp 45 °F Weather Overcast | Engineer A. Dennison | Operator Tim
Equipment 312 C Cat Trackhoe | Contractor MidMountain Contractors | Date March 15, 2006
Elevation 662.0 ft | Datum MSL | Job 063-1076.200
Location Black Diamond, WA



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	6.0	6.7

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 0.5 - 3.0 ft: Compact, orange-brown, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED LODGEMENT TILL)

C 3.0 - 8.5 ft: Dense to very dense, gray-brown, non-stratified,silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel, and trace cobbles, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
11:00	0.0		
11:10			3.0
11:15	8.5		

SPECIAL NOTES:

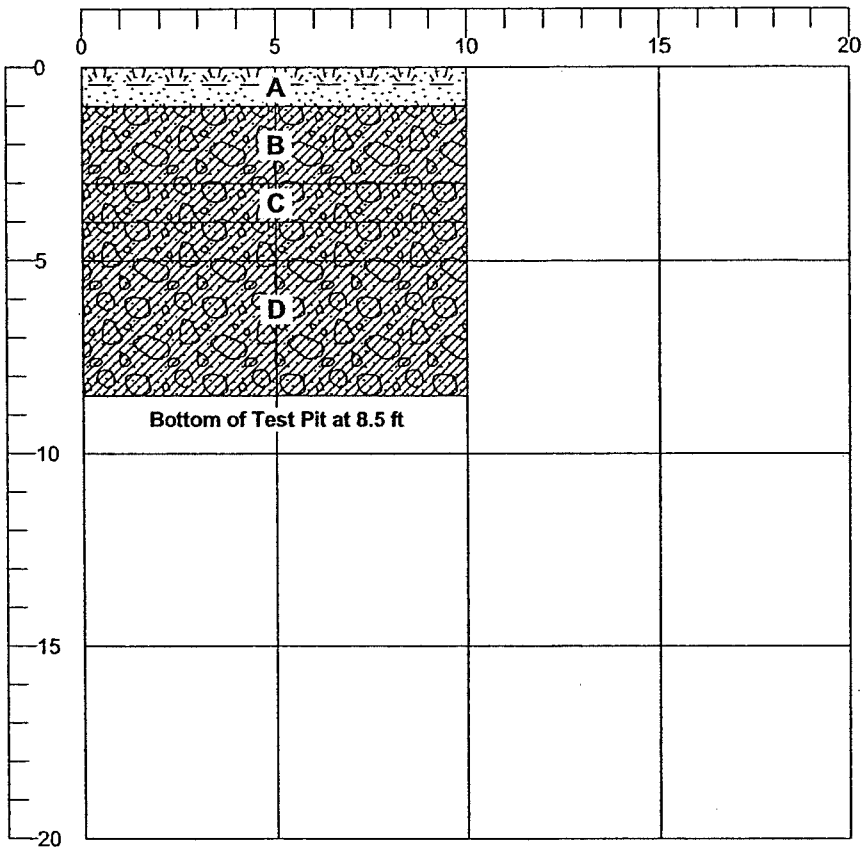
No caving was observed.
Minor water seepage was observed at 3 feet.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

LOG OF TEST PIT TP-15

Golder Associates

Temp 45 °F Weather Overcast | Engineer A. Dennison | Operator Tim
Equipment 312 C Cat Trackhoe | Contractor MidMountain Contractors | Date March 15, 2006
Elevation 673.0 ft | Datum MSL | Job 063-1076.200
Location Black Diamond, WA



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	8.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 1.0 - 3.0 ft: Loose, orange-brown, silty fine to coarse SAND with some, subrounded, fine to coarse gravel, and trace cobbles, moist (SM) (WEATHERED LODGEMENT TILL)

C 3.0 - 4.0 ft: Dense, light brown, non-stratified, iron-oxide stained, silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel and trace cobbles, moist (SM) (SLIGHTLY WEATHERED LODGEMENT TILL)

D 4.0 - 8.5 ft: Dense to very dense, gray-brown, non-stratified, silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel, little cobbles, and trace boulders, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
11:45	0.0		
12:05	8.5		

SPECIAL NOTES:
No caving was observed.
No water seepage was observed.

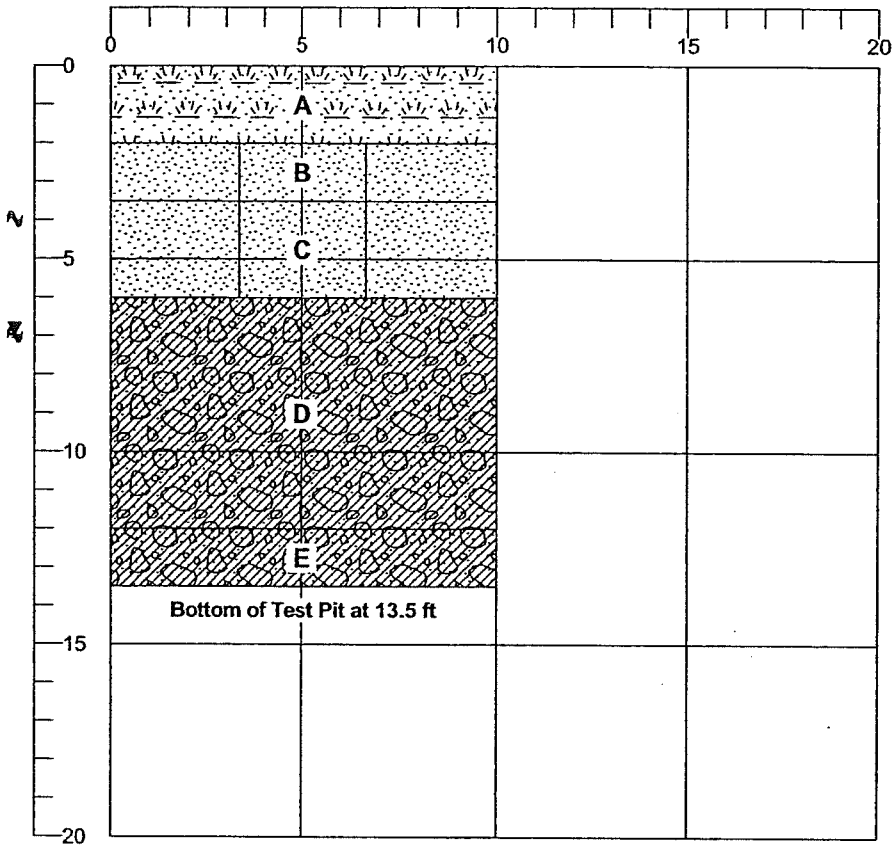
LOG OF TEST PIT TP-16

Golder Associates

Temp 45 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 663.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 15, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	3.0	
2	4.0	8.1
3	6.0	
4	6.5	24.1
5	11.5	13.8
6	12.5	14.4

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 2.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 2.0 - 3.5 ft: Compact to dense, gray-brown, non-stratifed, iron-oxide stained, silty fine to coarse SAND with some, subrounded fine to coarse gravel and trace cobbles, moist to wet (SM) (WEATHERED LODGMENT TILL)

C 3.5 - 6.0 ft: Dense to very dense, brown-gray, non-stratified, silty fine to coarse SAND with some socketed, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (LODGEMENT TILL)

D 6.0 - 12.0 ft: Compact to dense, orange-brown to red-orange, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel, little coal clasts, little siltstone clasts, moist to wet (SM) (LODGEMENT TILL)

E 12.0 - 13.5 ft: Very dense, non-stratifed, blue-gray, silty fine to medium SAND with little fine to coarse gravel and medium to coarse sand layers, mosit (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
12:20	0.0		
12:30			4.0
12:45			7.0
13:10	13.5		

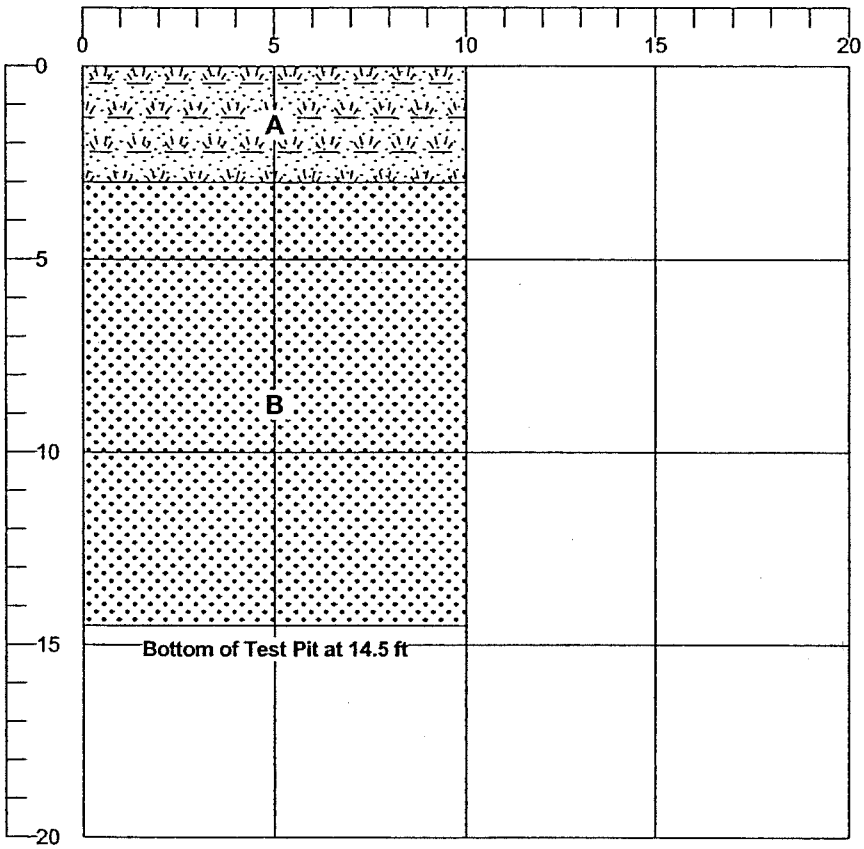
SPECIAL NOTES:

No caving was observed.
Minor water seepage was observed at 4 and 7 feet.

LOG OF TEST PIT TP-17

Golder Associates

Temp 50 °F Weather Light Rain | Engineer A. Dennison | Operator Tim
Equipment 312 C Cat Trackhoe | Contractor MidMountain Contractors | Date March 15, 2006
Elevation 642.0 ft | Datum MSL | Job 063-1076.200
Location Black Diamond, WA



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	5.0	17.8
2	7.0	
3	14.0	17.8

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 3.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL)

B 3.0 - 14.5 ft: Compact, brown, non-stratifed, silty fine to medium SAND with trace fine gravel and gray, clayey silt pockets, moist to wet (SM) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
13:30	0.0		
13:55	14.5		

SPECIAL NOTES:
No caving was observed.
No water seepage was observed.

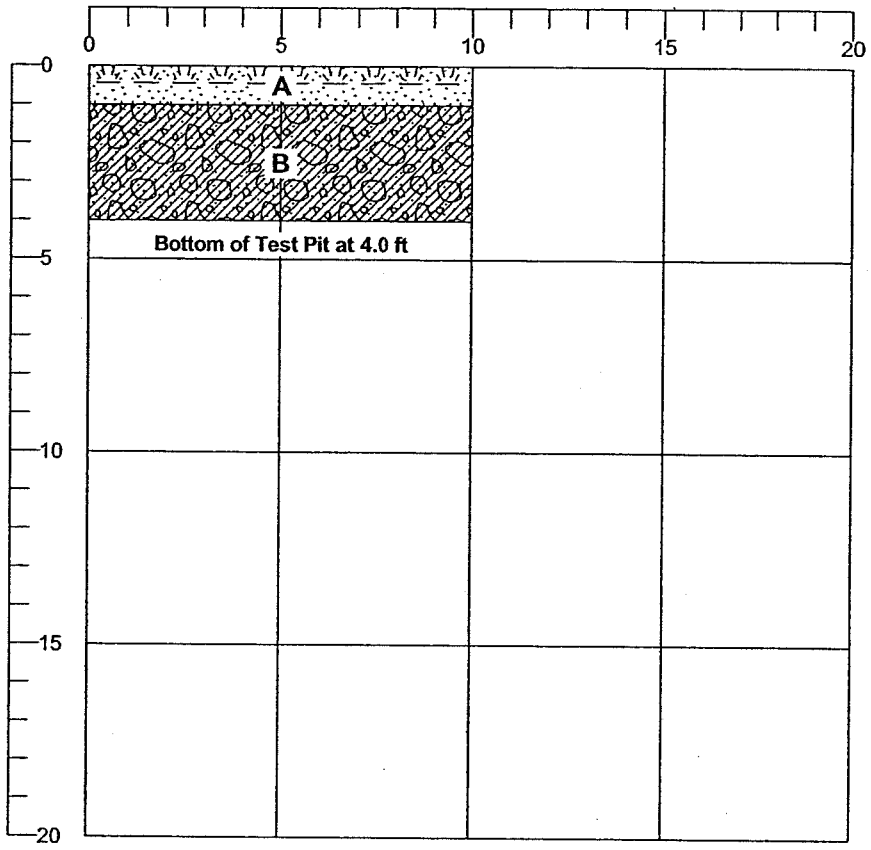
LOG OF TEST PIT TP-18

Golder Associates

Temp 45 °F Weather Light Rain
Equipment 312 C Cat Trackhoe
Elevation 709.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 15, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	3.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 1.0 - 4.0 ft: Dense to very dense, gray-brown, non-stratified, silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel, trace cobbles, and trace 3-ft diameter boulders, moist (SM) (LODGEMENT TILL)

*Test Pit terminated at 3-ft diameter boulder.

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
14:15	0.0		
14:30	4.0		

SPECIAL NOTES:
No caving was observed.
No water seepage was observed.

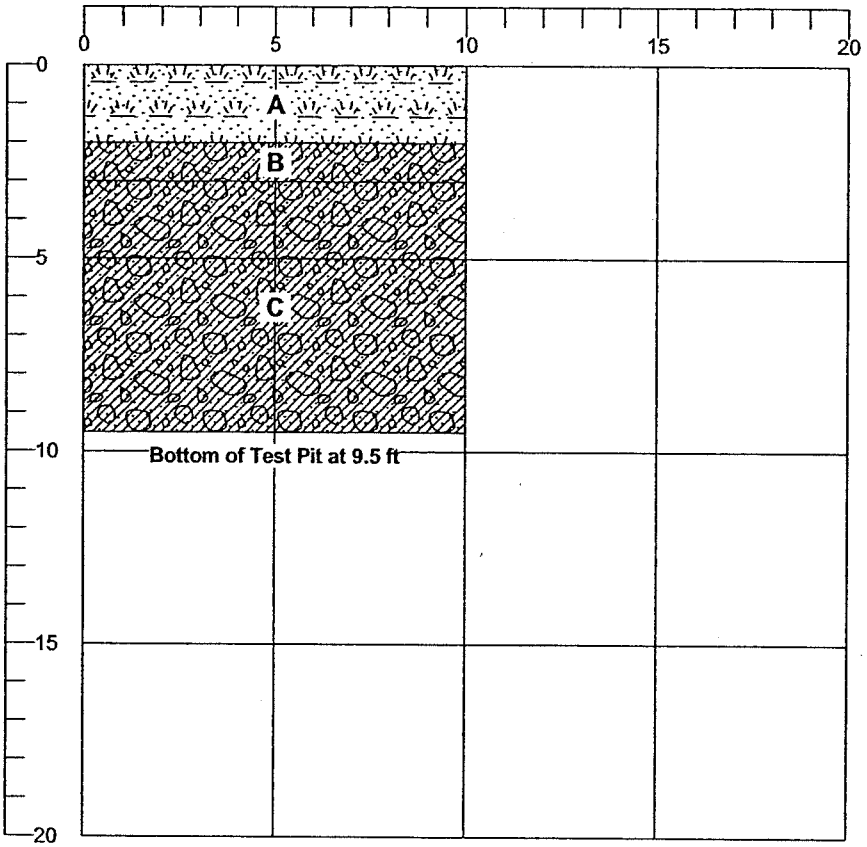
LOG OF TEST PIT TP-19

Golder Associates

Temp 45 °F Weather Partly Sunny
Equipment 312 C Cat Trackhoe
Elevation 697.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 15, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	4.0	
2	9.0	8.7

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 2.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 2.0 - 3.0 ft: Compact, gray-brown, non-stratified, iron-oxide stained, silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel and trace cobbles, moist (SM) (LODGEMENT TILL)

C 3.0 - 9.5 ft: Dense to very dense, brown-gray, non-stratifed, silty fine to coarse SAND with some socketed, subrounded, fine to coarse gravel, trace cobbles, and trace boulders, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
14:35	0.0		
15:00	9.5		

SPECIAL NOTES:
No caving was observed.
No water seepage was observed.

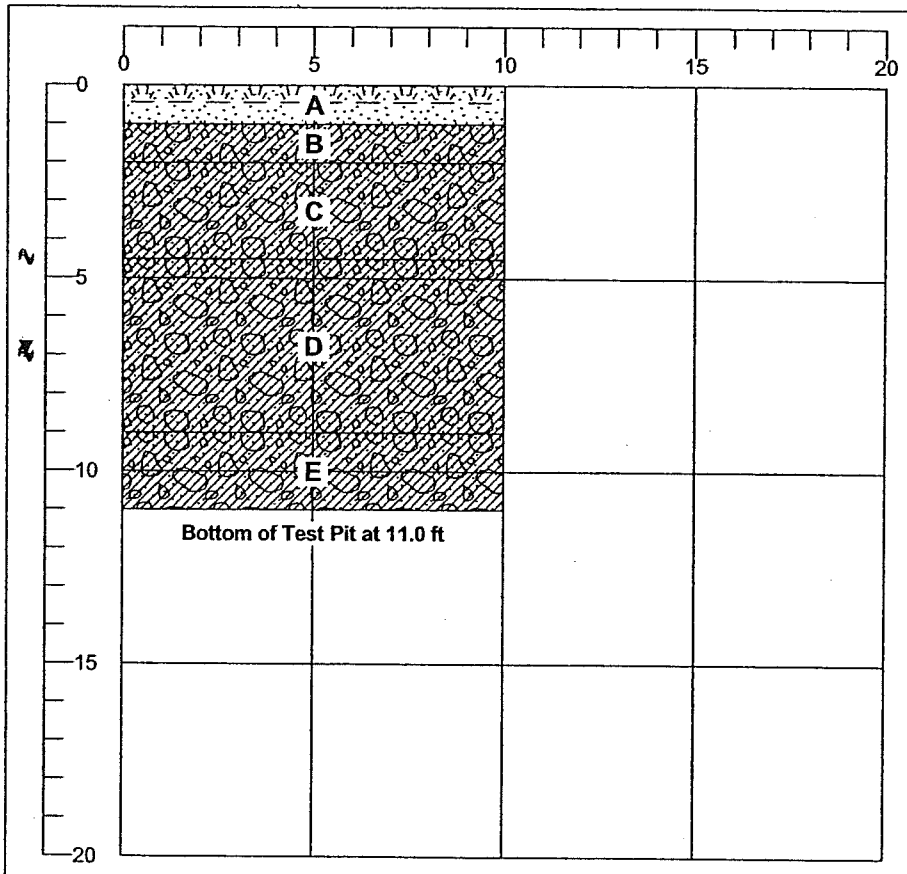
LOG OF TEST PIT TP-20

Golder Associates

Temp 45 °F Weather Partly Sunny
Equipment 312 C Cat Trackhoe
Elevation 614.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 17, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.5	
2	2.5	
3	8.0	10.1
4	10.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, and trace fine to coarse gravel, moist (SM) (TOPSOIL/FOREST DUFF)

B 1.0 - 2.0 ft: Loose to compact, orange-brown, silty fine to coarse SAND with some, subrounded, fine to coarse gravel, moist (SM) (WEATHERED LODGEMENT TILL)

C 2.0 - 4.5 ft: Compact, brown, non-stratified, iron-oxide stained, silty fine to coarse SAND with some subrounded, socketed, fine to coarse gravel, trace cobbles, and trace boulders, moist (SM) (SLIGHTLY WEATHERED LODGEMENT TILL)

D 4.5 - 9.0 ft: Dense, brown, non-stratified, silty fine to coarse SAND with some, socketed, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (LODGEMENT TILL)

E 9.0 - 11.0 ft: Very dense, gray, non-stratified, silty fine to coarse SAND with some, socketed, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
08:15	0.0		
08:30			4.5
08:35			7.0
08:45	11.0		

SPECIAL NOTES:

No caving was observed.
Minor water seepage was observed at 4.5 and 7 feet.

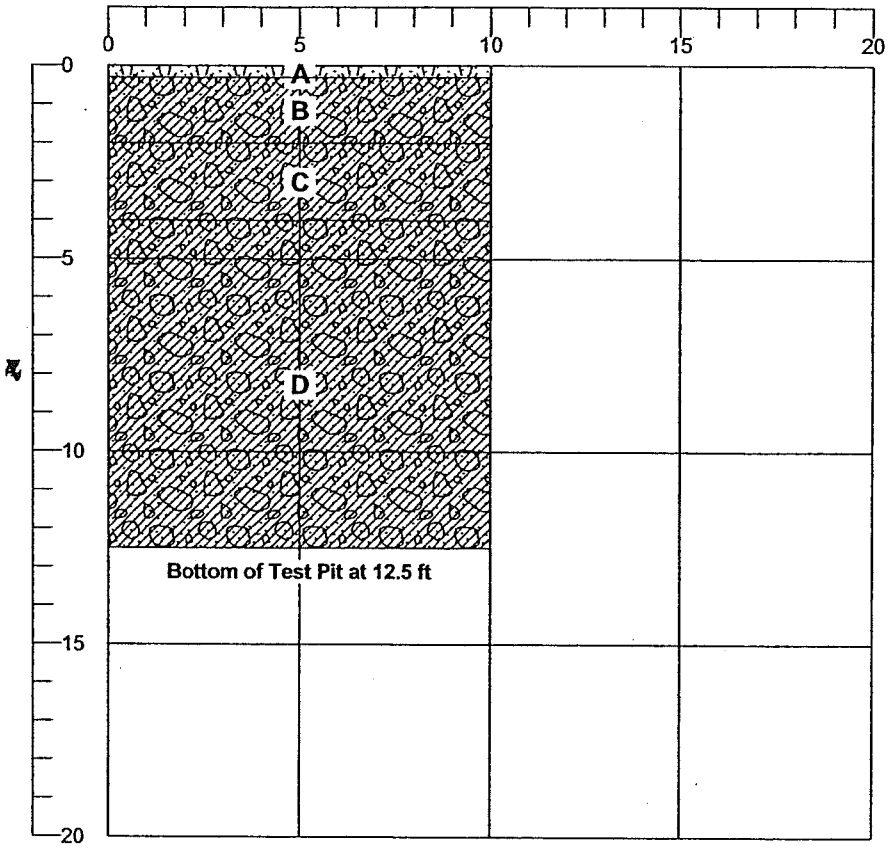
LOG OF TEST PIT TP-21

Golder Associates

Temp 45 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 636.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 17, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	3.0	
2	8.0	9.9
3	11.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, silty fine to medium sand with some organics, moist (SM) (TOPSOIL)

B 0.3 - 2.0 ft: Loose to compact, orange-brown, non-stratified, silty fine to coarse SAND with some fine to coarse gravel, moist (SM) (WEATHERED TILL)

C 2.0 - 4.0 ft: Compact, brown, non-stratified, iron-oxide stained, silty fine to coarse SAND with some, socketed, subrounded, fine to coarse gravel and little cobbles, moist (SM) (SLIGHTLY WEATHERED LODGEMENT TILL)

D 4.0 - 12.5 ft: Dense, gray, silty fine to coarse SAND with some, socketed, subrounded, fine to coarse gravel, trace cobbles, and trace boulders, moist (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
08:55	0.0		
09:00			8.0
09:15	12.5		

SPECIAL NOTES:

No caving was observed.
Minor water seepage was observed at 8 feet.

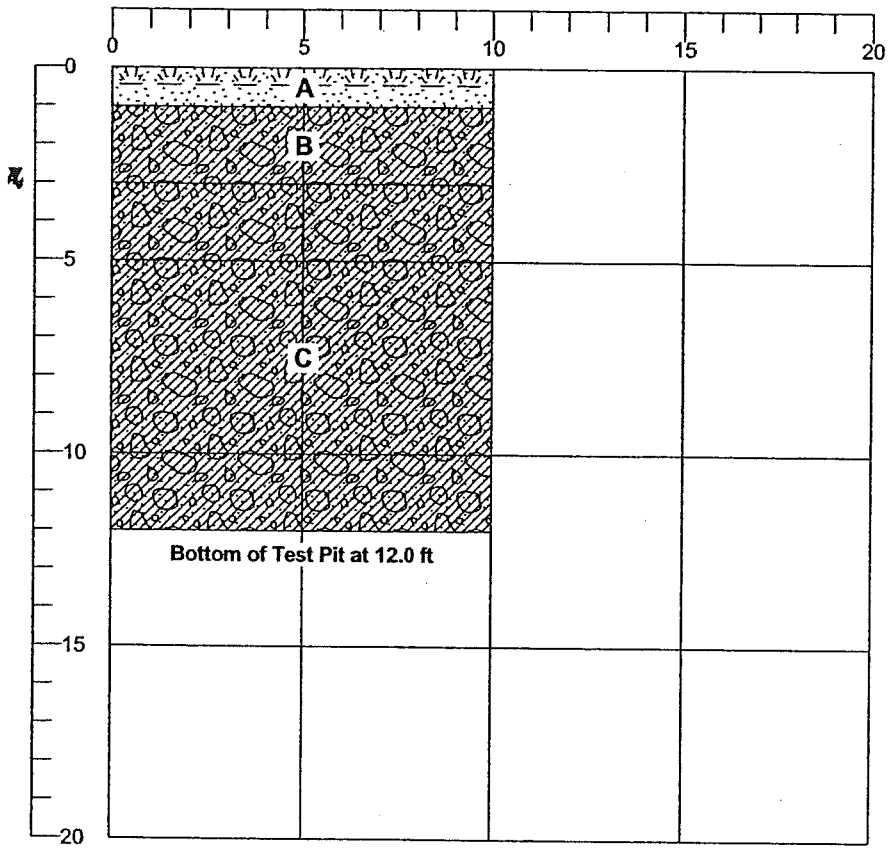
LOG OF TEST PIT TP-22

Golder Associates

Temp 45 °F Weather Light Rain
Equipment 312 C Cat Trackhoe
Elevation 640.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 17, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	6.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 1.0 - 3.0 ft: Loose to compact, light brown, non-stratified, iron-oxide stained, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist to wet (SM) (WEATHERED LODGEMENT TILL)

C 3.0 - 12.0 ft: Very dense, brown-gray, silty fine to coarse SAND with some socketed, subrounded, fine to coarse gravel, trace cobbles, and trace boulders, moist (SM) (LODGEMENT TIILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
09:45	0.0		
10:00			3.0
10:30	12.0		

SPECIAL NOTES:
No caving was observed.
Minor water seepage was observed at 3 feet.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

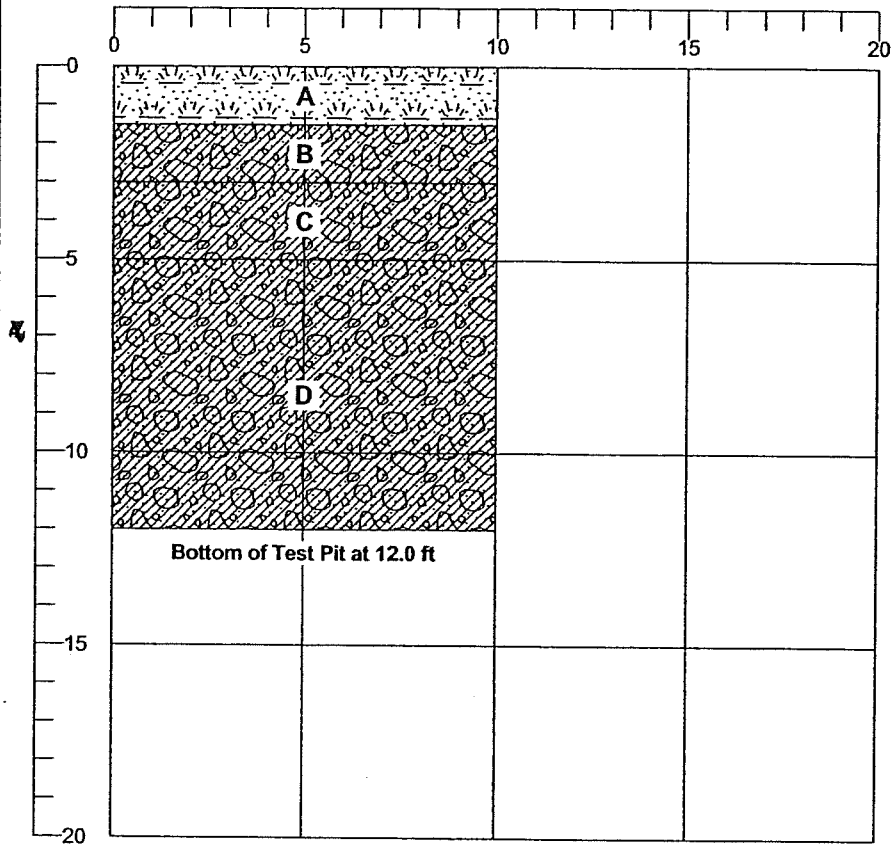
LOG OF TEST PIT TP-23

Golder Associates

Temp 45 °F Weather Light Rain
Equipment 312 C Cat Trackhoe
Elevation 656.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 17, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	4.0	17.2
3	9.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.5 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 1.5 - 3.0 ft: Loose to compact, orange-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED LODGEMENT TILL)

C 3.0 - 5.0 ft: Loose to compact, light brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (SLIGHTLY WEATHERED LODGEMENT TILL)

D 5.0 - 12.0 ft: Very dense, gray, silty fine to coarse SAND with some socketed, subrounded, fine to coarse gravel, and trace cobbles, moist (SM) (LODGEMENT TIILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
10:45	0.0		
11:00			7.0
11:45	12.0		

SPECIAL NOTES:

No caving was observed.
Minor water seepage was observed at 7 feet.

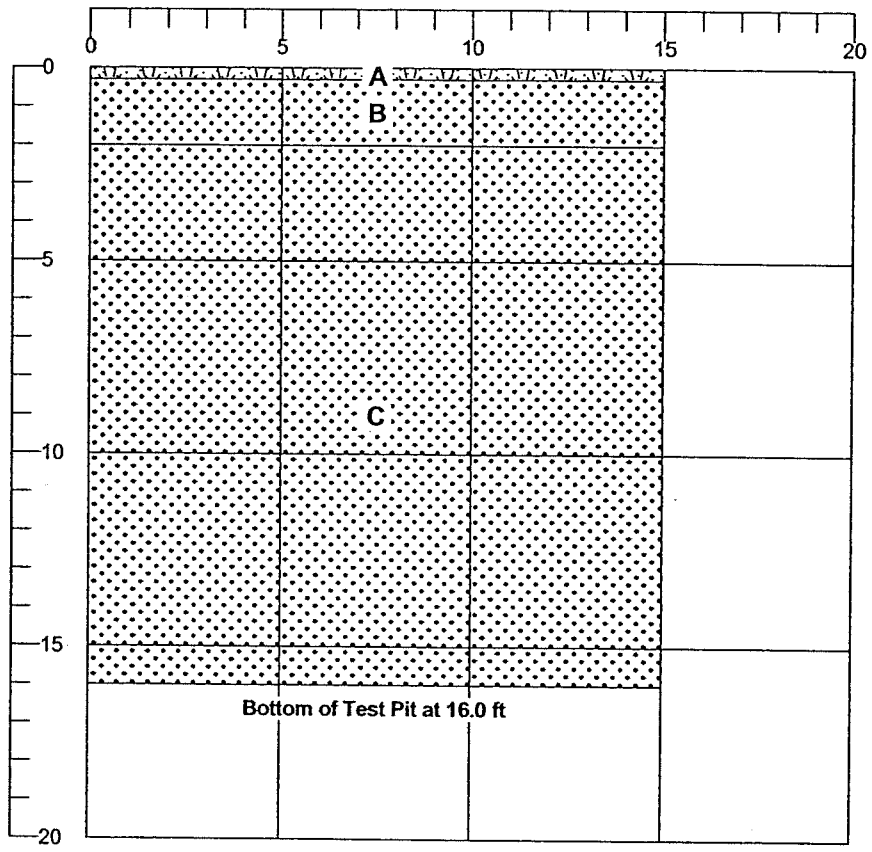
LOG OF TEST PIT TP-24

Golder Associates

Temp 45 °F Weather Rain
Equipment 312 C Cat Trackhoe
Elevation 594.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 17, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.5	
2	4.0	
3	8.0	
4	15.0	5.7

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.3 - 2.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 2.0 - 16.0 ft: Compact, brown-gray, non-stratified, fine to coarse SAND with some, subrounded, fine to coarse gravel, little cobbles, trace boulders, and trace silt, damp (SW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
13:30	0.0		
14:10	16.0		

SPECIAL NOTES:
Moderate caving was observed between 2 to 14 feet.
No water seepage was observed.

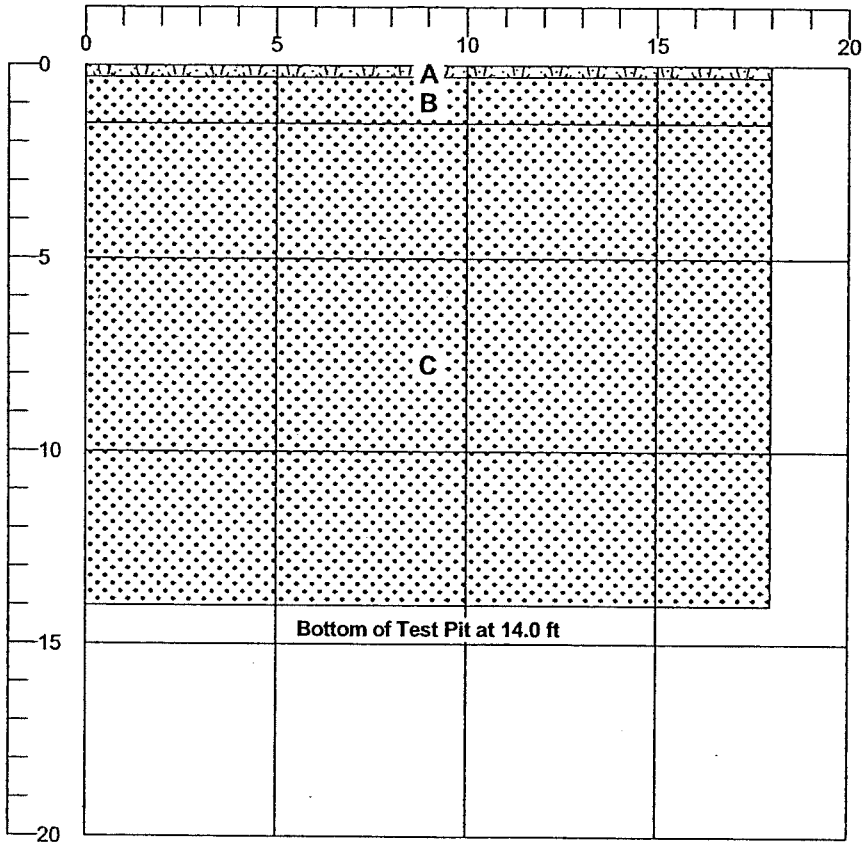
LOG OF TEST PIT TP-25

Golder Associates

Temp 50 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 598.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 20, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.0	
2	4.0	4.5
3	4.1	
4	14.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.3 - 1.5 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 1.5 - 14.0 ft: Compact, brown-gray, non-stratified, fine to coarse SAND and subrounded, fine to coarse GRAVEL, little cobbles, trace boulders, and trace silt, damp (SW-GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
07:45	0.0		
08:15	14.0		

SPECIAL NOTES:

Major caving was observed between 0 to 14 feet.
No water seepage was observed.

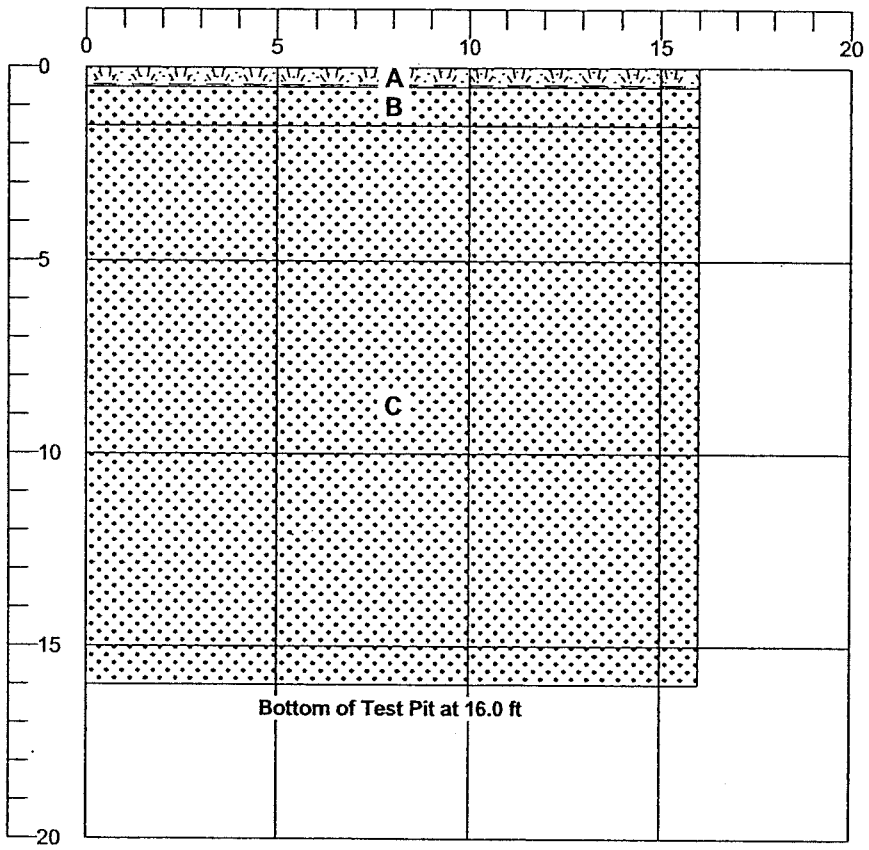
LOG OF TEST PIT TP-26

Golder Associates

Temp 50 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 591.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 20, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	4.0	5.7
2	6.0	
3	15.0	5.4

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.5 - 1.5 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 1.5 - 16.0 ft: Compact, brown-gray, non-stratified, fine to coarse SAND and subrounded, fine to coarse GRAVEL, trace to little cobbles, and trace silt, damp (SW-GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
08:35	0.0		
09:05	16.0		

SPECIAL NOTES:

Moderate to major caving was observed between 2 to 15 feet.
No water seepage was observed.

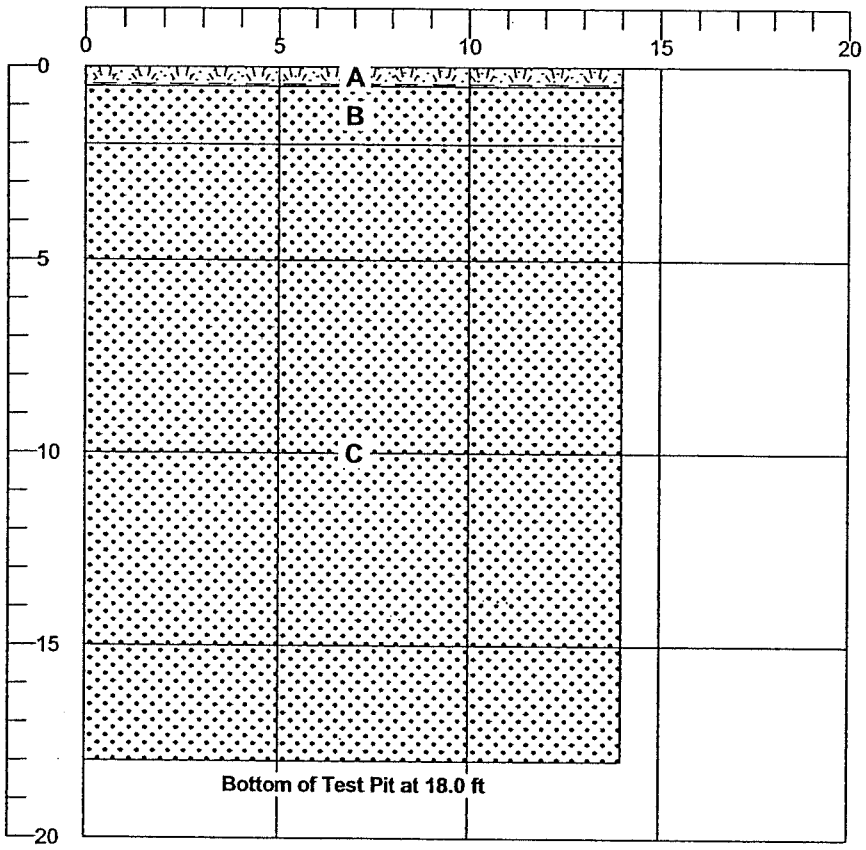
LOG OF TEST PIT TP-27

Golder Associates

Temp 50 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 591.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 20, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.0	
2	4.0	3.8
3	4.1	
4	6.0	
5	15.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL/GRASS)

B 0.5 - 2.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 2.0 - 18.0 ft: Compact to dense, brown, non-stratifed, fine to coarse GRAVEL with some fine to coarse sand, some cobbles, little boulders, and trace silt, damp (GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
09:15	0.0		
09:55	18.0		

SPECIAL NOTES:
Minor to moderate caving was observed between 2 to 16 feet.
No water seepage was observed.

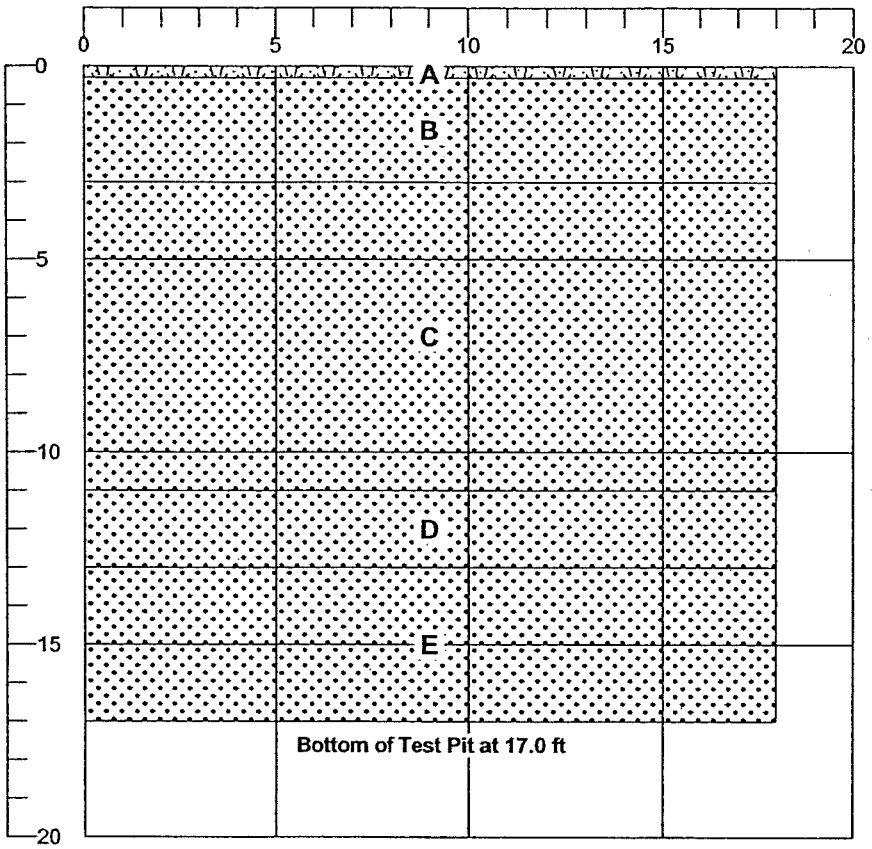
LOG OF TEST PIT TP-28

Golder Associates

Temp 50 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 564.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 20, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	5.0	
3	12.0	18.3
4	15.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL/GRASS)

B 0.3 - 3.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 3.0 - 11.0 ft: Compact, brown, non-stratifed, fine to coarse SAND and fine to coarse GRAVEL with trace cobbles and trace silt, moist (SP) (RECESSIONAL OUTWASH)

D 11.0 - 13.0 ft: Compact, brown, non-stratified, fine to coarse SAND with little silt, trace, subrounded, fine gravel, trace organics, and minor iron-oxide staining, moist to wet (SP-SM) (RECESSIONAL OUTWASH)

E 13.0 - 17.0 ft: Compact, brown-gray, non-stratified, fine to coarse SAND with trace to litte, subrounded, fine to coarse gravel and trace silt, moist (SW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
14:20	0.0		
14:50	17.0		

SPECIAL NOTES:

Major caving was observed between 0 to 11 feet.
No water seepage was observed.

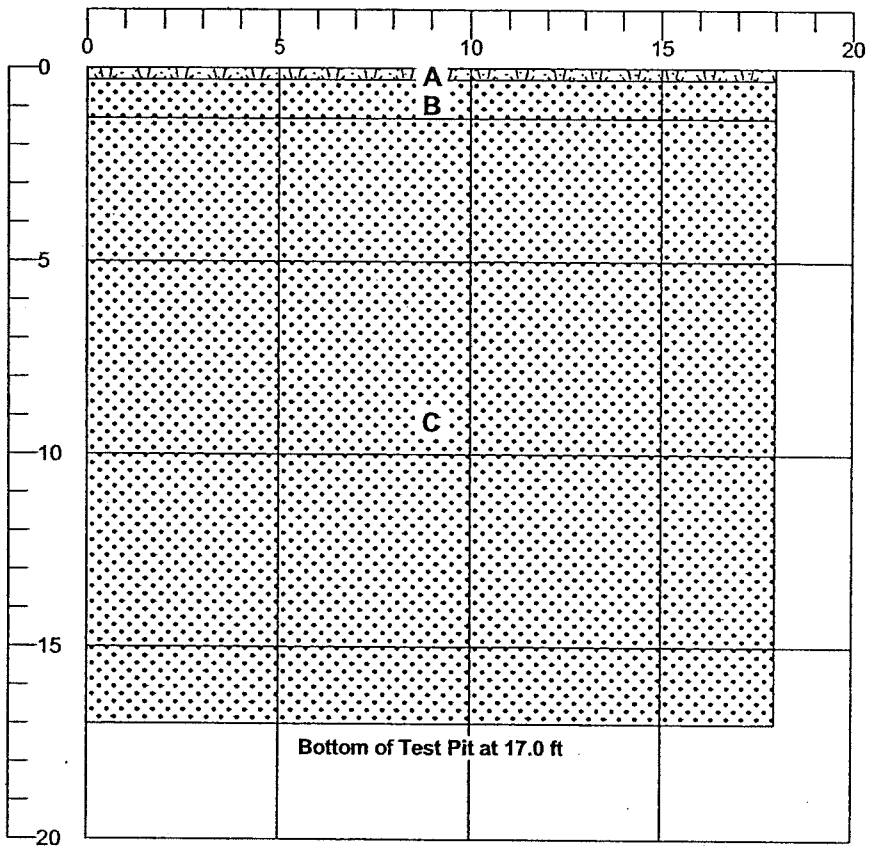
LOG OF TEST PIT TP-29

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 561.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 21, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.0	
2	6.0	
3	15.0	2.9

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL/GRASS)

B 0.3 - 1.3 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with little, subrounded, fine to coarse gravel, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 1.3 - 17.0 ft: Compact, brown-gray, non-stratifed, fine to coarse SAND with some subrounded, fine to coarse gravel, and trace silt, damp (SW-GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
07:45	0.0		
08:30	17.0		

SPECIAL NOTES:

Major caving was observed between 0 to 17 feet.
No water seepage was observed.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

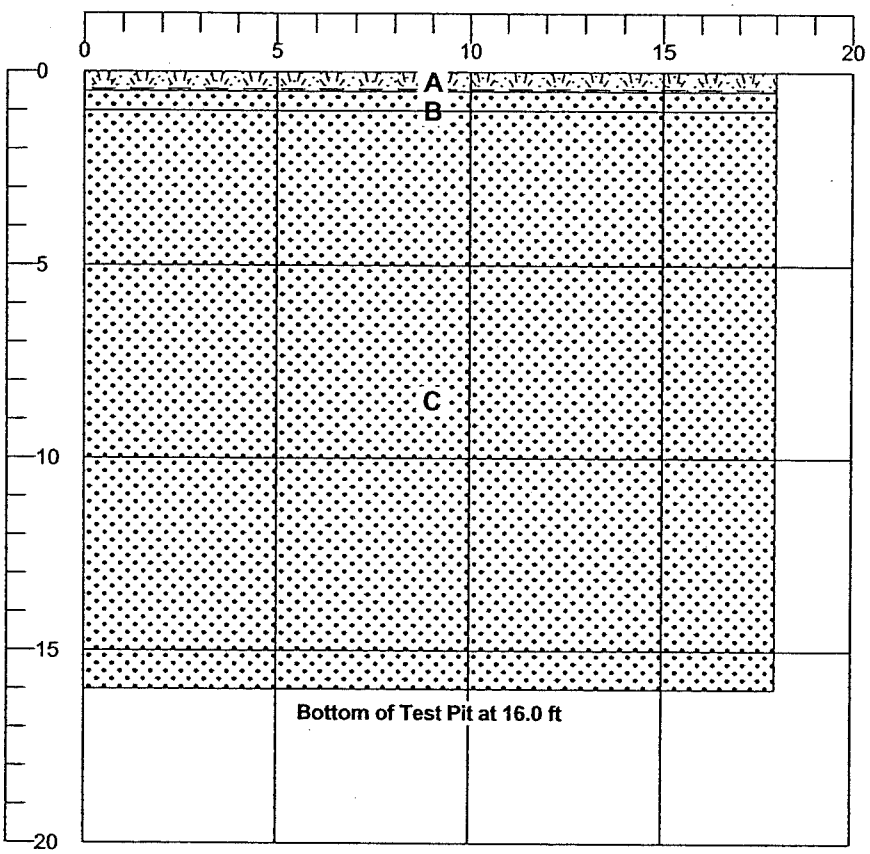
LOG OF TEST PIT TP-30

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 558.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 21, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	4.0	3.5
2	4.1	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL/GRASS)

B 0.5 - 1.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with little, subrounded, fine to coarse gravel, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 1.0 - 16.0 ft: Compact, brown-gray, non-stratifed, subrounded, fine to coarse GRAVEL and fine to coarse SAND with trace cobbles, and trace silt, damp (GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
08:35	0.0		
09:05	16.0		

SPECIAL NOTES:

Major caving was observed between 0 to 16 feet.
No water seepage was observed.

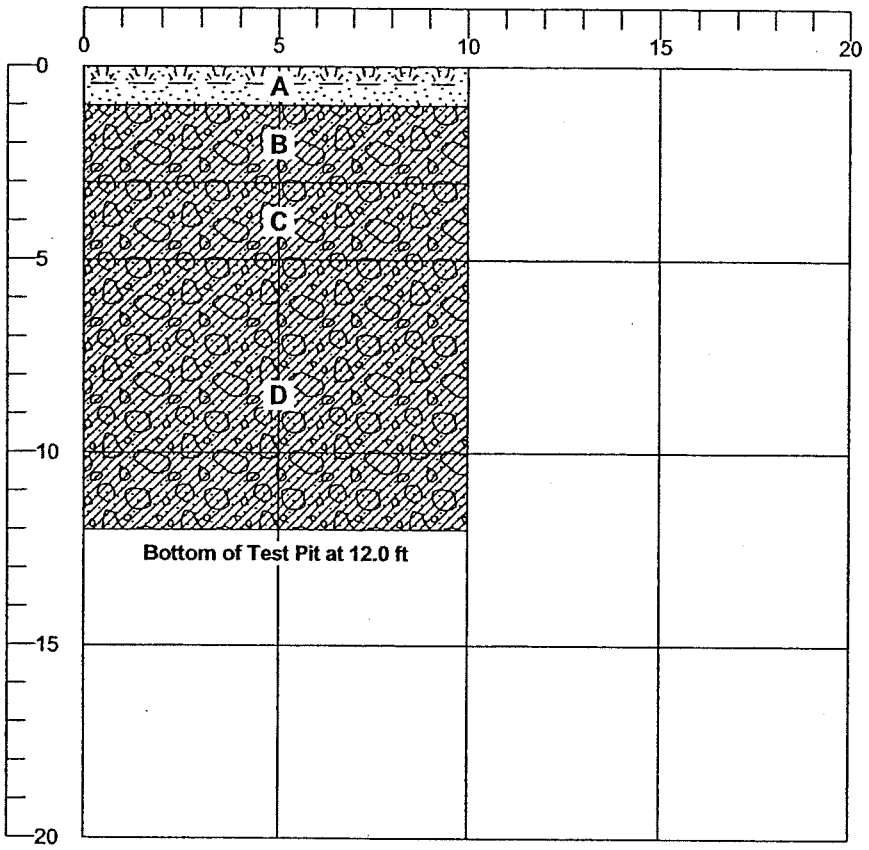
LOG OF TEST PIT TP-31

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 588.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 21, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.0	
2	4.0	13.3
3	11.5	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 1.0 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 1.0 - 3.0 ft: Loose to compact, orange-brown, non-stratified, silty fine to medium SAND with little, subrounded, fine to coarse gravel, moist (SM) (WEATHERED LODGEMENT TILL)

C 3.0 - 5.0 ft: Compact, brown-gray, non-stratified, iron-oxide stained, silty fine to coarse SAND with little to some, socketed, subrounded, fine to coarse gravel, trace cobbles, and trace boulders, moist (SM) (SLIGHTLY WEATHERED LODGEMENT TILL)

D 5.0 - 12.0 ft: Dense, brown-gray, non-stratified, silty fine to coarse SAND with little to some, socketed, subrounded, fine to coarse gravel, trace cobbles, and trace boulders, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
10:55	0.0		
11:45	12.0		

SPECIAL NOTES:
No caving was observed.
No water seepage was observed.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

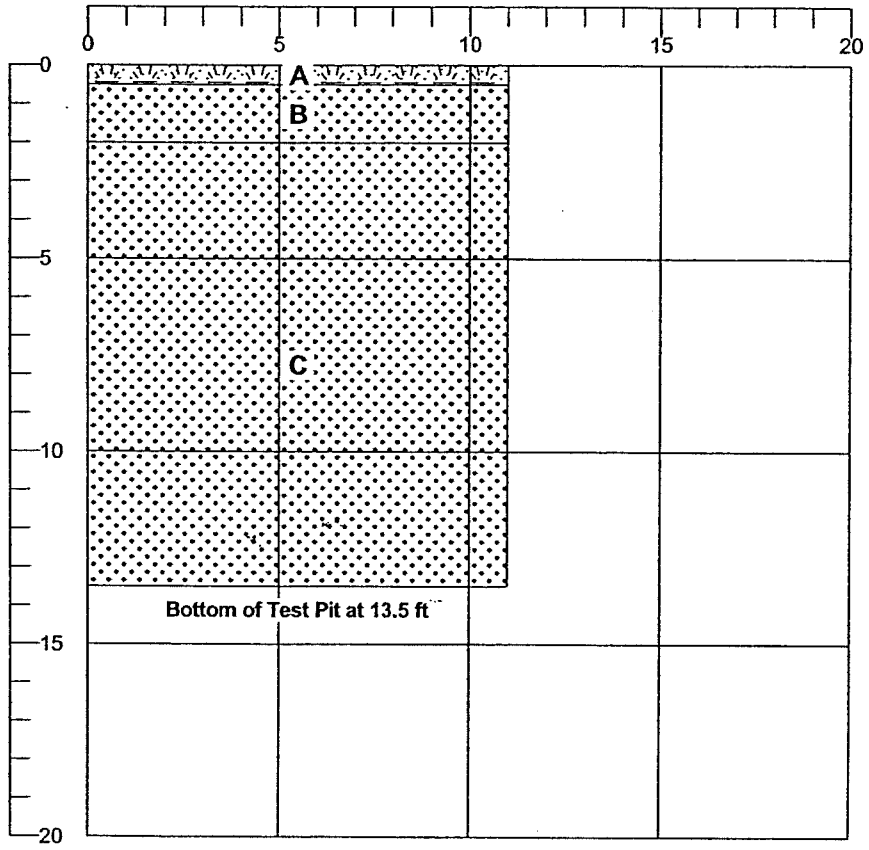
LOG OF TEST PIT TP-32

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 549.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 21, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.0	
2	4.0	
3	13.0	4.2

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.5 - 2.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 2.0 - 13.5 ft: Compact, brown-gray, non-stratifed, fine to coarse SAND with little to some, subrounded, fine to coarse gravel and trace silt, damp (SW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
11:50	0.0		
12:35	13.5		

SPECIAL NOTES:

Minor caving was observed between 1 to 10 feet.
No water seepage was observed.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

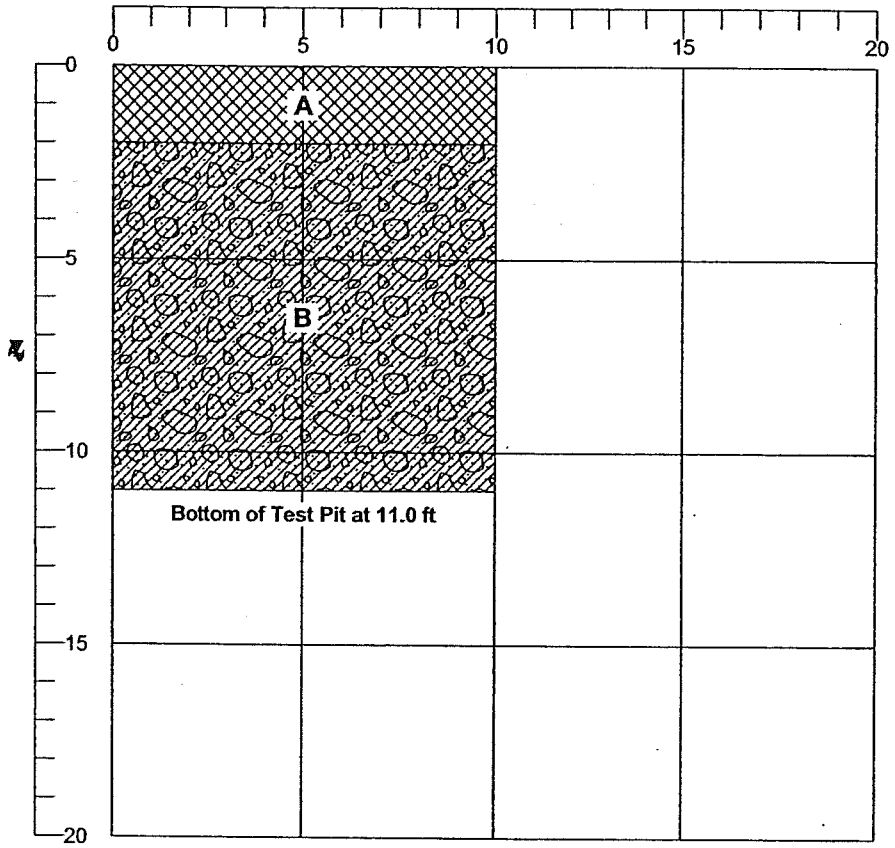
LOG OF TEST PIT TP-33

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 538.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 21, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.5	
2	4.0	8.4
3	10.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 2.0 ft: Loose to compact, gray, non-stratified, fine to coarse SAND and fine to coarse GRAVEL with little silt and trace cobbles, moist to wet (SW-GW) (FILL)

B 2.0 - 11.0 ft: Dense to very dense, gray, non-stratifed, silty fine to coarse SAND with some, subrounded, fine to coarse gravel, trace cobbles, and trace boulders, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
12:45	0.0		
13:00			7.5
13:15	11.0		

SPECIAL NOTES:
No caving was observed.
Minor water seepage was observed at 7.5 feet.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

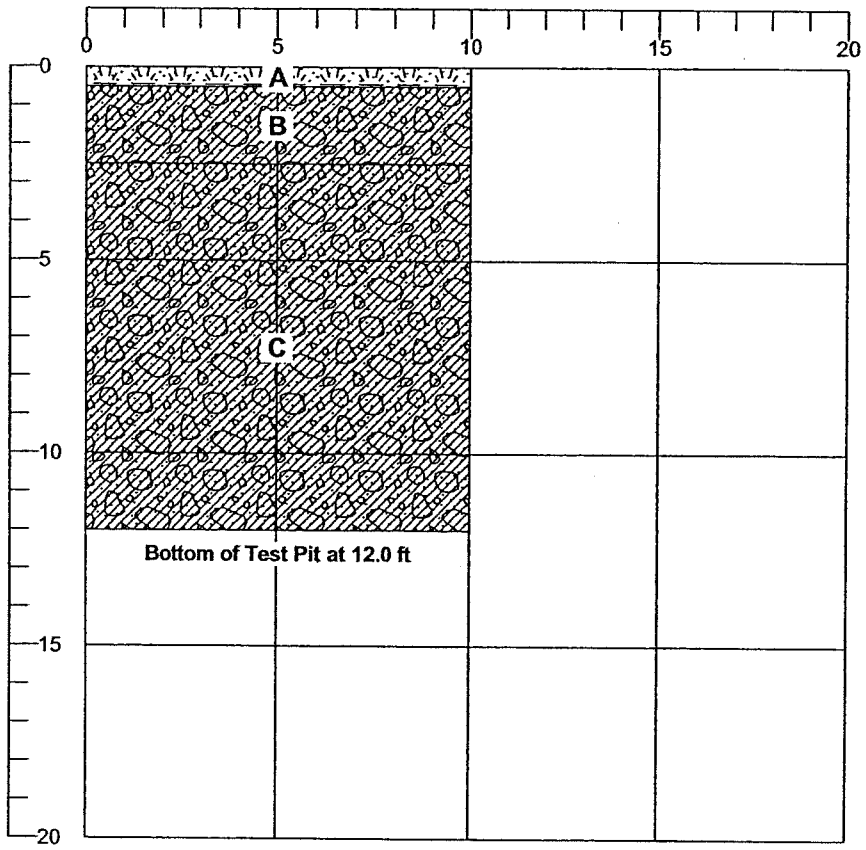
LOG OF TEST PIT TP-34

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 608.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 21, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	11.0	8.5

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 0.5 - 2.5 ft: Loose to compact, orange-brown, non-stratified, silty fine to medium SAND with little, subrounded, fine to coarse gravel, moist (SM) (WEATHERED LODGEMENT TILL)

C 2.5 - 12.0 ft: Dense, gray-brown, non-stratified, silty fine to coarse SAND with some, socketed, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
13:20	0.0		
14:00	12.0		

SPECIAL NOTES:
No caving was observed.
No water seepage was observed.

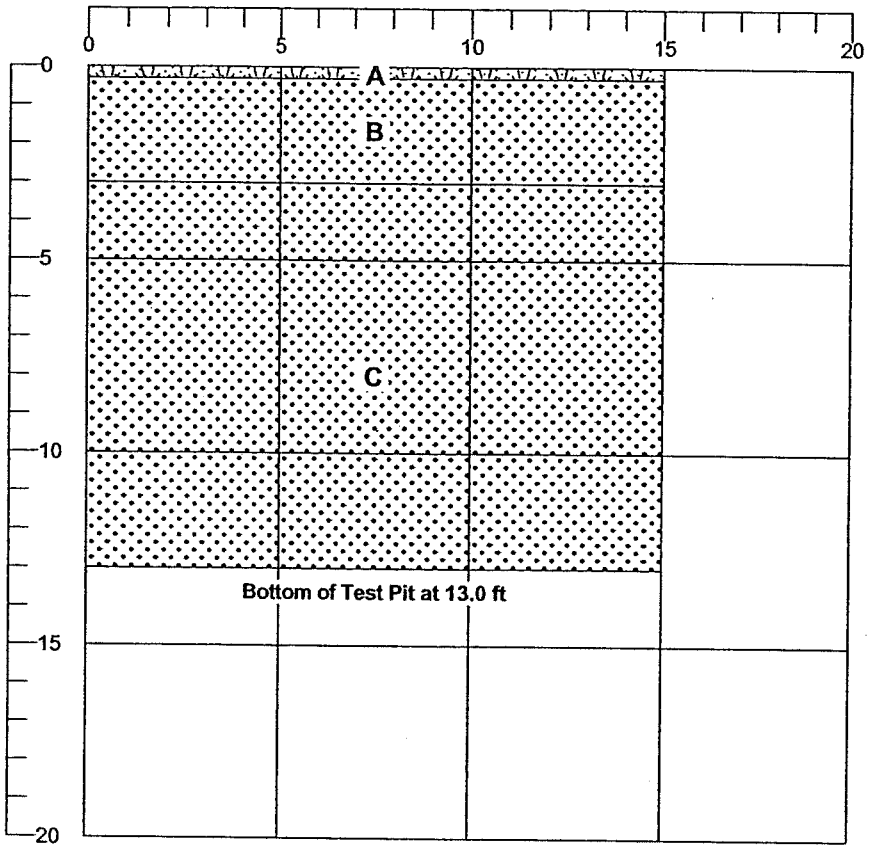
LOG OF TEST PIT TP-35

Golder Associates

Temp 45 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 554.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 21, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	12.0	4.2

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.3 - 3.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with trace, subrounded, fine gravel, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 3.0 - 13.0 ft: Compact, brown-gray, non-stratifed, fine to coarse SAND and subrounded, fine to coarse gravel with some cobbles, and trace silt, damp (SW-GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
14:15	0.0		
14:45	13.0		

SPECIAL NOTES:
Moderate caving was observed between 2 to 13 feet.
No water seepage was observed.

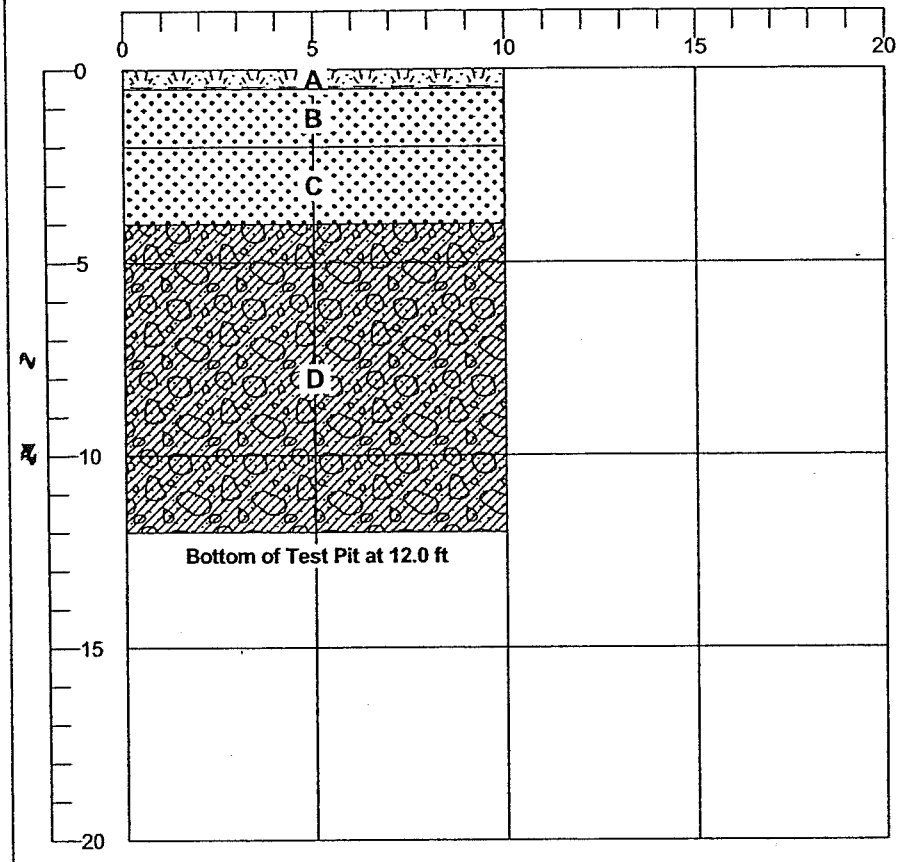
LOG OF TEST PIT TP-36

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 561.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 22, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.5	
2	3.0	16.6
3	8.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL/GRASS)

B 0.5 - 2.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with little, subrounded, fine to coarse gravel, moist (SM) (WEATHERED LODGEMENT TILL)

C 2.0 - 4.0 ft: Loose, light brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel, moist (SM) (SLIGHTLY WEATHERED LODGEMENT TILL)

D 4.0 - 12.0 ft: Dense, gray, non-stratifed, silty fine to coarse SAND with some, subrounded, fine to coarse gravel, little cobbles, trace boulders, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
09:40	0.0		
09:45			7.5
10:00			10.0
10:15	12.0		

SPECIAL NOTES:

No caving was observed.
Minor ater seepage was observed at 7.5 and 10 feet.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

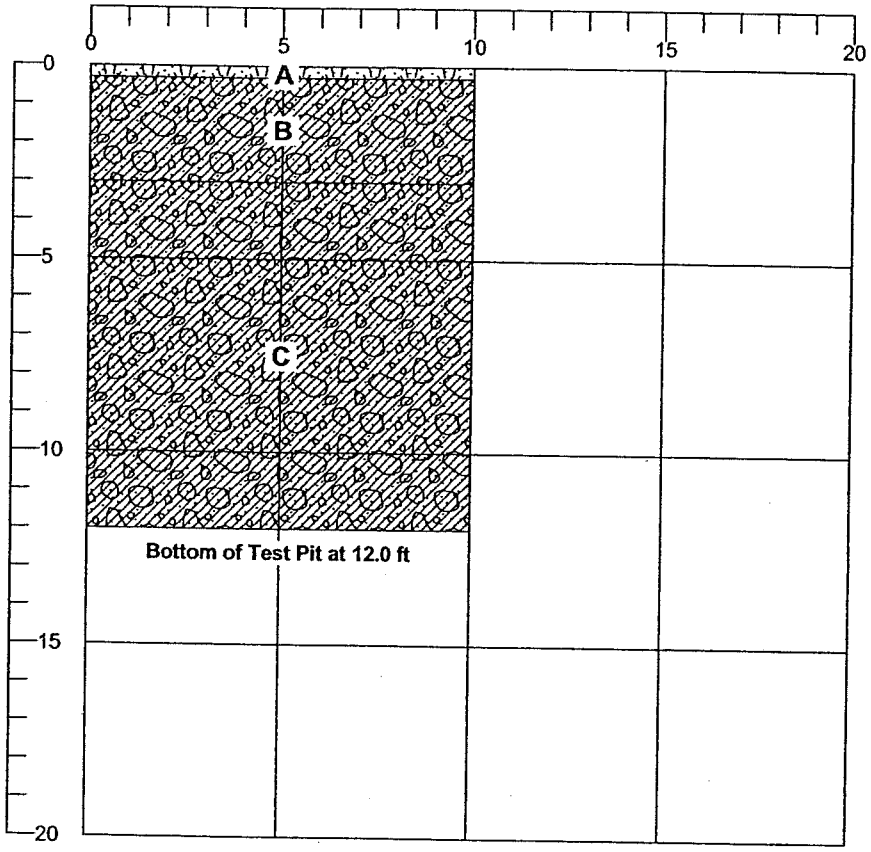
LOG OF TEST PIT TP-37

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 584.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 22, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	7.0	13.9

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 0.3 - 3.0 ft: Loose to compact, orange-brown, non-stratified, silty fine to medium SAND with little, subrounded, fine to coarse gravel, moist (SM) (WEATHERED LODGEMENT TILL)

C 3.0 - 12.0 ft: Dense to very dense, gray, non-stratified, silty fine to coarse SAND with little, socketed, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
10:30	0.0		
10:50	12.0		

SPECIAL NOTES:
No caving was observed.
No water seepage was observed.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

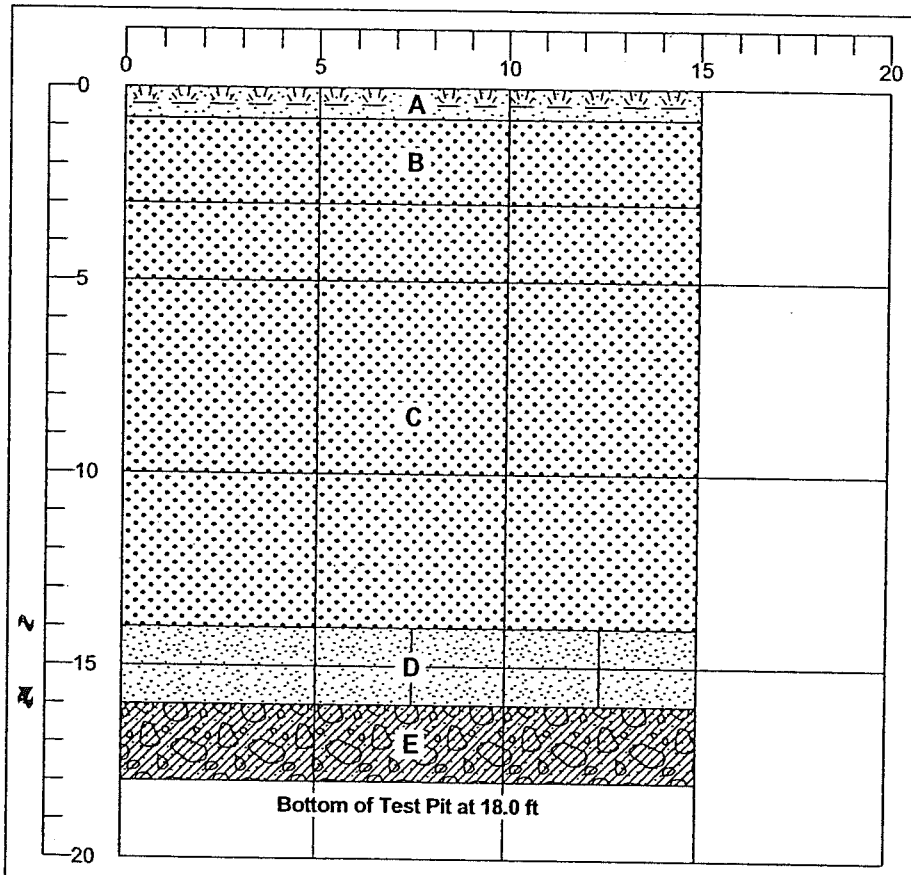
LOG OF TEST PIT TP-38

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 554.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 22, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	2.0	
2	4.0	5.7
3	16.0	8.5
4	17.5	8.2

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.8 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.8 - 3.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with little, subrounded, fine to coarse gravel, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 3.0 - 14.0 ft: Compact, brown-gray, non-stratifed, fine to medium SAND with trace, subrounded, fine to coarse gravel, trace cobbles, and trace silt, damp (SP) (RECESSIONAL OUTWASH)

D 14.0 - 16.0 ft: Compact, gray, non-stratified, fine to coarse SAND with little silt and little fine gravel, moist (SW-SM) (TRANSITIONAL ZONE)

E 16.0 - 18.0 ft: Dense, gray-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
11:10	0.0		
11:20			14.0
11:25			16.0
11:45	18.0		

SPECIAL NOTES:

Moderate caving was observed between 3 to 14 feet.
Minor water seepage was observed at 16 feet.

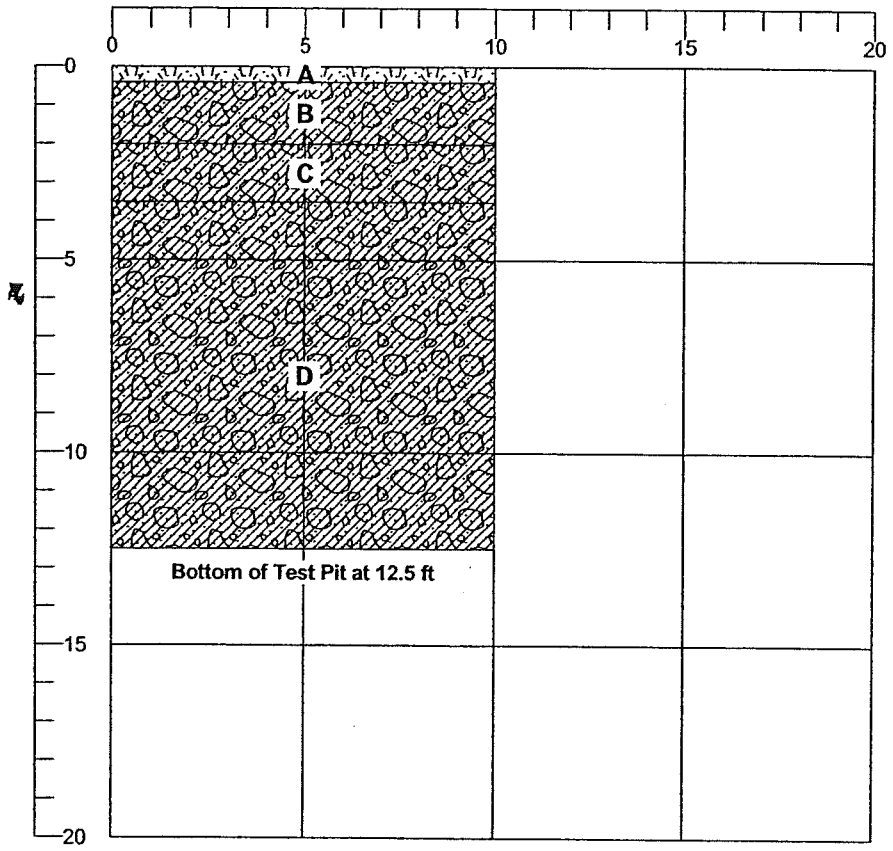
LOG OF TEST PIT TP-39

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 568.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 22, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	12.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.4 ft: Loose, dark brown, non-stratified, silty fine to medium SAND with some organics, moist (SM) (TOPSOIL/FOREST DUFF)

B 0.4 - 2.0 ft: Compact, orange-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED LODGEMENT TILL)

C 2.0 - 3.5 ft: Dense, gray, non-stratified, iron-oxide stained, silty fine to coarse SAND with some, socketed, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (SLIGHTLY WEATHERED LODGEMENT TILL)

D 3.5 - 12.5 ft: Dense to very dense, gray, non-stratified, silty fine to coarse SAND with some, socketed, subrounded, fine to coarse gravel, trace cobbles, and trace boulders, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
12:20	0.0		
12:40			6.0
13:00	12.5		

SPECIAL NOTES:

No caving was observed.
Minor water seepage was observed at 6 feet.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

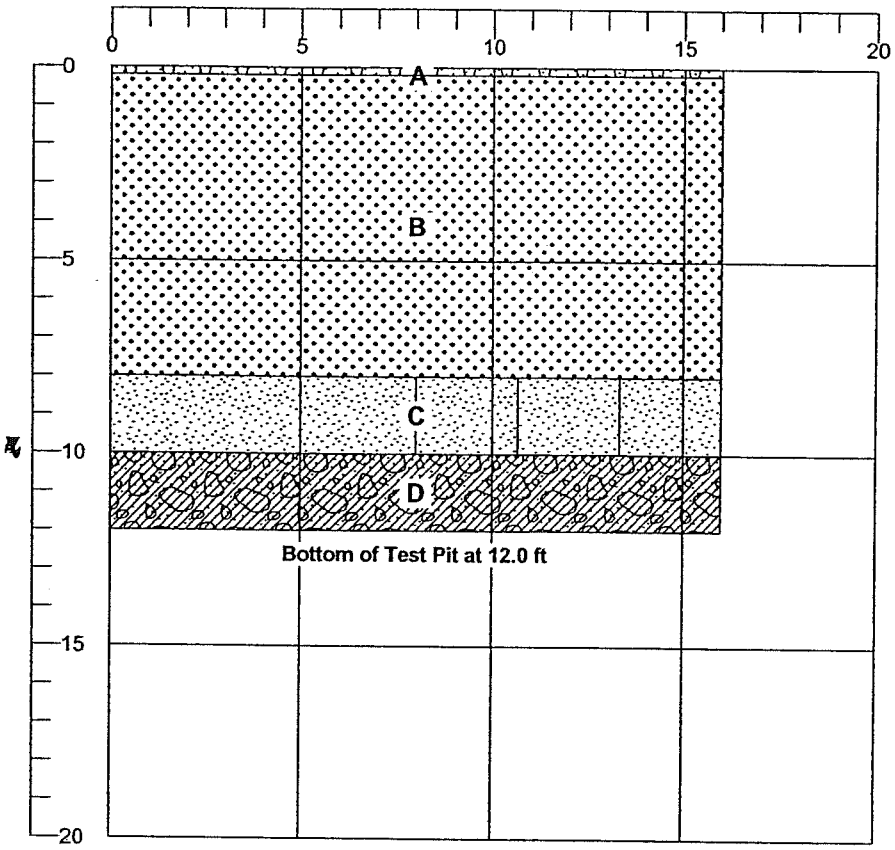
LOG OF TEST PIT TP-40

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 561.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 22, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	11.0	8.7

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.2 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.2 - 8.0 ft: Compact, brown-gray, non-stratifed, fine to coarse SAND with some, subrounded, fine to coarse gravel, trace cobbles, and trace silt, moist (SW) (RECESSIONAL OUTWASH)

C 8.0 - 10.0 ft: Compact, gray, non-stratified, fine to coarse SAND with little silt and little fine to coarse gravel, moist (SW-SM) (RECESSIIONAL OUTWASH)

D 10.0 - 12.0 ft: Dense, gray-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (LODGEMENT TILL)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
13:05	0.0		
13:45			10.0
14:00	12.0		

SPECIAL NOTES:

Moderate to major caving was observed between 0 to 8 feet.
Minor water seepage was observed at 10 feet.

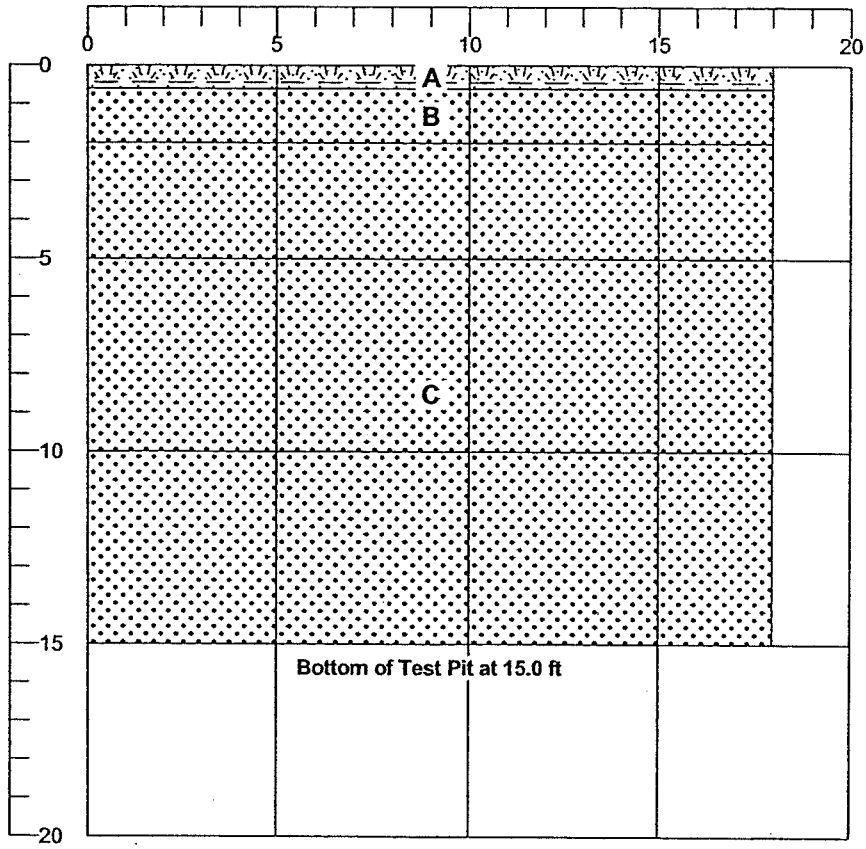
LOG OF TEST PIT TP-41

Golder Associates

Temp 50 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 561.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 22, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.5	
2	3.0	
3	3.1	
4	7.0	
5	10.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.6 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.6 - 2.0 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 2.0 - 15.0 ft: Compact, brown-gray, non-stratifed, subrounded, fine to coarse GRAVEL with some fine to coarse sand, some cobbles, trace boulders, and trace silt, damp (GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
13:45	0.0		
14:15	15.0		

SPECIAL NOTES:

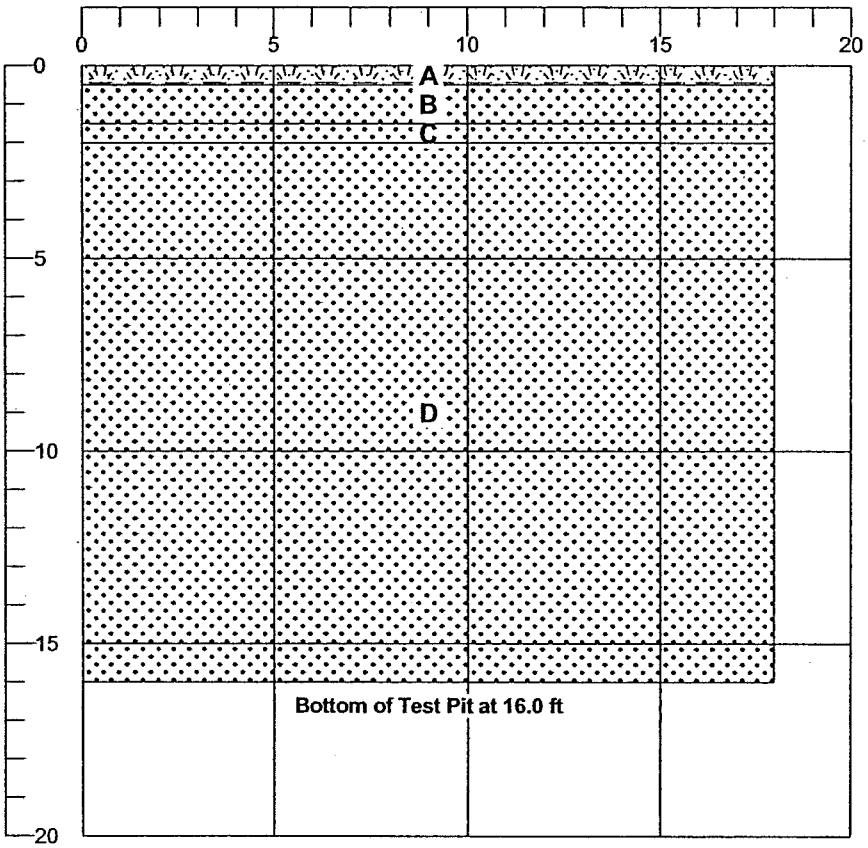
Major caving was observed between 2 to 15 feet.
No water seepage was observed.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

LOG OF TEST PIT TP-42

Golder Associates

Temp 55 °F Weather Sunny | Engineer A. Dennison | Operator Tim
Equipment 312 C Cat Trackhoe | Contractor MidMountain Contractors | Date March 23, 2006
Elevation 489.0 ft | Datum MSL | Job 063-1076.200
Location Black Diamond, WA



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.0	
2	2.0	
3	4.0	
4	13.0	4.4

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.5 - 1.5 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with some, subrounded, fine to coarse gravel and trace cobbles, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 1.5 - 2.0 ft: Compact, light brown, non-stratified, fine to coarse SAND with some, subrounded fine to coarse gravel, little sitl, and trace cobbles, damp (SW-SM) (RECESSIONAL OUTWASH)

D 2.0 - 16.0 ft: Compact, brown-gray, non-stratifed, fine to coarse SAND and subrounded, fine to coarse GRAVEL, some cobbles, trace boulders, and trace silt, damp (SW-GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
10:00	0.0		
10:45	16.0		

SPECIAL NOTES:
Major caving was observed between 0 to 15 feet.
No water seepage was observed.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

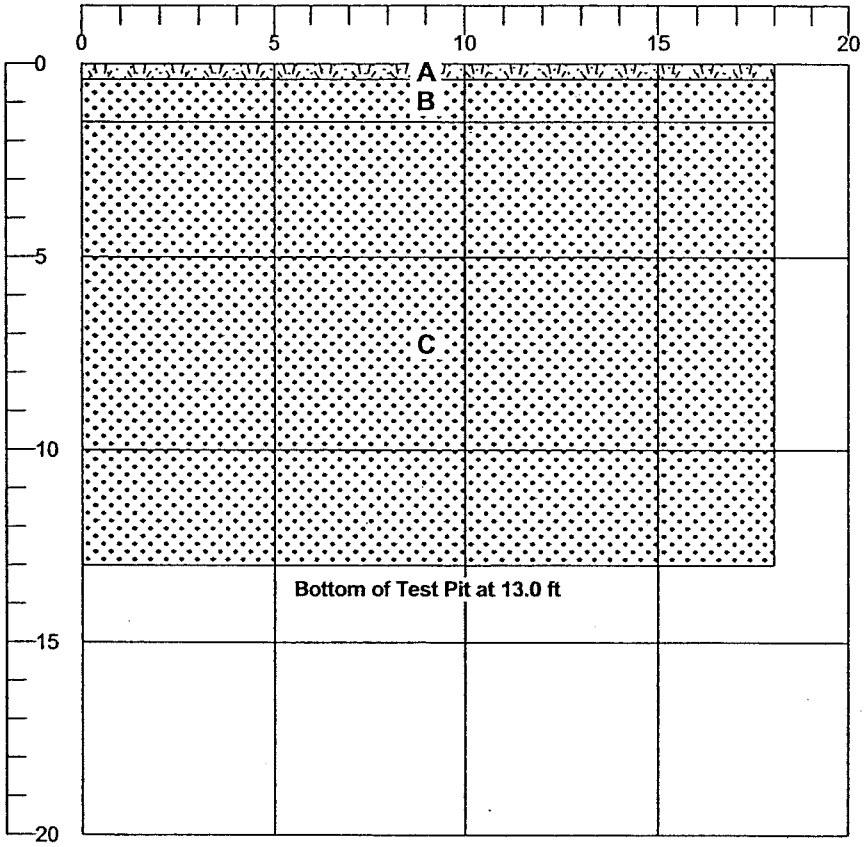
LOG OF TEST PIT TP-43

Golder Associates

Temp 55 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 495.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 23, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	1.0	
2	4.0	
3	9.0	4.9

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.4 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.4 - 1.5 ft: Loose, orange-brown, non-stratified, silty fine to coarse SAND with little, subrounded, fine to coarse gravel, moist (SM) (WEATHERED RECESSIONAL OUTWASH)

C 1.5 - 13.0 ft: Compact, brown-gray, non-stratifed, fine to coarse SAND and subrounded, fine to coarse GRAVEL, some cobbles, and trace silt, damp (SW-GW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
11:00	0.0		
11:30	13.0		

SPECIAL NOTES:
Major caving was observed between 0 to 13 feet.
No water seepage was observed.

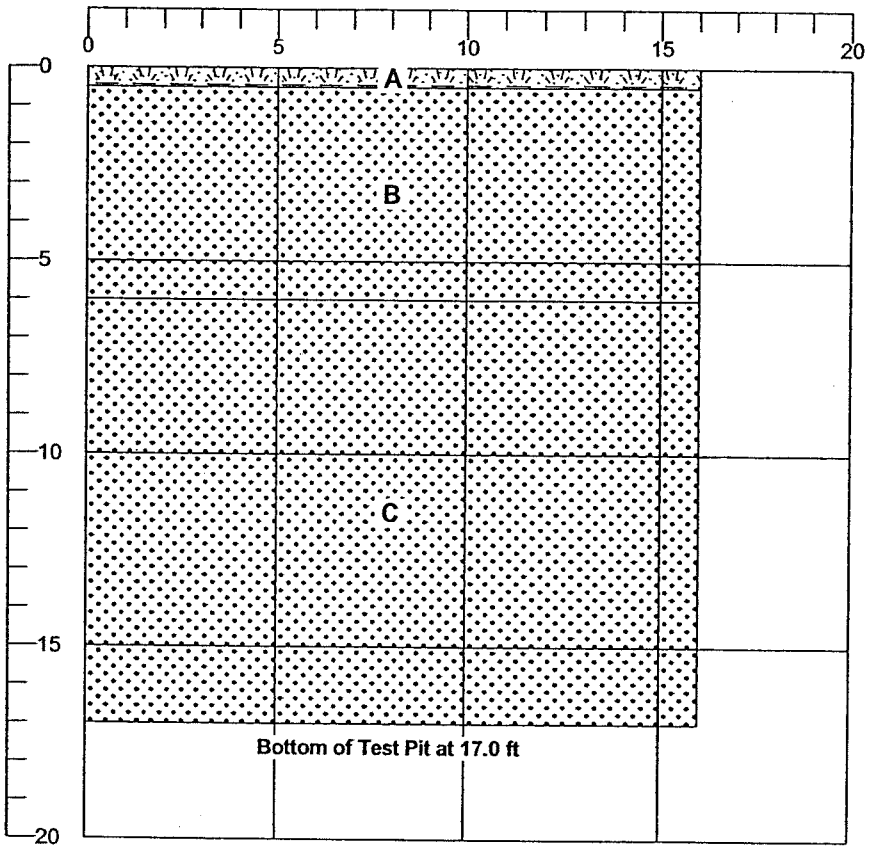
LOG OF TEST PIT TP-44

Golder Associates

Temp 55 °F Weather Sunny
Equipment 312 C Cat Trackhoe
Elevation 512.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 23, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	3.5	18.4
2	15.0	

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.5 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL)

B 0.5 - 6.0 ft: Loose, brown, non-stratified, fine to coarse SAND with some, subrounded, fine to coarse gravel, little silt, trace cobbles, and trace, orange-brown, silt clumps, moist (SP-SM) (WEATHERED RECESSIONAL OUTWASH)

C 6.0 - 17.0 ft: Compact, brown-gray, non-stratifed, fine to coarse SAND with some, subrounded, fine to coarse gravel, little cobbles, trace silt, and trace, orange-brown, silt clumps, damp (SW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
11:50	0.0		
12:20	17.0		

SPECIAL NOTES:
Moderate to major caving between 0 to 6 feet.
No water seepage was observed.

LOG OF TEST PIT 063-1076.200_VILLAGES_TPS.GPJ GLDR_WA.GDT 4/20/06

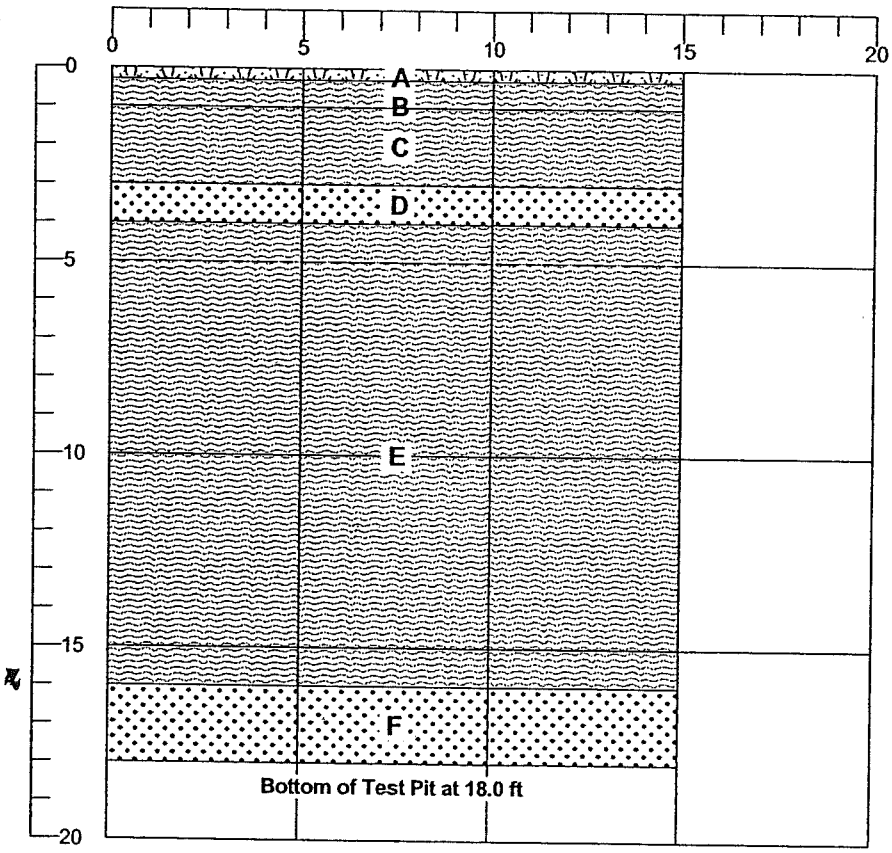
LOG OF TEST PIT TP-45

Golder Associates

Temp 55 °F Weather Overcast
Equipment 312 C Cat Trackhoe
Elevation 466.0 ft
Location Black Diamond, WA

Engineer A. Dennison
Contractor MidMountain Contractors
Datum MSL

Operator Tim
Date March 23, 2006
Job 063-1076.200



SAMPLES		
NO.	DEPTH (ft)	MOISTURE (%)
1	0.7	
2	2.0	31.7
3	3.5	
4	10.0	29.5
5	15.0	30.1
6	16.5	6.5

LITHOLOGIC DESCRIPTIONS AND EXCAVATION NOTES

A 0.0 - 0.3 ft: Loose, dark brown, non-stratified, silty fine to coarse SAND with some organics, moist (SM) (TOPSOIL/GRASS)

B 0.3 - 1.0 ft: Loose, orange-brown, non-stratifed, silty fine to medium SAND with trace fine gravel, moist (SM) (WEATHERED KETTLE LAKE DEPOSIT)

C 1.0 - 3.0 ft: Compact, light brown to brown, non-stratified, iron-oxide stained, SILT with little fine sand, and trace organics, moist (ML) (KETTLE LAKE DEPOSIT)

D 3.0 - 4.0 ft: Compact, gray, non-stratified, fine to medium SAND with little silt, moist (SP-SM) (RECESSIONAL OUTWASH)

E 4.0 - 16.0 ft: Compact, orange-brown to gray-brown, non-stratified, iron-oxide stained, clayey SILT with lenses of fine to medium sand with trace to little silt, moist (ML) (KETTLE LAKE DEPOSIT)

F 16.0 - 18.0 ft: Compact, brown-gray, non-stratified, fine to coarse SAND with some, subrounded, fine to coarse gravel and little silt, moist to wet (SW) (RECESSIONAL OUTWASH)

TIME	DEPTH OF HOLE (ft)	DEPTH TO W/L (ft)	DEPTH TO SEEPAGE (ft)
12:40	0.0		
13:25			16.0
13:30	18.0		

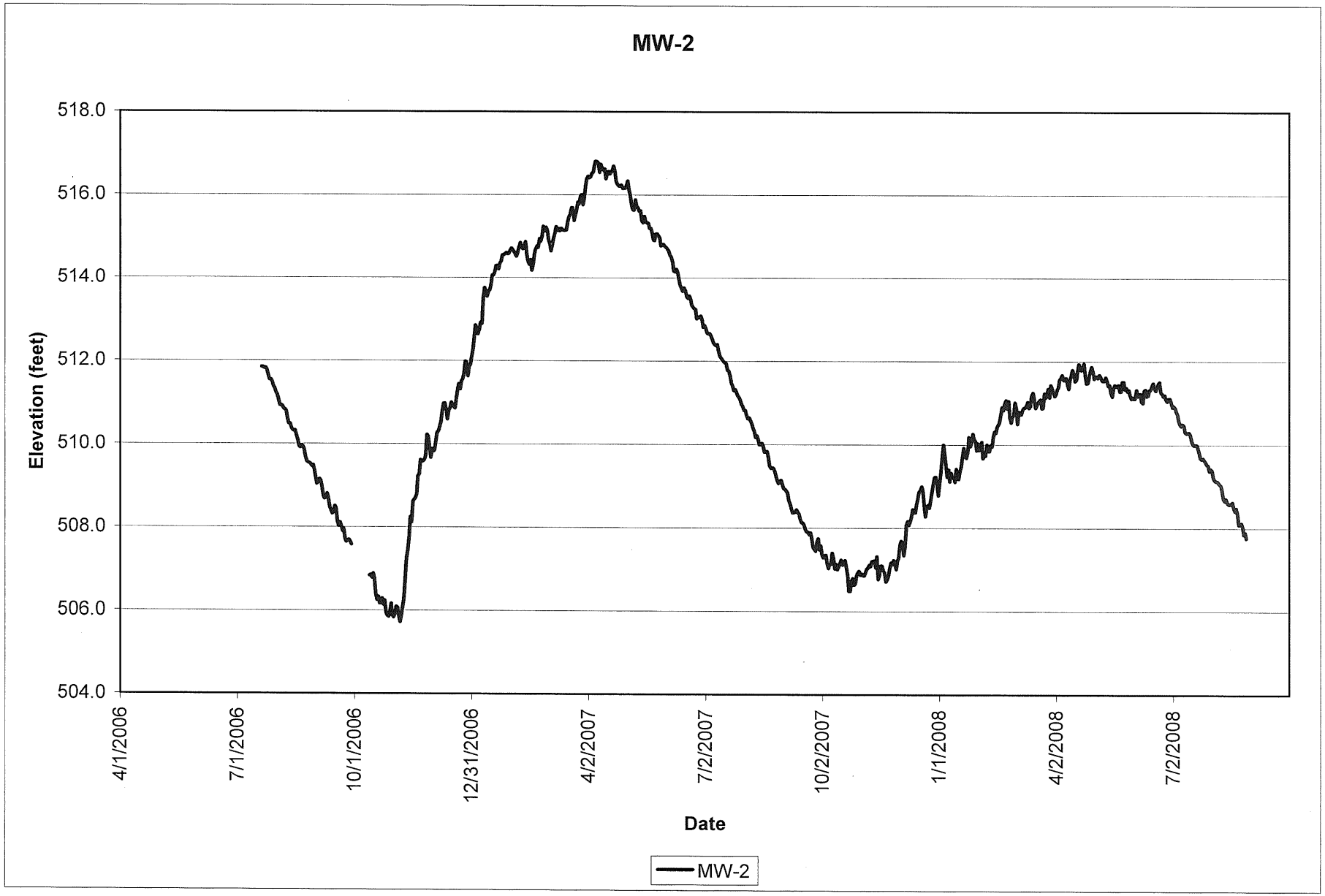
SPECIAL NOTES:
Moderate caving between 8 to10 feet. Moderate to major water seepage at 16 feet.

Appendix 5
Ground Water Data

Monthly Hand-Measurements of Ground Water Levels

	2006									2007												2008							
Well/Date	**5/9**	**6/9**	**7/20**	**8/10**	**9/28**	**10/11**	**11/9**	**11/21**	**12/14**	**1/18**	**2/20**	**3/20**	**4/17**	**5/23**	**6/21**	**7/31**	**8/29**	**9/20**	**10/18**	**11/19**	**12/20**	**1/30**	**2/26**	**3/25**	**4/29**	**5/20**	**6/19**	**7/30**	**8/28**
MW-1	Dry	Dry	Dry	Dry	Dry	Dry	Dry	NM	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW-2	512.71	513.29	511.83	510.48	507.52	506.97	506.88	NM	511.10	514.31	515.05	515.88	516.74	515.10	513.53	511.06	509.29	508.06	507.29	507.24	508.80	510.02	510.66	511.34	512.03	511.55	511.49	509.48	507.87
MW-3	536.44	540.80	532.94	530.96	527.29	526.86	531.83	NM	540.57	542.75	540.71	543.99	542.86	537.16	534.47	531.44	529.34	527.93	527.25	527.39	535.87	539.44	540.23	540.05	540.26	536.42	539.03	531.37	529.04
MW-4	554.05	555.08	554.46	554.25	553.25	553.12	552.56	NM	552.94	553.57	554.31	554.73	555.36	555.47	555.12	554.48	553.95	553.51	553.23	552.23	551.78	552.29	552.67	553.24	553.79	553.83	553.93	553.60	553.17
MW-5	---	---	---	---	535.77	535.69	535.48	NM	535.66	535.63	535.77	NM	536.03	536.17	536.17	536.02	535.94	535.78	535.76	535.42	535.23	535.32	535.44	535.56	535.68	535.75	535.82	535.81	535.72
MW-6	---	---	---	---	486.21	485.38	483.99	NM	491.22	499.56	496.17	NM	499.84	495.27	492.36	489.14	487.15	485.62	484.01	482.18	481.94	485.69	488.98	488.74	489.82	488.77	487.70	486.62	484.08
MW-7	---	---	---	---	487.52	486.59	485.48	489.38	492.50	500.36	497.39	NM	500.80	496.54	493.71	490.47	488.41	486.89	485.20	483.46	483.17	486.84	490.09	489.90	490.72	489.89	488.70	486.99	485.19
MW-8	---	---	---	---	524.64	531.01	531.58	534.81	535.14	534.91	535.05	NM	534.91	534.68	534.26	532.88	531.32	530.03	530.79	533.93	534.48	534.63	534.68	534.92	535.00	534.85	535.06	533.86	532.30
MW-9	---	---	---	---	534.49	533.53	546.18	NM	550.22	548.22	547.98	NM	546.70	542.73	540.14	537.30	535.00	533.30	532.40	532.60	541.99	546.49	547.00	547.10	546.09	543.34	544.73	539.78	537.12
MW-10	---	---	---	---	---	476.30	475.46	NM	480.14	483.61	482.22	482.89	483.72	481.29	479.86	478.22	477.19	NM	474.93	473.40	473.03	476.11	478.32	478.38	478.83	478.36	477.83	476.64	475.35
MW-11	---	---	---	---	---	461.37	462.01	461.91	462.26	463.15	464.52	465.02	465.60	465.95	465.57	464.76	464.06	NM	463.12	462.42	461.86	461.46	461.49	461.96	462.34	462.40	462.36	461.86	461.60
MW-12	---	---	---	---	---	475.63	474.83	477.84	480.63	486.01	483.79	484.72	486.08	482.91	480.85	478.37	476.82	NM	474.33	472.72	472.45	475.81	478.73	478.40	479.05	478.32	477.63	476.03	474.63
MW-13	---	---	---	---	---	Dry	482.25	483.60	484.86	492.77	489.59	491.29	492.64	488.46	485.60	Dry	Dry	NM	Dry	Dry	Dry	Dry	483.82	482.52	Dry	482.10	Dry	Dry	Dry
MW-14	---	---	---	---	---	---	---	---	558.25	560.17	557.85	559.42	558.81	557.49	557.48	557.32	557.19	557.11	557.15	556.91	557.85	558.64	558.59	557.96	559.30	557.62	558.52	557.21	557.19
MW-15	---	---	---	---	---	---	---	---	385.53	385.93	386.69	387.13	387.38	387.64	387.57	387.32	387.09	386.83	386.94	386.62	386.61	386.49	386.38	386.56	387.46	386.82	386.87	386.56	386.77
MW-16	---	---	---	---	---	---	Dry		Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW-17	---	---	---	---	---	---	---	487.37	490.40	NM	495.24	NM	498.95	494.33	491.63	488.22	486.25	484.97	483.17	481.42	481.21	485.02	488.30	488.10	488.75	487.88	486.94	485.05	483.32
MW-18	---	---	---	---	---	---	---	Dry		NM	Dry	NM	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW-19	---	---	---	---	---	---	---	496.51	497.59	500.66	501.96	502.52	503.98	503.04	501.79	500.01	498.74	497.73	496.60	495.33	494.24	494.91	495.79	496.70	497.43	497.44	496.95	496.44	495.20
MW-20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	491.60	490.01	487.99
MW-21	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	544.08	543.30	542.39
MW-22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	492.43	490.20	488.24
MW-23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	527.76	526.45	524.75
P-1	---	---	---	---	---	---	---	---	---	537.27	537.22	Dry	537.00	Dry	Dry	Dry	Dry	Dry	Dry	Dry	536.93	536.88	536.91	536.73	536.77	Dry	536.65	Dry	Dry
P-2	---	---	---	---	---	---	---	---	---	511.08	510.44	Dry	511.49	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
P-3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	501.96	500.17	Dry
DH-2	NM	NM	NM	NM	NM	NM	NM	NM	NM	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
DH-3	NM	NM	NM	NM	NM	NM	NM	NM	504.19	506.49	501.80	505.43	504.65	498.88	Dry	Dry	Dry	Dry	Dry	Dry	Dry	504.32	504.92	501.34	503.07	501.45	Dry	Dry	Dry
W-1	NM	NM	NM	NM	NM	NM	NM	NM	496.42	500.15	501.05	501.93	503.42	501.97	500.42	498.43	497.06	495.96	494.79	493.41	492.10	493.19	494.50	495.32	496.05	496.00	495.49	494.54	493.53
W-3	NM	NM	NM	NM	NM	NM	NM	NM	NM	488.67	489.97	490.36	492.25	490.70	488.81	486.39	484.93	483.95	482.97	481.61	480.20	480.48	481.43	482.69	483.58	483.71	483.43	482.58	481.82
W-5	NM	NM	NM	NM	NM	NM	NM	NM	502.16	503.97	505.36	505.87	506.89	505.62	505.99	504.74	503.84	503.07	502.23	501.26	500.34	500.46	500.74	501.55	502.18	502.23	501.90	501.37	500.64
MW-1-ICE	NM	NM	NM	NM	NM	NM	NM	NM	522.55	522.58	522.68	522.89	522.86	522.67	522.65	522.64	522.62	522.61	522.57	522.54	522.53	522.86	522.94	522.91	522.89	522.81	522.65	522.66	522.63
MW-2D-ICE	NM	NM	NM	NM	NM	NM	NM	NM	NM	559.43	559.07	559.46	NM	558.56	558.34	558.09	557.93	Dry	Dry	Dry	559.34	559.28	559.30	559.21	559.05	Dry	559.05	Dry	Dry
MW-4-ICE	NM	NM	NM	NM	NM	NM	NM	NM	561.57	561.79	561.54	561.54	561.57	561.50	561.40	561.09	560.70	560.40	560.04	559.68	560.12	561.45	561.60	561.53	561.67	561.52	561.47	561.39	561.20

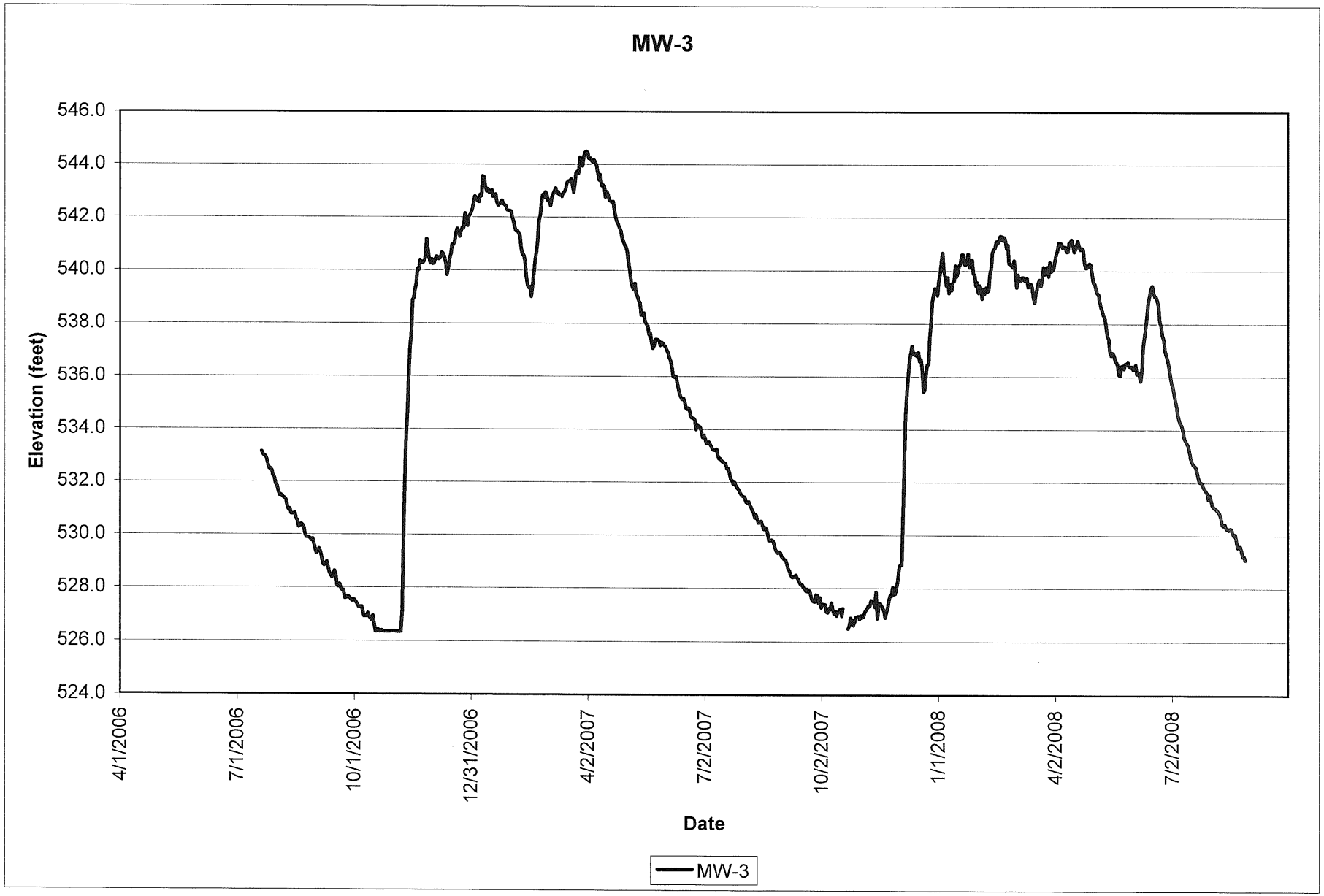
Notes:
Refer to Figure 7 for well locations.
--- Indicates that the well was not constructed until a later date.
NM: Not Measured



AESI

MW-2 HYDROGRAPH
THE VILLAGES

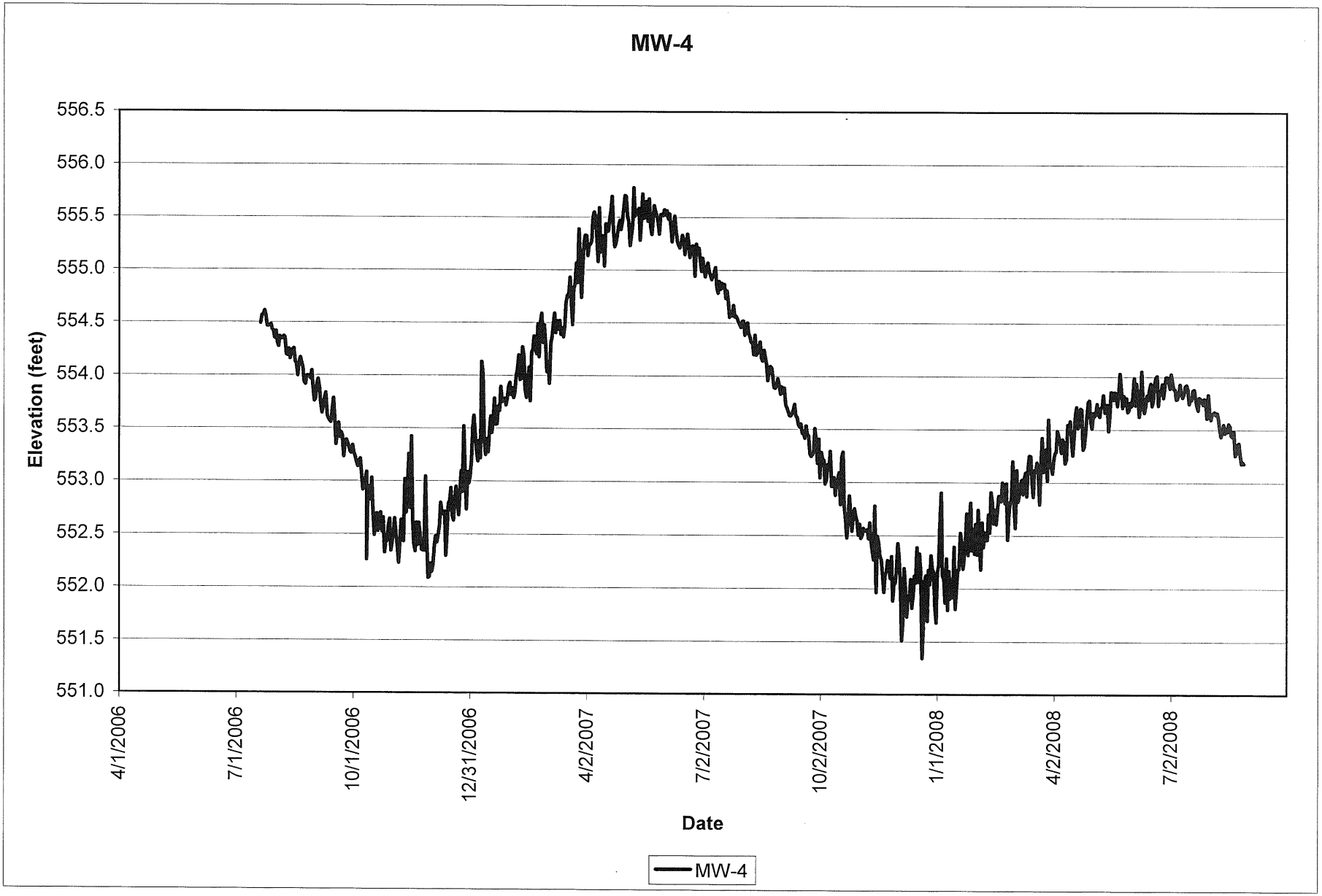
APPENDIX 5
DATE 09/08
PROJECT NO KG060601A



AESI

MW-3 HYDROGRAPH
THE VILLAGES

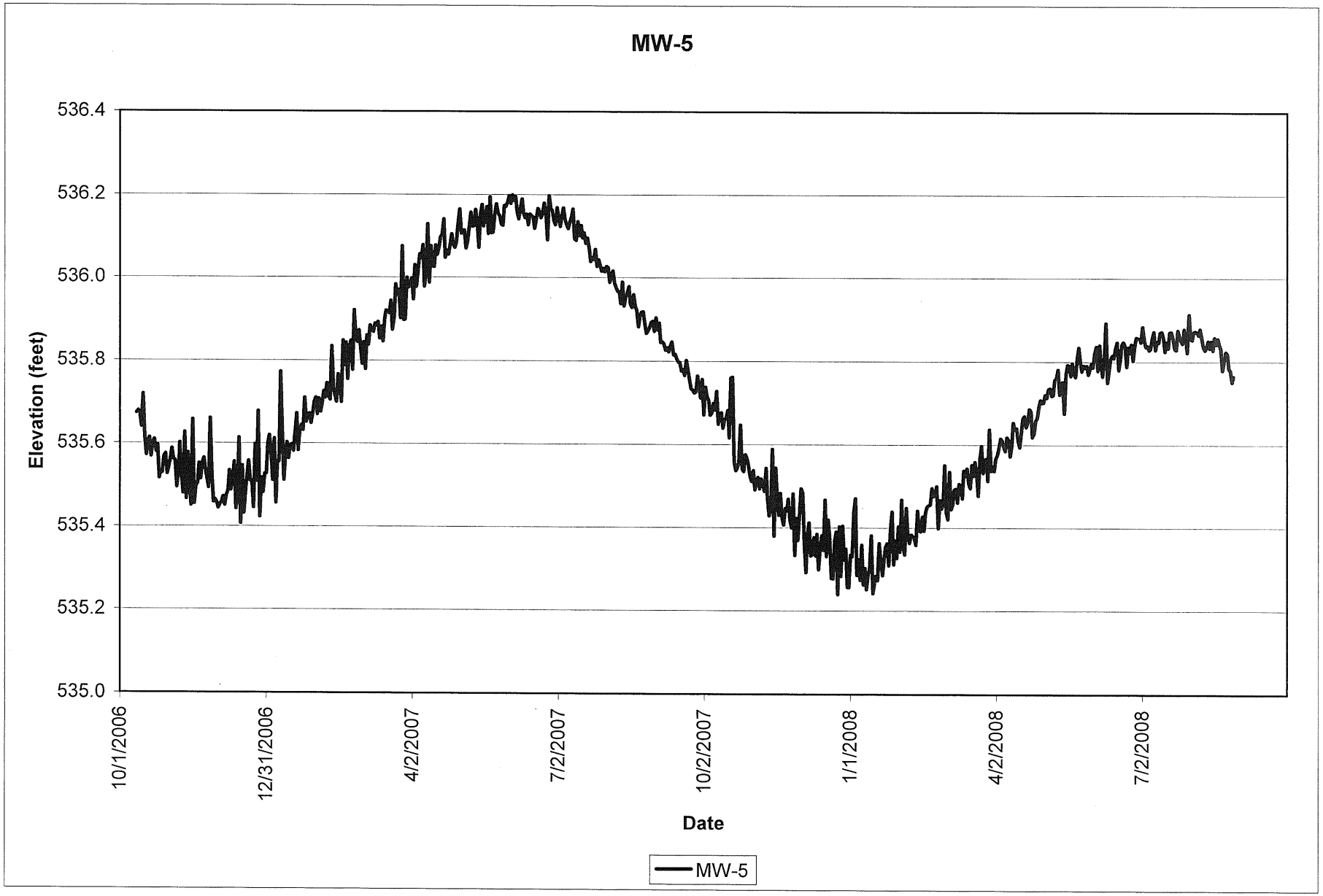
APPENDIX 5
DATE 09/08
PROJECT NO KG060601A



AESI

MW-4 HYDROGRAPH
THE VILLAGES

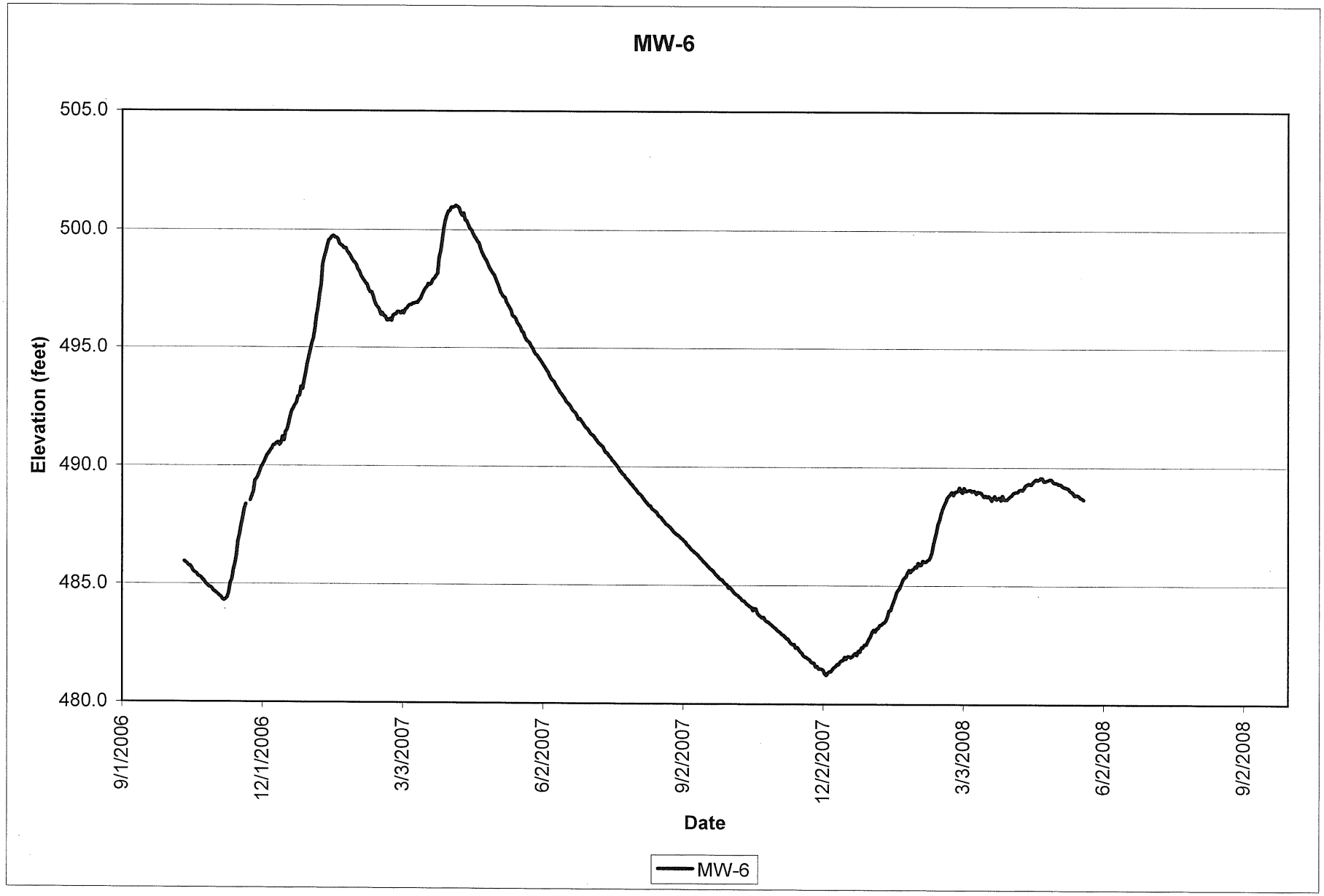
APPENDIX 5
DATE 09/08
PROJECT NO KG060601A



AESI

MW-5 HYDROGRAPH

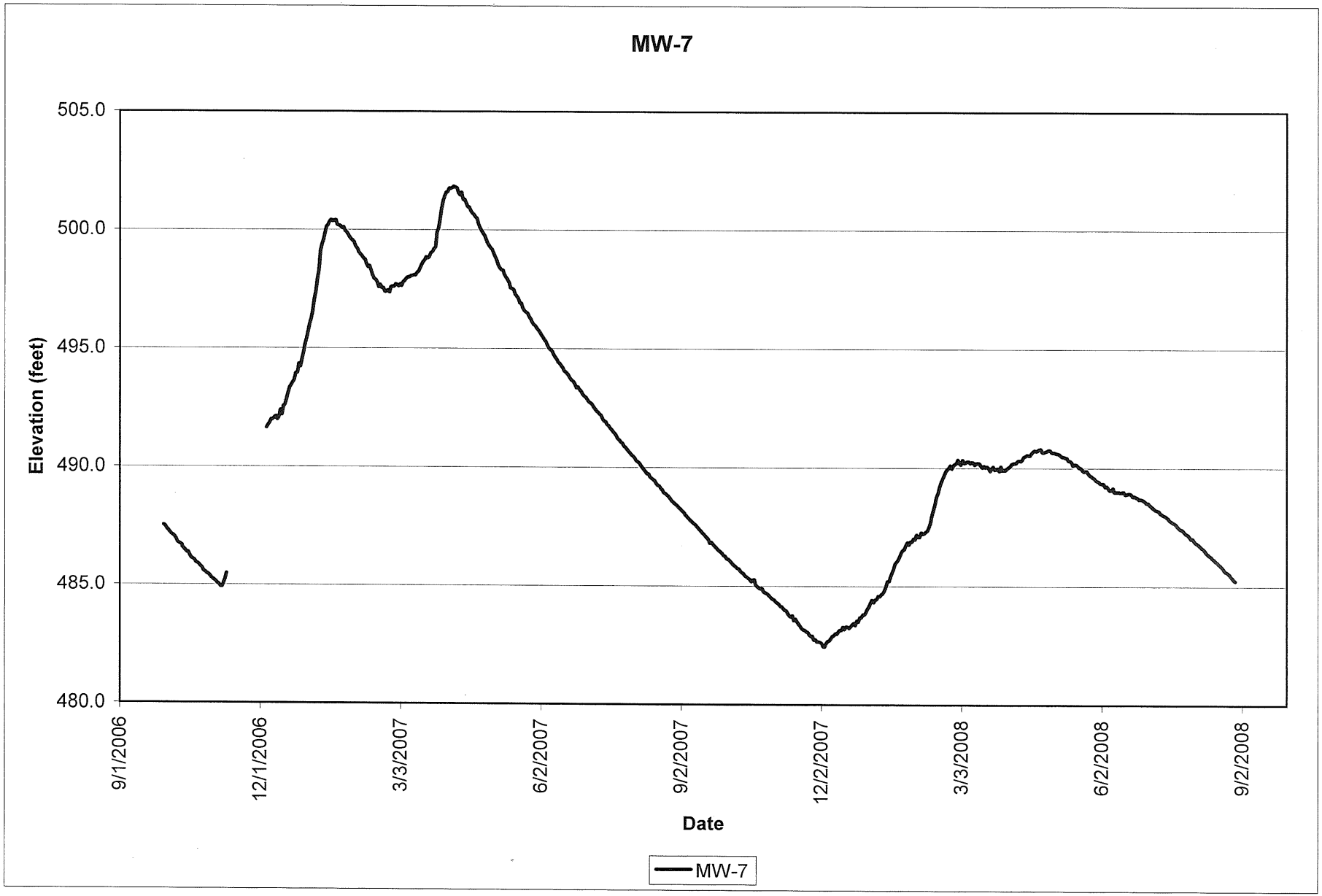
APPENDIX 5
DATE 09/08
PROJECT NO KG060601A



AESI

MW-6 HYDROGRAPH
THE VILLAGES

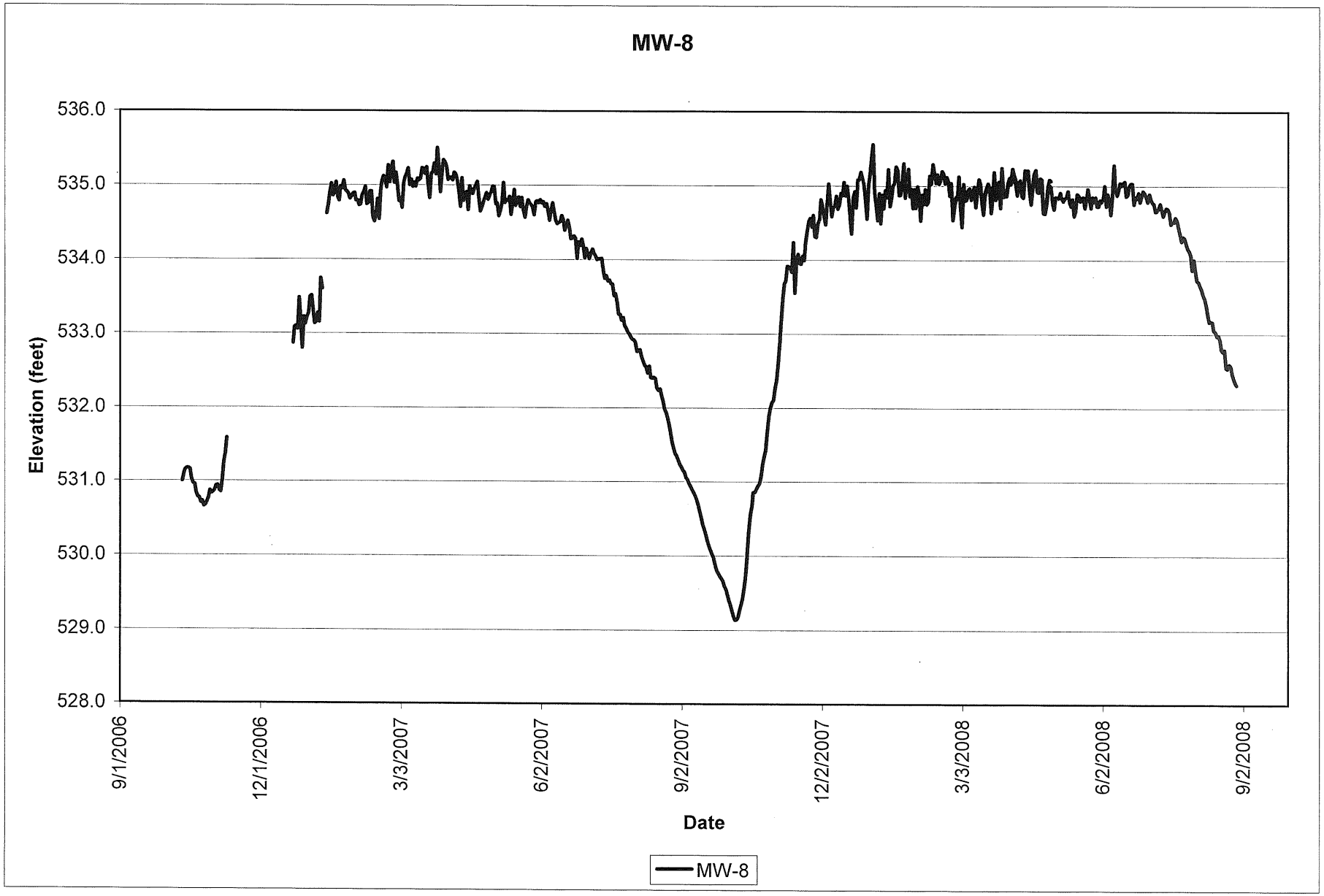
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-7 HYDROGRAPH
THE VILLAGES

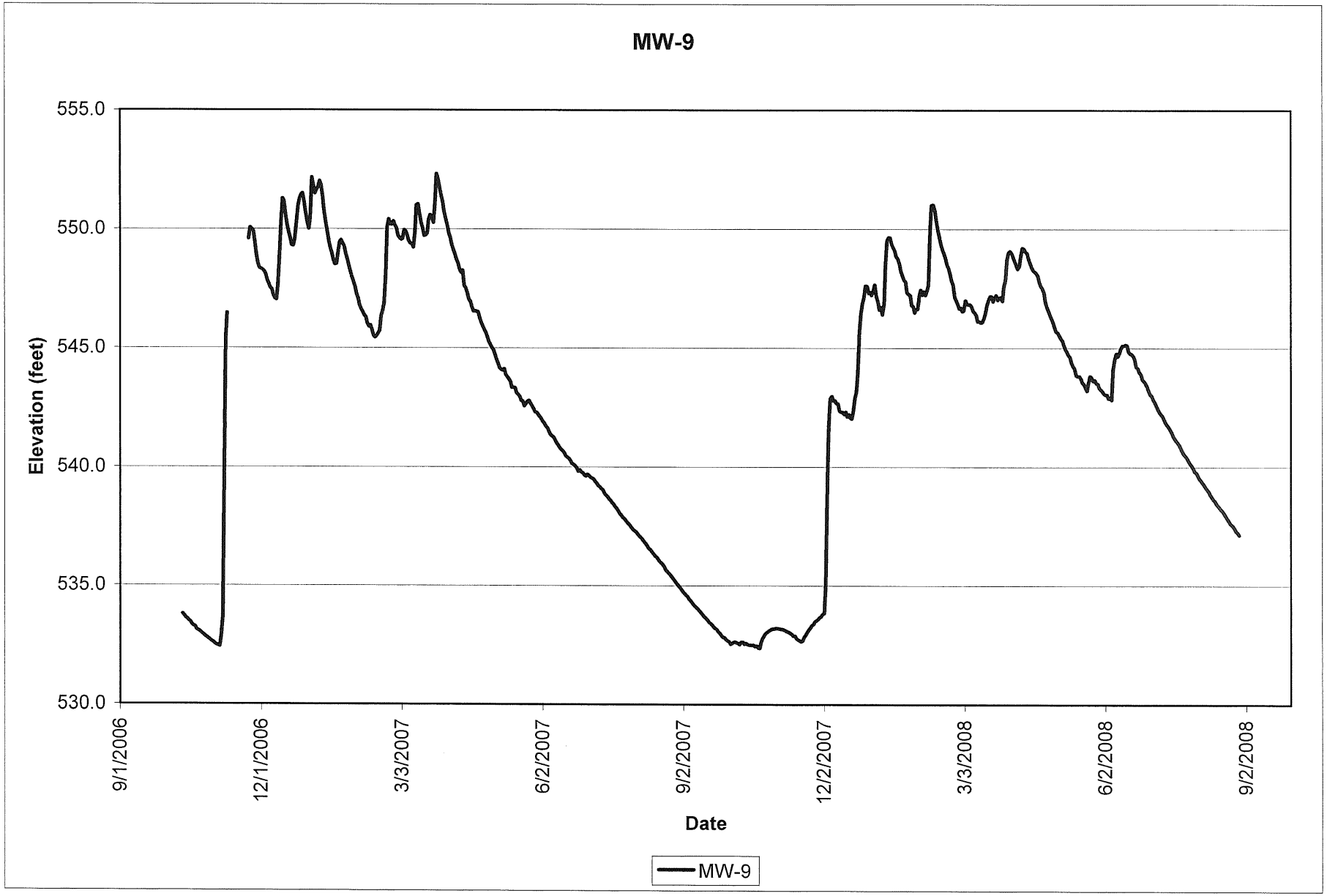
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-8 HYDROGRAPH
THE VILLAGES

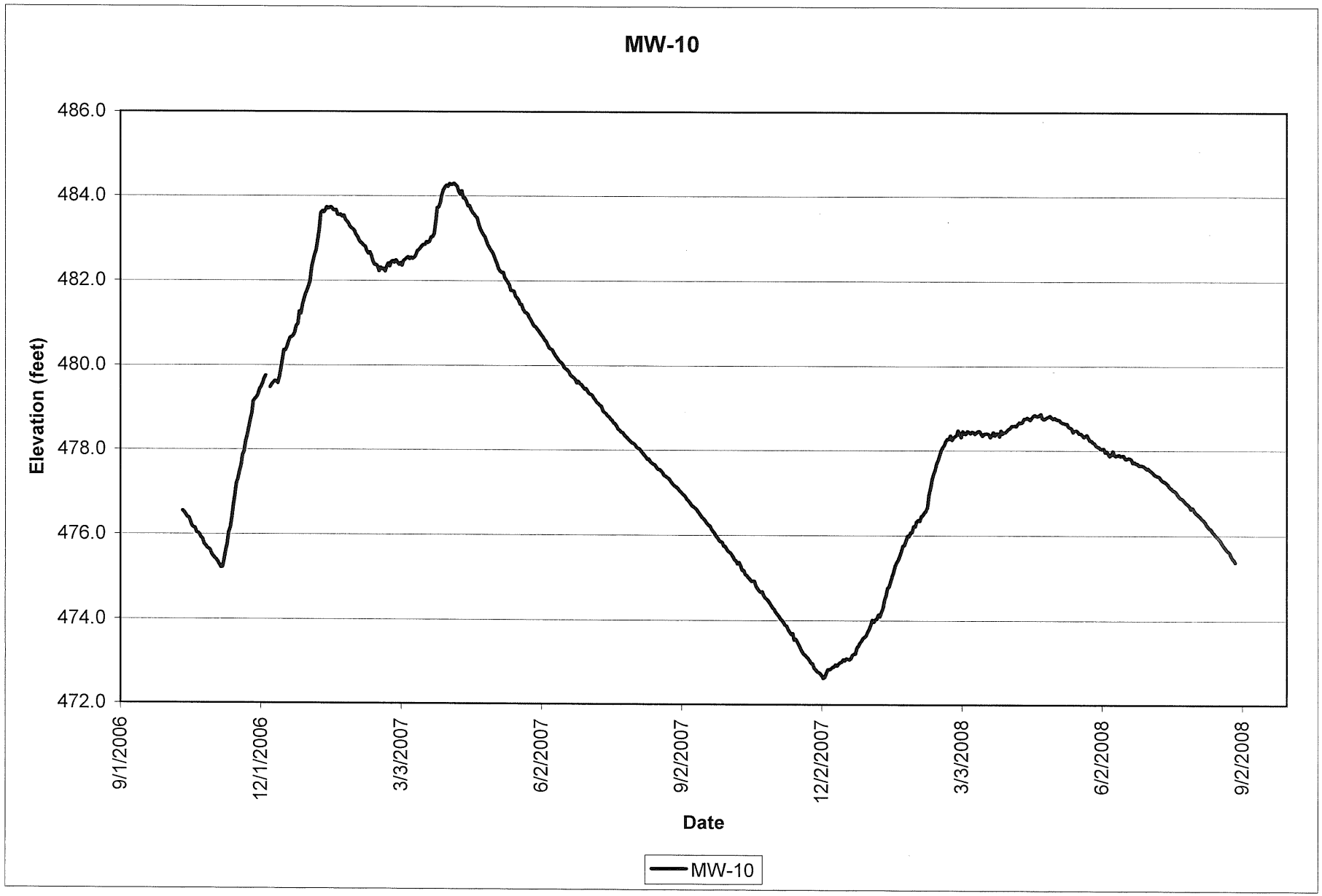
APPENDIX 5
DATE 9/08
PROJECT NO. KG060601A



AESI

MW-9 HYDROGRAPH
THE VILLAGES

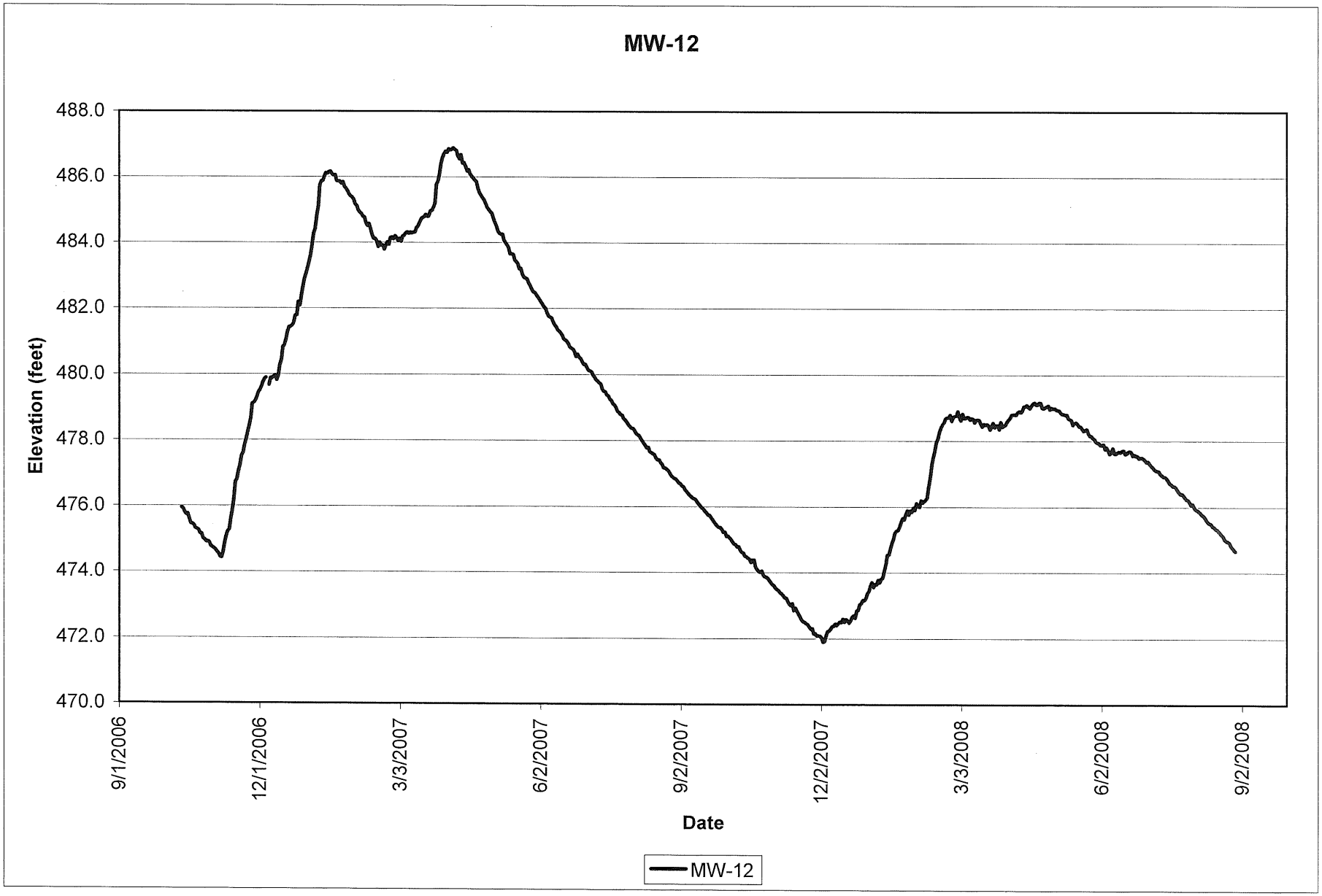
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-10 HYDROGRAPH
THE VILLAGES

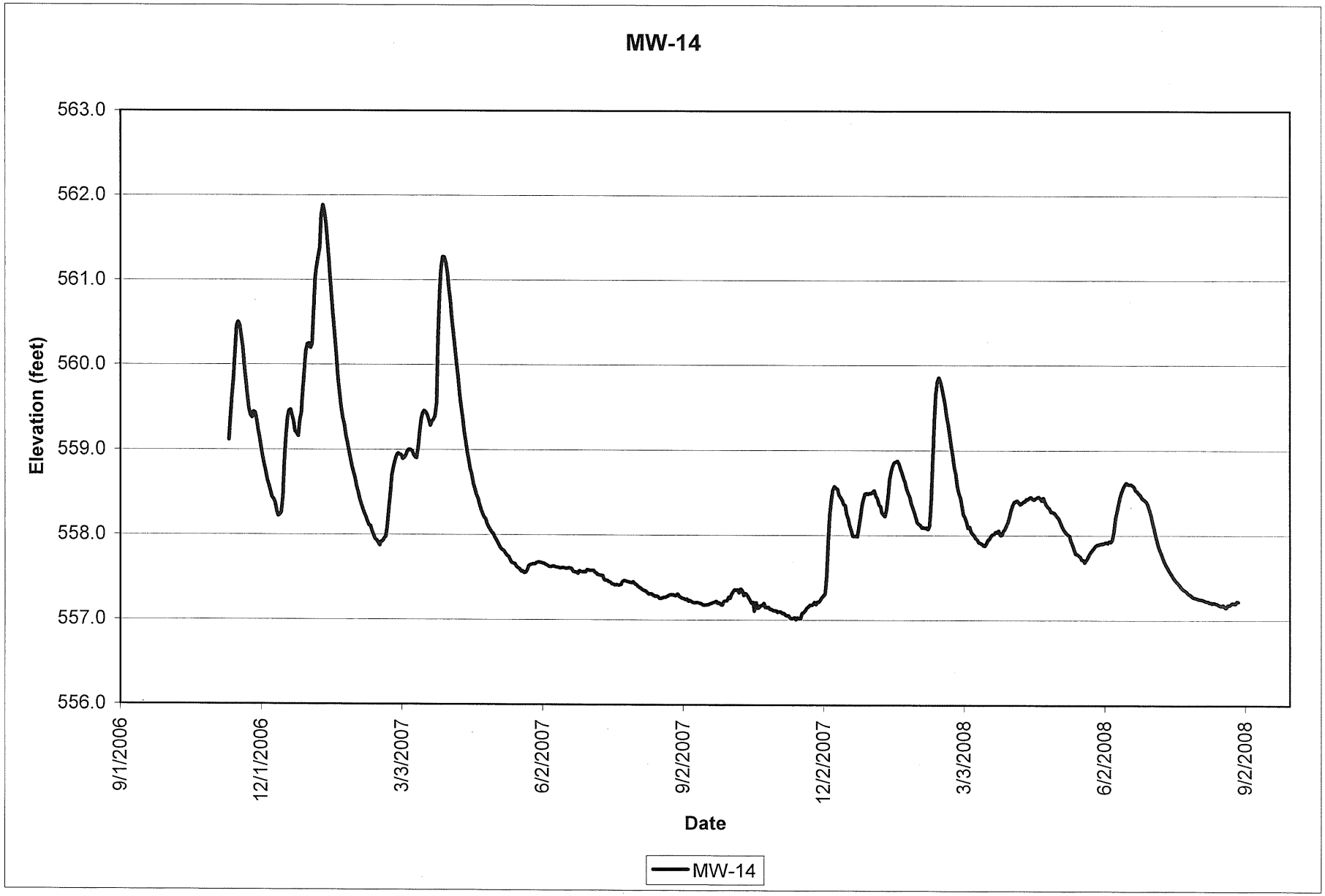
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-12 HYDROGRAPH
THE VILLAGES

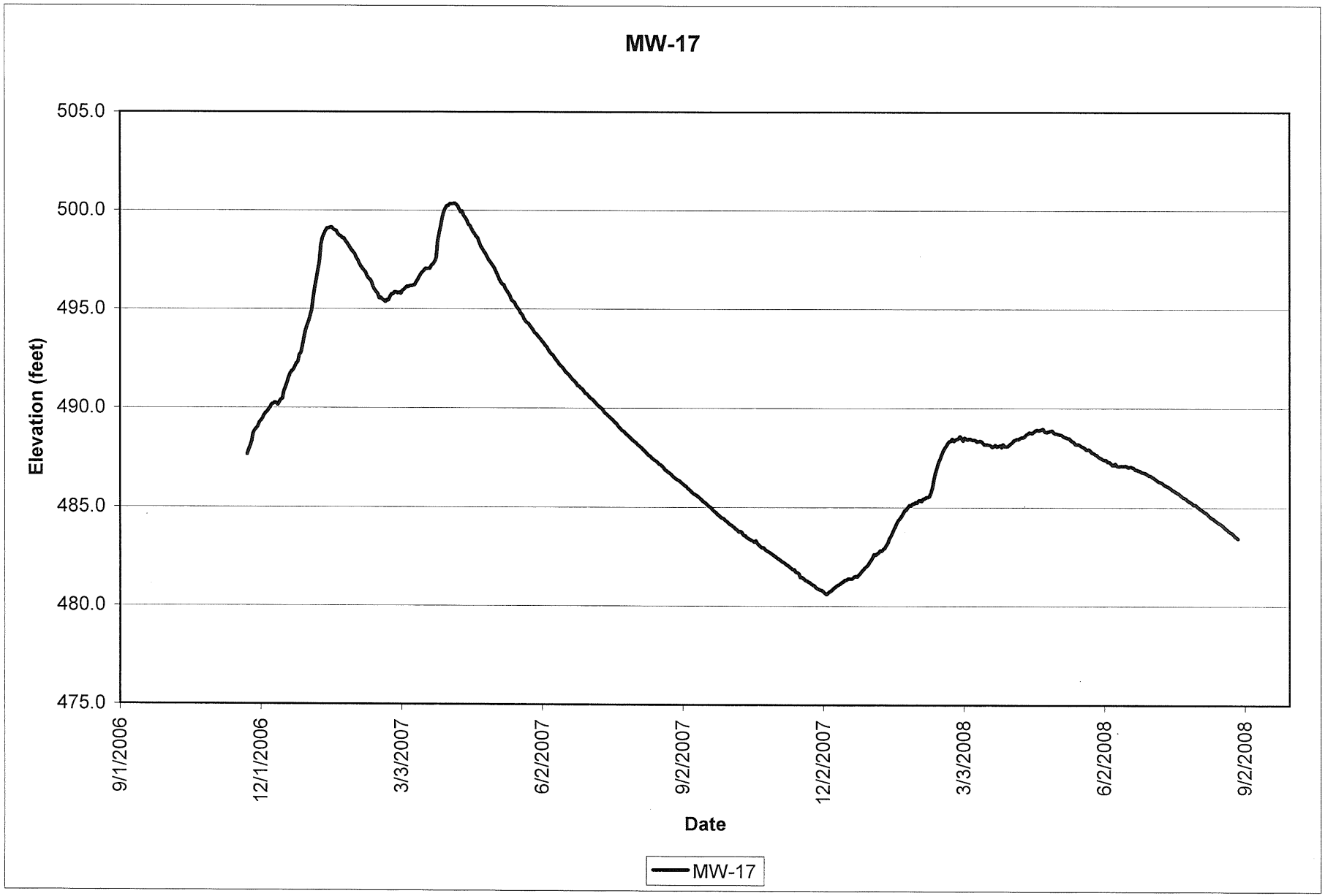
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-14 HYDROGRAPH
THE VILLAGES

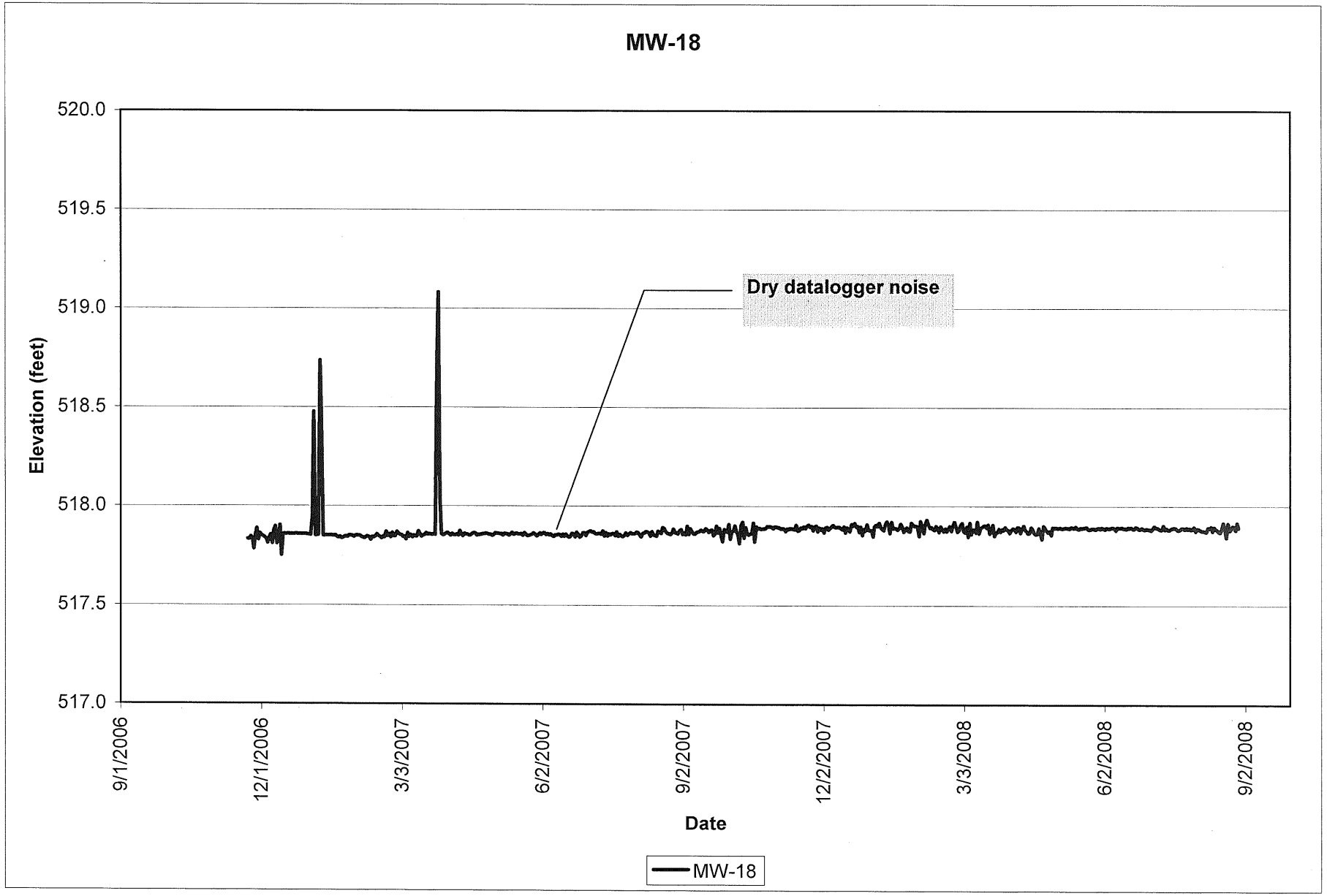
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-17 HYDROGRAPH
THE VILLAGES

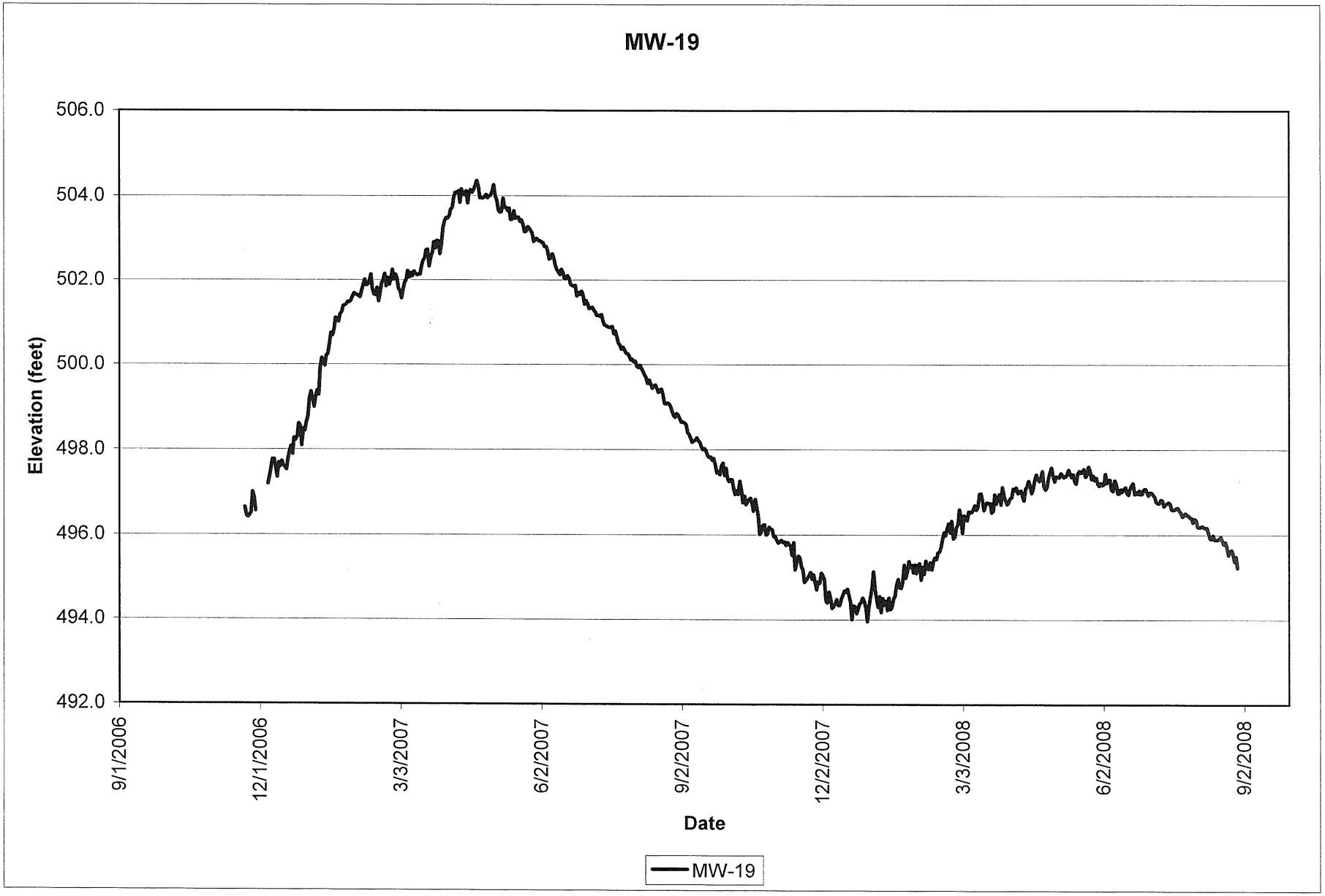
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-18 HYDROGRAPH
THE VILLAGES

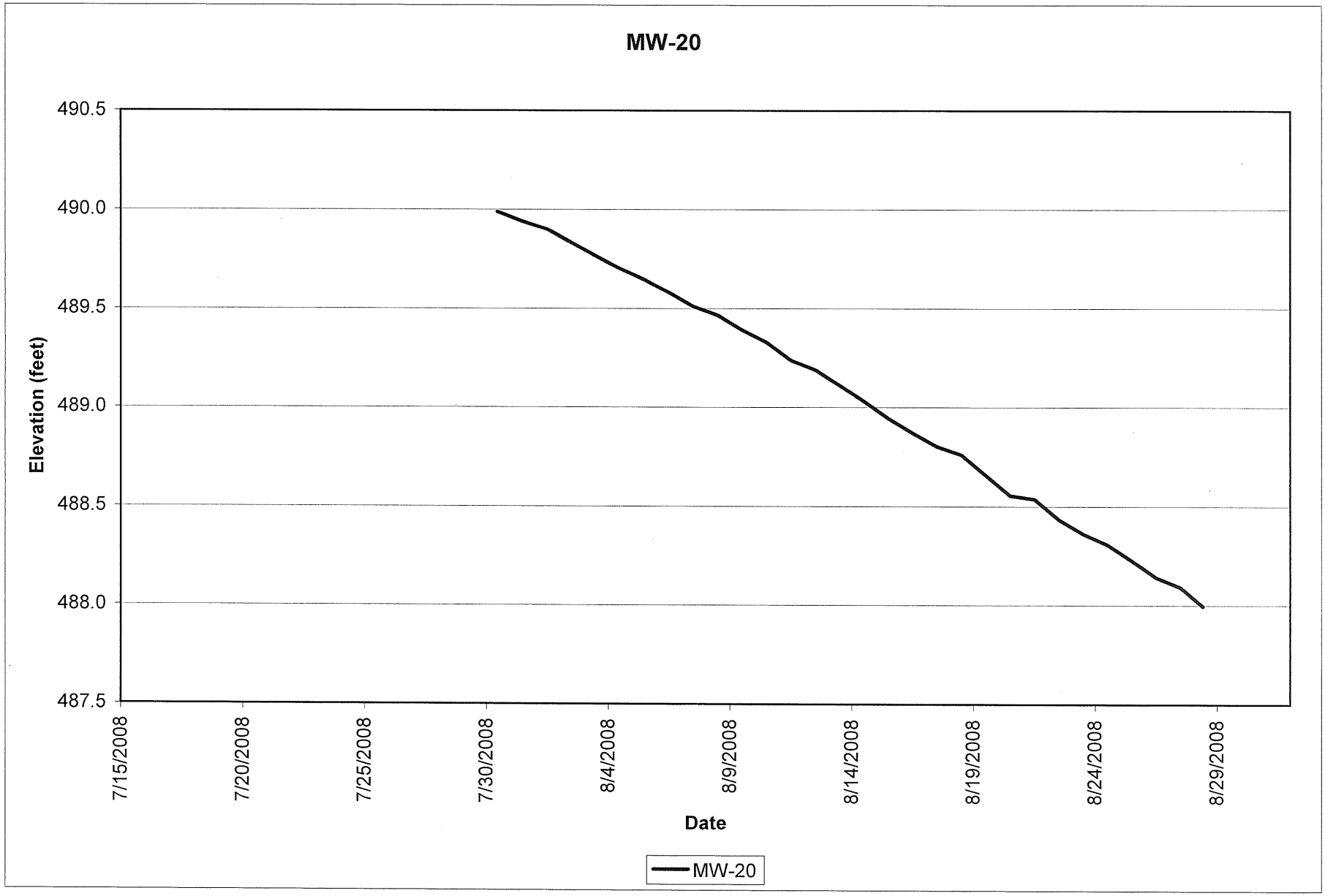
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-19 HYDROGRAPH
THE VILLAGES

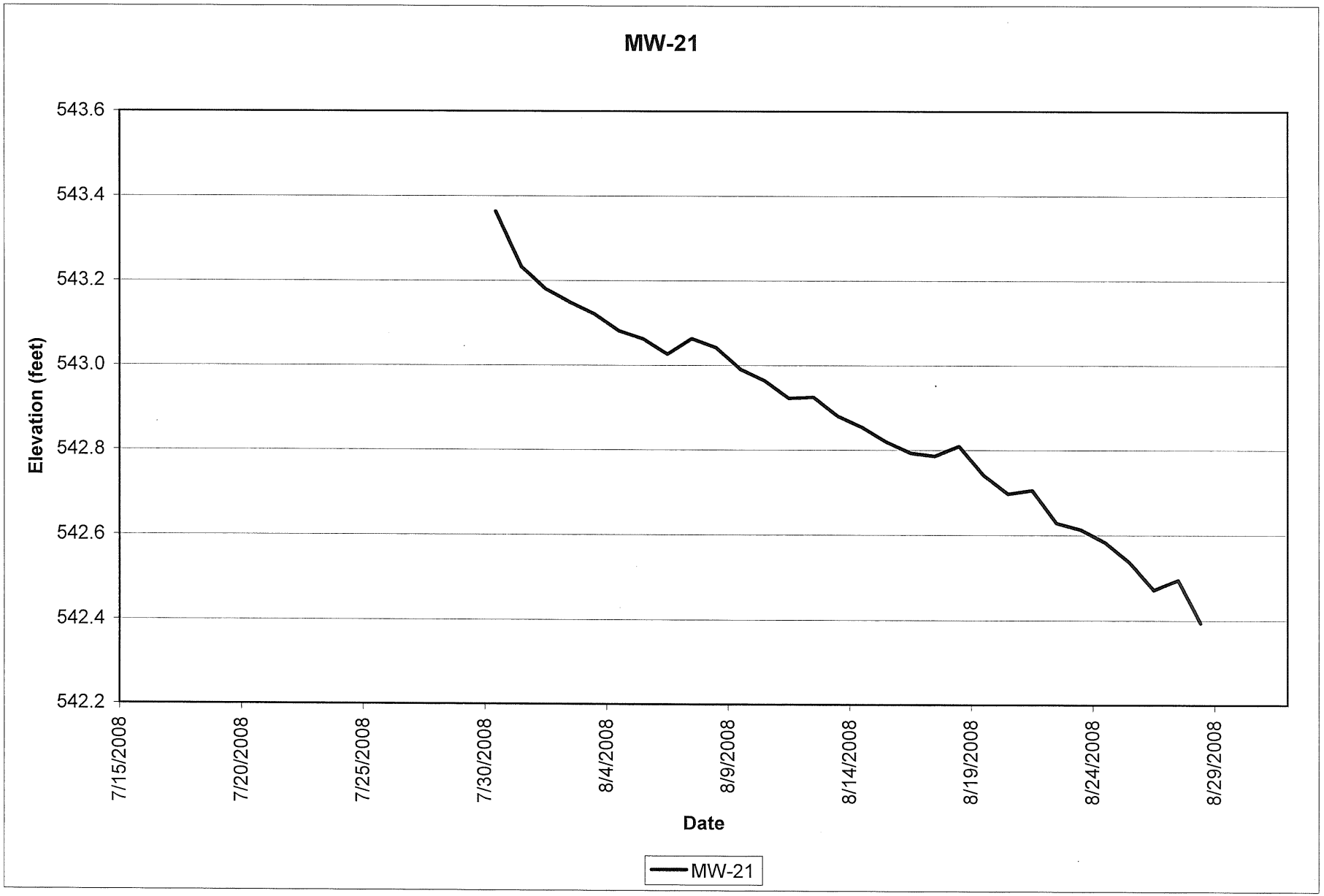
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-20 HYDROGRAPH
THE VILLAGES

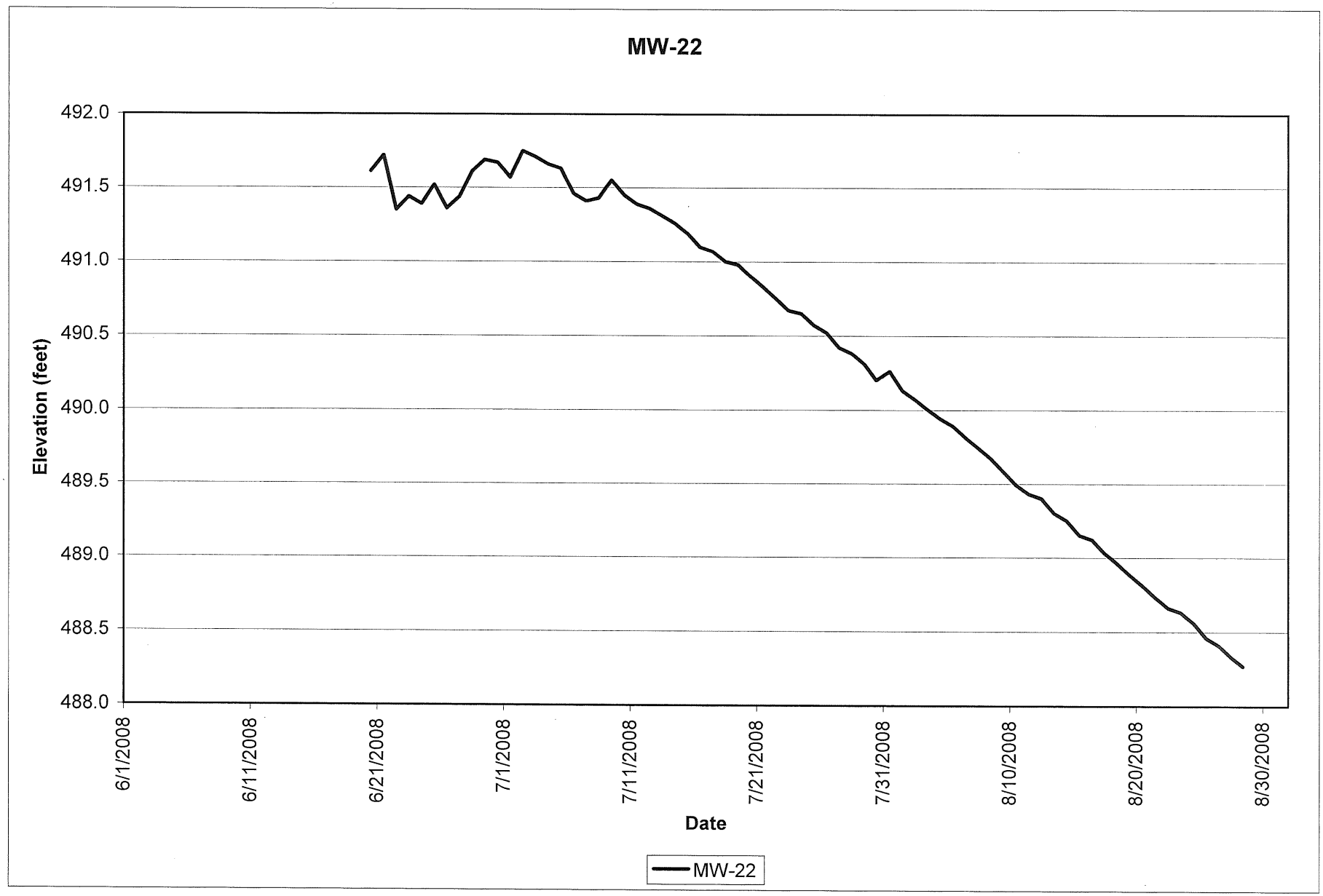
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-21 HYDROGRAPH
THE VILLAGES

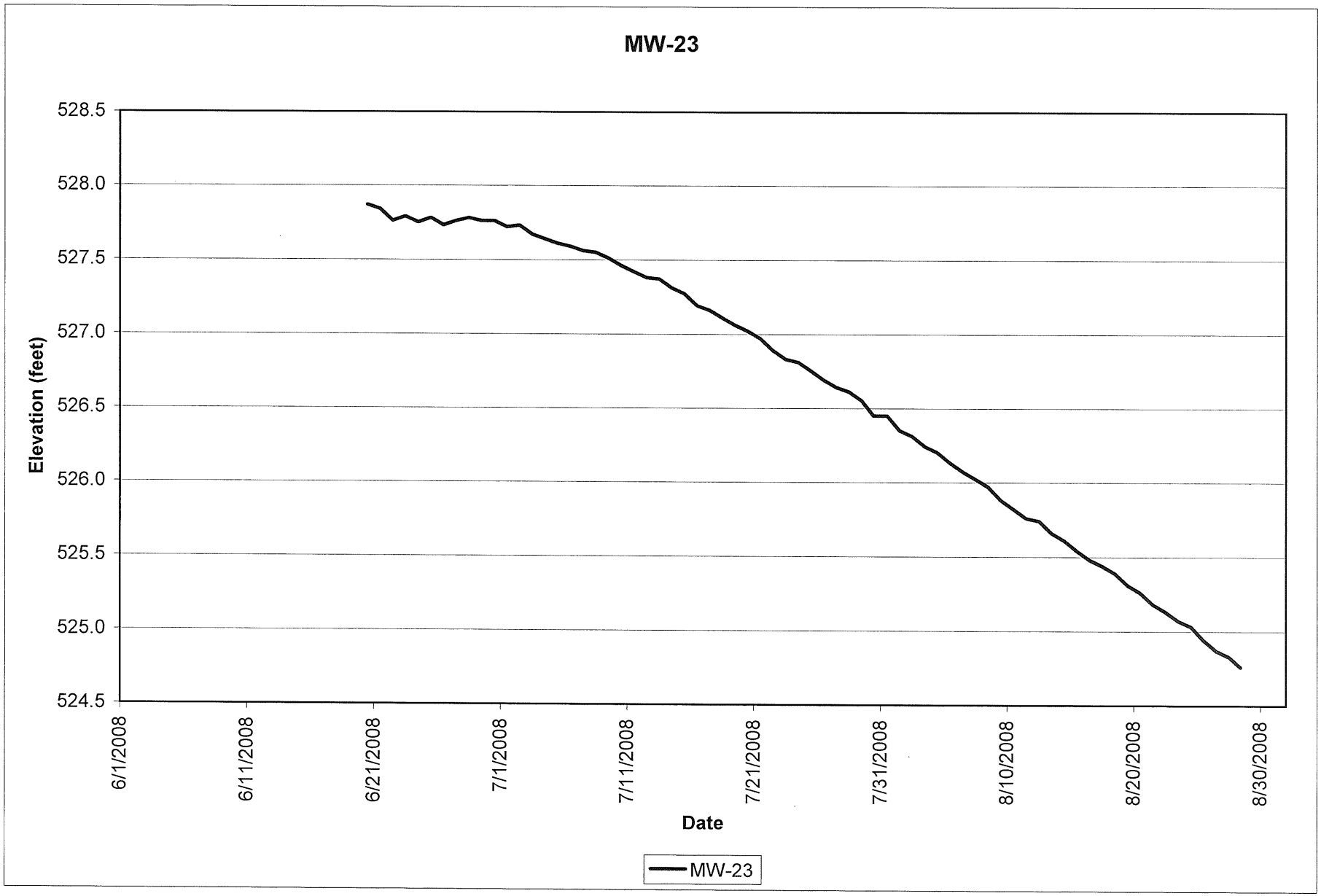
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-22 HYDROGRAPH
THE VILLAGES

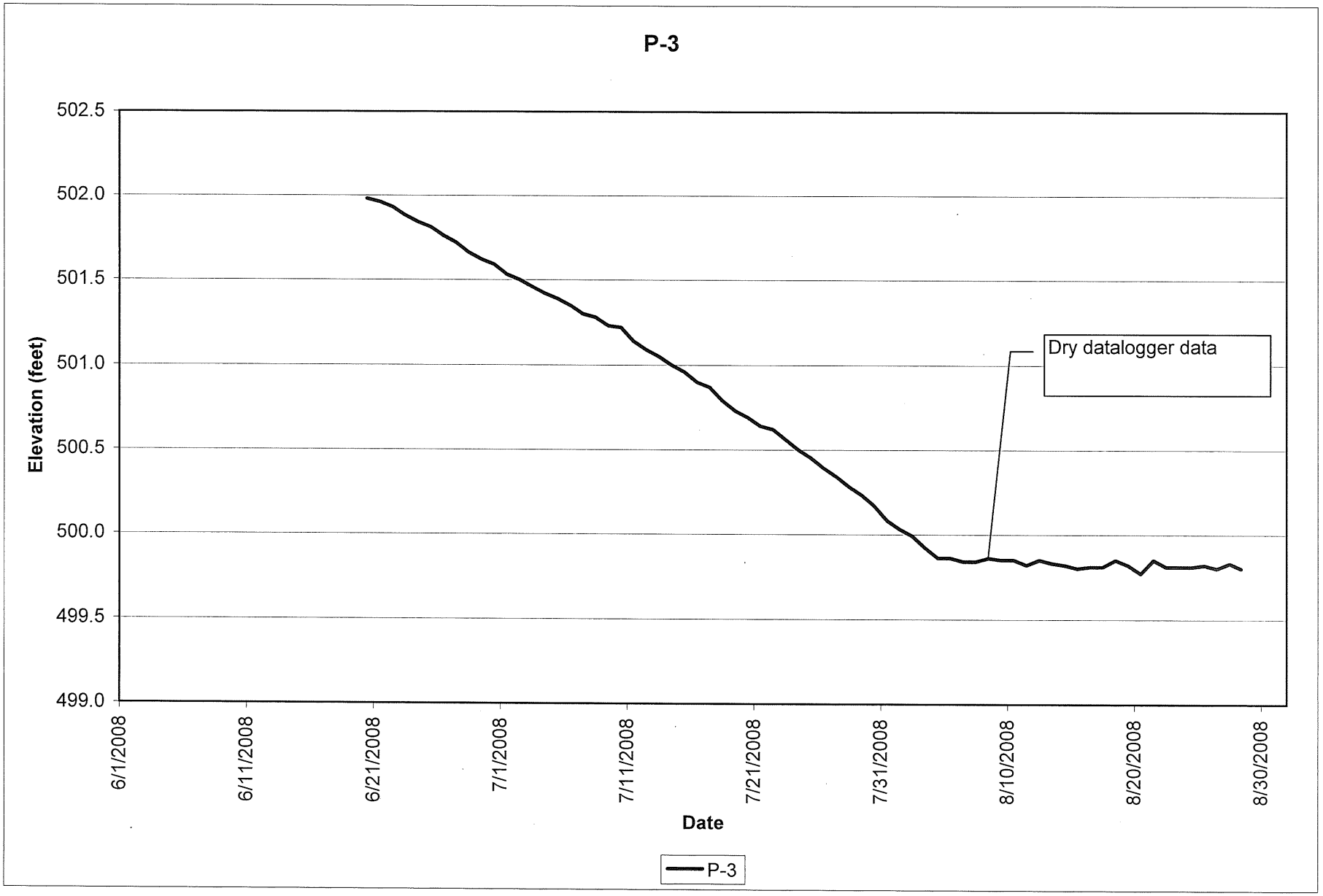
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-23 HYDROGRAPH
THE VILLAGES

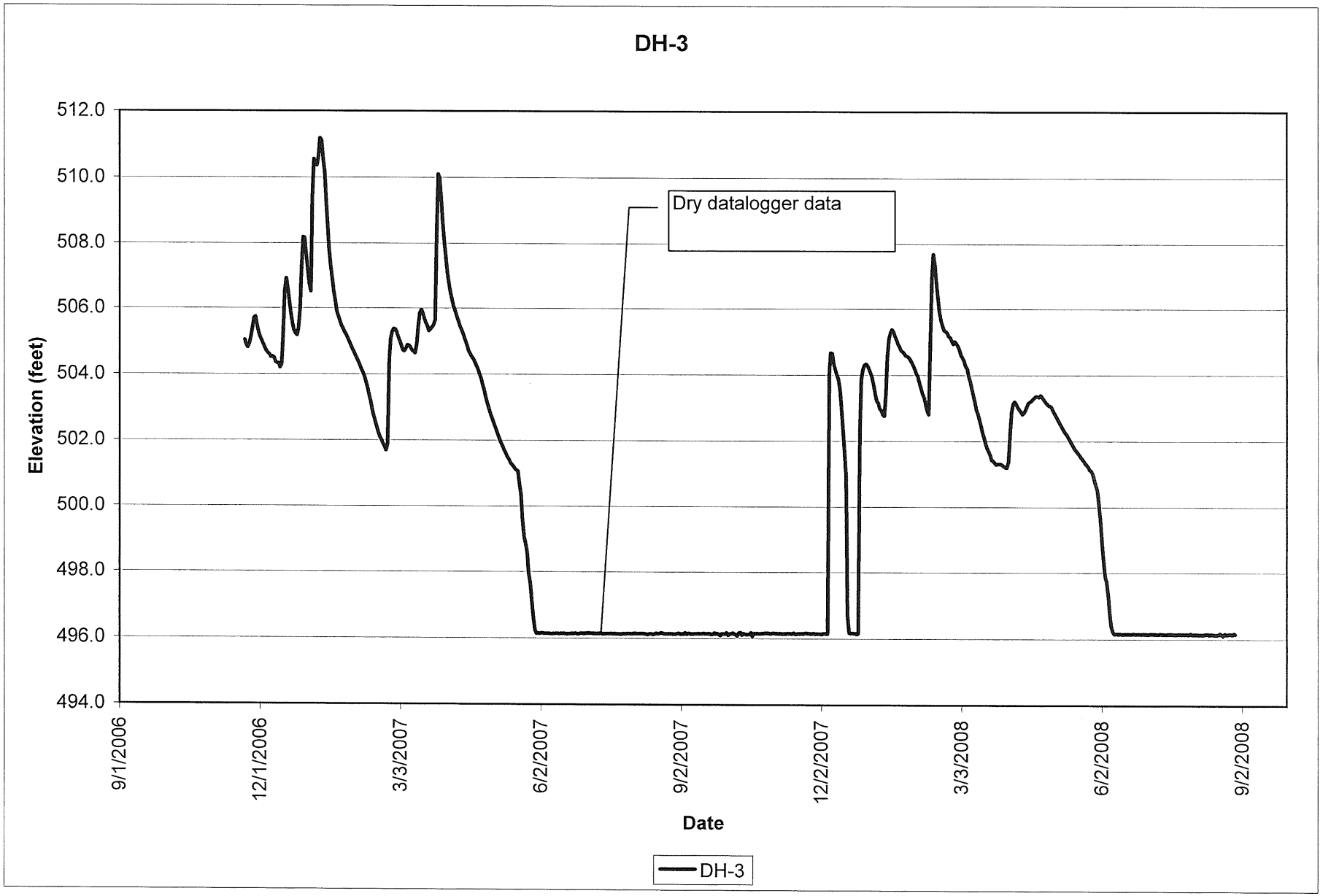
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

P-3 HYDROGRAPH
THE VILLAGES

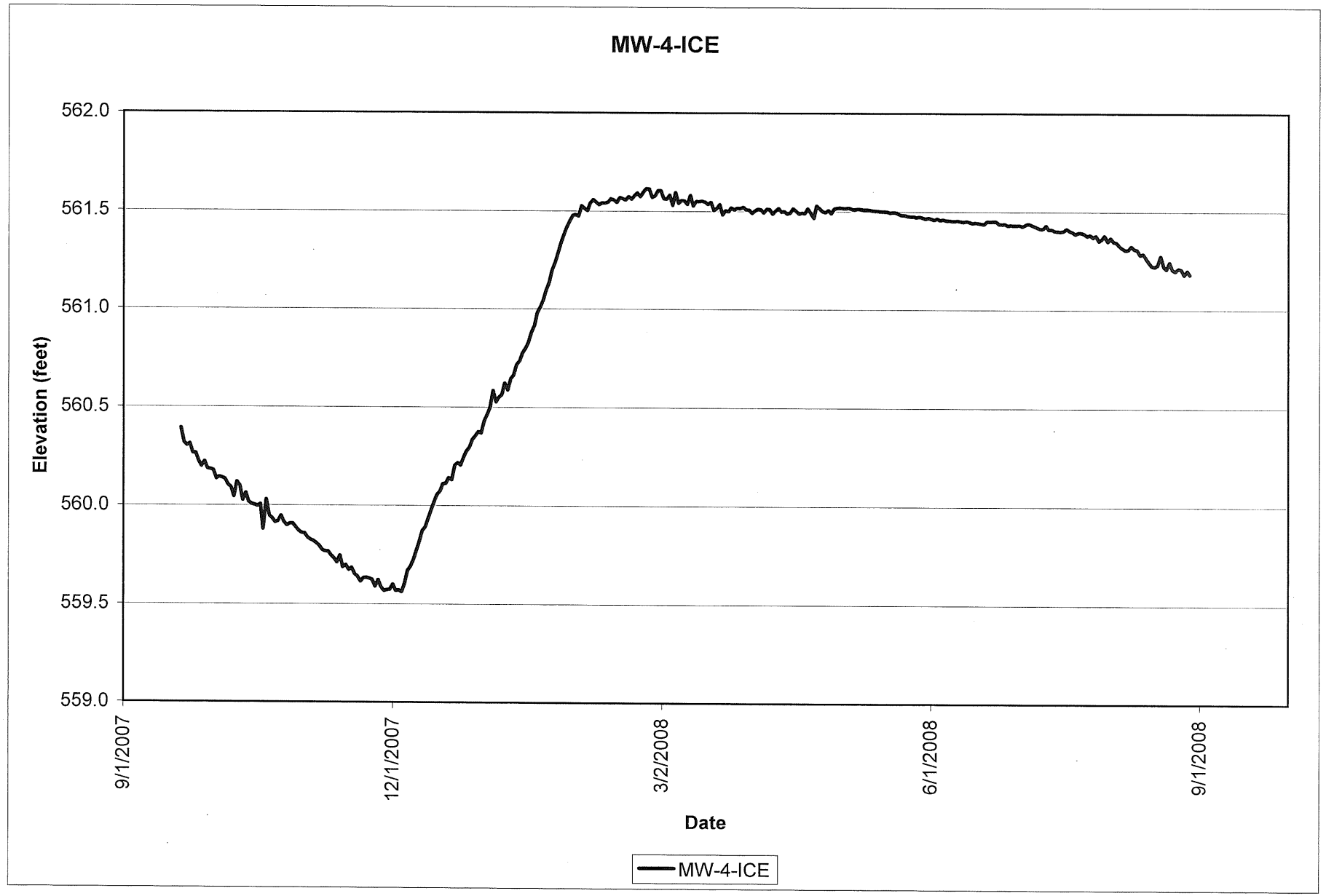
APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

DH-3 HYDROGRAPH
THE VILLAGES

APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A



AESI

MW-4-ICE HYDROGRAPH
THE VILLAGES

APPENDIX 5
DATE 09/08
PROJECT NO. KG060601A

APPENDIX 6

APPENDIX 6
CHANNEL EROSION AND GEOMORPHIC/ GEOLOGIC RECONNAISSANCE

DRAFT

Introduction

AESI performed stream channel/slope reconnaissance in on-site and off-site/downstream areas, and examined the spring discharge zone on the southern side of the Black Diamond Lake swale. Stream channel/slope reconnaissance was conducted on Crisp Creek, a tributary to Crisp Creek (heading west from Wetland BU1), stream S-4, an unnamed ravine feature (heading north from Parcel F), and an unnamed ravine feature located on the southern portion of the offsite King County West parcel..

Crisp Creek, unnamed tributary to Crisp Creek, and the unnamed ravine feature located on the southern portion of the offsite King County West parcel receive baseflow contribution from the pre-Olympia aquifer present at depth beneath much of the Main Property. The purpose of this analysis was to identify existing erosion and sediment transport hazards in selected drainage channels that originate on the site and/or will receive surface water from on-site detention ponds or baseflow contributions downgradient from proposed infiltration facilities. The on-site streams not proposed for direct storm water discharge, which include S2, S3, S5, S6 and S7, were not included in this analysis, and are described briefly in Section 5.1 in the main body of this report. For more detail on these on-site streams, please refer to the Fisheries Technical Report (Cedarock, 2008). Locations of the above streams are illustrated on Figure 3 in the main body of this report. The analysis included performing a visual, geologic reconnaissance of the above-described channels (Figure 4).

Channel Erosion Processes

The capacity of a stream to erode and transport sediment is generally a balance between stream gradient, flow rate, channel geometry, roughness of the streambed (woody debris, boulders), and pavement gravel size. A change in one of these variables by large storm events, floods, landslides, or by development activities (grading, storm water release, or clearing operations) can increase or decrease the existing erosion and sediment transport hazards of the stream.

Channel-forming discharge has been defined by Gordon, et al. (1992) as the single dominant discharge equivalent in its effect to the range of discharges that govern the channel shape and size. Although extreme floods may result in a large amount of erosion, channel enlargement and sediment deposition, the more frequently occurring moderate flows do the most work towards channel maintenance. Hence, aspects of the channel such as the cross-sectional area, bed sediment size distribution, and gravel bar formation commonly develop for a particular channel as a result of the more frequent occurring moderate flows. In streams with floodplains, this channel-forming flow can be related to the bankfull discharge, which is defined as the discharge that fills the channel to the top of its banks. Bankfull discharge is commonly found to have a recurrence interval between the 1- and 2-year flood events (Dunne and Leopold, 1978; Booth, 1989; Gordon, et al., 1992; Rosgen, 1996).

Stream erosion can occur by three general processes in response to increases in the channel forming discharge: 1) channel incision, 2) channel widening, and 3) channel extension (Figure 23). Channel incision is the deepening or downcutting of the stream channel bed. Depending on the geology and hydraulics of a channel, gravel-bedded streams can develop a coarse layer of gravel and/or cobbles, termed pavement gravels, that overlie and protect a finer-grained substrate. Stream incision can occur when the pavement gravel begins to move, subsequently exposing the relatively finer-grained, and more easily erodible, sub-pavement sediments. Where there are no source gravels, or in streams with very low flow or very high sediment loads, no pavement layer may form. In this case, the stream channels may be silt- or sand-bedded and, in many circumstances, can be more sensitive to streambed incision if flows increase. The stream gradient and the material underlying a stream (stream pavement gravels and geologic parent material) play a major role in determining the stream's ability to deepen its channel.

Channel widening occurs by the undercutting of the stream sidewalls. The sidewalls may either be composed of alluvium, landslide debris, or in-place parent sediments. In most cases where steep sidewalls are present, channel widening is the result of channel incision. Channel incision results in the oversteepening of the banks and leads to the development of landslides. A "conveyor belt" system may then develop as the toe of the landslide is continually undermined by stream action and the slide body continues to move downward in response to the undercutting.

Channel extension generally entails the development of a new tributary channel or the uphill erosion of an existing tributary channel. These channels may form as a result of ground water springs or upslope surface water runoff eroding a gully. Landslides may then further enlarge the gully. Channel extension commonly occurs as a result of uncontrolled surface water runoff within a basin.

The sediment a stream transports is further dependent on its competence and capacity. Competence is defined as the largest grain size that a stream can move in traction as bedload. Capacity refers to the maximum amount of sediment a stream can carry in traction as bedload and suspended load. This distinction is important when considering sediment transport capabilities of gravel-bedded streams. These streams have the capacity to move large amounts of sediment over a range of flows, if sources are available that are finer-grained than the stream pavement gravel. (These sources, if available, would significantly increase the suspended load.) However, if sediments finer-grained than the pavement gravels are not available, the stream forming discharge or stream competency discharge for gravel pavement based streams only moves large quantities of sediment when incipient motion of the protective pavement gravels occurs.

For gravel-bedded streams, sources that would provide large quantities of material finer than the stream pavement and therefore significantly increase the bedload would include landslides or other mass wasting processes, gully erosion, channel extension, and sidebank erosion, if the stream forming discharge were to increase.

Channel Observations

Crisp Creek and Unnamed Tributary to Crisp Creek

Crisp Creek (WRIA 09-0113) is 3.5 miles long and enters the Green River at approximately RM 40.1. The Crisp Creek basin drains an area of approximately 5.0 square miles both within and outside of the Project Area (Cedarock 2008). Crisp Creek is located approximately three-quarters of a mile west of the project site at its closest point and does not receive any surface water runoff from the site. Crisp Creek and an unnamed tributary to Crisp Creek receive baseflow contributions from the pre-Olympia aquifer present at depth beneath much of the Main Property. The channel lengths investigated for this study are shown on Figure 4 in the main body of this report.

Crisp Creek Tributary

The headwaters of the unnamed Crisp Creek tributary are formed in a kettle depression located west of Main Property. The unnamed tributary also receives road drainage from portions of 218th Avenue SE. Discharge from the kettle depression and 218th Avenue SE enters the unnamed tributary through culverts on the west side of 218th Avenue SE near elevation 480 feet. The kettle depression is likely floored in pre-Olympia-age glacial sand and gravel deposits ($Qpog_{1c}$) with a thin veneer of low-permeability organic rich sediments from recent alluvial deposition, based on explorations completed for this report.

Downstream of the 218th Avenue SE road crossing, three culverts drain to the ravine. At the time of our site visit (January 31, 2007), two were dry and one, carrying drainage from the kettle depression, had significant flow. The channel ranged from 3 to 4 feet wide and up to 2 feet deep. Approximately 60 feet downstream of 218th Avenue SE the channel became narrower (width of 2.5 to 3 feet, depths of up to 1 foot) and flow volumes decreased somewhat.

The slopes on either side of the unnamed tributary were dry and leaf-covered and were generally stable. No evidence of recent mass wasting was observed. Approximately 100 feet downstream of 218th Avenue SE a small, old, revegetated slump was observed near the top of the ravine slope. Above the slump, a small outcrop of dense, gray to brown-gray, silty fine sand with scattered gravel, interpreted to be Vashon-age glacial till, was observed.

The Crisp Creek tributary had relief of approximately 50 feet from the top of the defined channel (at approximate elevation 480 fmsl) to the confluence with main-stem Crisp Creek and was approximately 800 feet long, yielding an average gradient of 6 percent. The ravine was V-shaped. Substrate in this section was mainly fine to coarse sand with rounded gravels.

Crisp Creek

The upper main stem of Crisp Creek, above the confluence with the Crisp Creek tributary, receives surface water flow from the north and runoff from SE Auburn-Black Diamond Road. Crisp Creek becomes incised at approximate elevation 480 fmsl downstream of the SE Auburn-Black Diamond Road crossing.

The gradient of the upper portion of Crisp Creek was approximately 9 percent for the upper 550 foot segment below SE Auburn-Black Diamond Road and above the confluence with the unnamed Crisp Creek tributary.

The confluence of Crisp Creek and the Crisp Creek tributary was at approximate elevation 430 fmsl. At the time of our site visit (January 31, 2007) flow from the main stem of Crisp Creek was significantly less than flow from the unnamed tributary. Downslope of the confluence, the valley bottom becomes slightly wider and more vegetated. The approximately 950 foot segment below the confluence with the Crisp Creek tributary has a generally narrow valley bottom with steep slopes nearly 100 feet high. The slopes were generally dry and leaf-covered with small exposures of brown, oxidized, sand and gravel with generally trace to few silt.

At approximate elevation 370 fmsl, roughly 950 feet down-gradient of the confluence with the unnamed tributary, the valley bottom began to widen significantly. Springs were observed emanating from the break in slope on the west side of Crisp Creek at approximate elevation 370 to 400 fmsl. Piping associated with the spring discharge exposed roughly 15 feet of dense fine to coarse sand with gravel. Springs were also observed emanating from the slope on the east side of Crisp Creek. Based on field observations, it appeared that the spring discharge zone was roughly 30 feet higher on the east side of Crisp Creek than on the west side.

On the south side of a small nose feature on the west side of Crisp Creek, ground water appeared to be seeping out of the slope at approximate elevation 365 to 370 fmsl. Below the spring discharge zone the Crisp Creek ravine becomes broad and "U" shaped and opens to the Green River Valley.

Other Spring-Fed Tributaries to the Green River

A number of small springs emanate from the northern slope of the Green River valley. AESI walked a portion of a large ravine located southwest of the Main Property in Section XX. AESI also traversed portions of the slope downhill from SE Green Valley Road, south of southern property boundary. The S-8 ravine receives baseflow contributions from the pre-Olympia aquifer present at depth beneath much of the Main Property. Springs downhill from SE Green Valley Road are likely sourced from older aquifers. The channel lengths or areas investigated for this study are shown on Figure 4 in the main body of this report.

Unnamed Ravine located on the southern portion of the offsite King County West Parcel

This ravine drains wetland complex BU9, on the southern portion of the offsite King County West parcel, through a culvert running underneath an existing logging road. Flow through the culvert at the time of our visit was less than 0.5 gpm. Surface flow was observed to infiltrate within 25 feet of the culvert and the slopes on either side of the ravine bottom were dry and sandy. Overall, substrate was dark brown silty sand or forest duff. At approximately 260 feet from the head of the S-8 ravine, an exposure of dense, gray-brown, unsorted, silty fine sand with few gravel was observed in a tree throw located roughly 15 to 20 feet from the top of slope, at approximate elevation 540 fmsl. This material was interpreted to be Vashon-age glacial till.

However, the lower slopes appeared to consist of fine to coarse sand with gravel.

Small areas of fine gravel on top of dark brown silty sand (forest duff) were encountered on the channel bottom at approximately 400 feet from the head of the ravine, which may indicate occasional concentrated flow in this portion of the ravine. Roughly 50 feet further down-gradient, springs were observed emanating from the channel bottom at approximate elevation 460 feet. An old, revegetated slump feature was also identified on the west side of the ravine

The gradient of the upper 500 foot segment of the ravine, located up-gradient of the spring discharge zone, was approximately 16 percent. Below the spring discharge zone, the valley bottom widens to approximately 25 to 30 feet across and becomes more "U" shaped in morphology, opening to the Green River valley. Below the spring discharge zone, the S-8 ravine had a shallower gradient of approximately 12 percent. At approximately 520 feet from the head of the ravine, the eastern ravine slope was measured as 35 degrees and 70 percent slope, using an inclinometer. Devils club was present along the bottom portions of the slopes and in the valley bottom, which often indicates very moist soil conditions. Significant flow was observed in the channel bottom near the outlet of the ravine. In general, the slopes on either side of the ravine appear to be stable. Small shallow slumps were common but no debris flows or large slides were observed.

Spring Discharge Zone south of Black Diamond Lake

Ground water from the $Qpog_{2c}$ (lower pre-Olympia-age, coarse-grained glacial deposits, see geologic cross-sections) unit emerges from a spring discharge zone at approximate elevation 590 to 600 fmsl on the eastern slope above wetlands on the south of Black Diamond Lake. Surface flow from the springs was concentrated into small channel features. At least one gravel-lined channel was observed where a majority of the spring discharge converged. This channel was approximately 1 to 2 feet wide and 2 to 3 inches deep with an estimated flow of 1 to 2 gpm.

Jones Lake Tributaries

Stream S4

Stream S4 drains several wetland complexes located on the eastern portion of the Main Property of The Villages project, and flows north into Jones Lake (as illustrated on Figure 4 in the main body of this report). Near the northeastern property boundary, adjacent to 257th Ave SE, the S4 channel was observed to be approximately 2 to 2.5 feet wide and approximately 0.10 feet deep, flowing at roughly 20 to 30 gpm. The S4 channel was incised about 1 foot into the forest floor. Several b-axis gravel measurements were taken and range from 2.5 inches to 3 inches in diameter.

Unnamed Ravine Feature/Stream Channel

A small unnamed ravine feature and stream channel extend to the north off of the upland area that forms the eastern portion of the Main Property of The Villages project, and ends at a wastewater treatment facility, as shown on Figure 4 in the main body of this report. This area

marks the location of a potential stormwater discharge location identified by Triad Associates.

The GPS waypoints marking the ravine/stream channel traverse are attached. Waypoint 1 indicates the start of the traverse and waypoint 12 indicates the top of the ravine feature tributary/wetland area. At waypoint 4, a dry gravel lined stream channel was encountered sloping down to the east. At waypoint 5, the channel bends to the north, marking the head of the ravine feature. The dry stream channel was approximately 1 to 2 feet wide with an occasional 3-foot wide section, and channel substrate consisted of sand and rounded gravels with occasional cobbles. The larger N gravels ranged from 2.25 inches to 2.5 inches in diameter. Apparent flow depth based on the dry channel was approximately 0.10 feet. Very minor, intermittent seepage was observed between elevations 630 and 615 fmsl.

Approximately 20 to 30 feet downstream of waypoint 7, the channel substrate became orangish-brown sand with the visual characteristics of $Qpog_{2c}$. Channelized flow was observed to begin at approximate elevation 615 fmsl. At waypoint 8, the channel was roughly 18 inches wide and 0.10 to 0.20 feet deep with gravels present in the substrate. The channel appeared to lose flow downgradient of waypoint 8. At waypoint 9, the channel was incised up to 2 feet for a 30 foot segment with gravel and sand substrate. Approximately 50 feet downstream of the incised segment, devils club was observed along both sides of the stream channel, which often indicates very moist soil conditions. Channelized flow began to disappear at waypoint 10, opening up to a wetland area. The channelized flow/wetland area ended at a berm above the wastewater treatment facility. Flow from the ravine/stream channel/wetland area enters the wastewater treatment facility through an 8-inch poly-vinyl chloride (PVC) culvert running under the berm.

APPENDIX 7

May 4, 2006 Our Ref.: 063-1076.300

Black Diamond Properties
825 Fifth Avenue, Suite 202
Kirkland, Washington 98033

Attention: Mr. David MacDuff

RE: MINE HAZARD STUDY - EXECUTIVE SUMMARY
THE VILLAGES PROJECT
BLACK DIAMOND, WASHINGTON

Dear David:

The Villages project consists of 9 principal land parcels that have been designated by Black Diamond Properties (BDP), for the purposes of this project, as Parcels A through G, and King County West and King County South. The purpose of the Mine Hazard Study is to identify any portions of the Villages land parcels that are known to be underlain by abandoned coal mine workings or have areas classified as potential mine hazard areas by the City of Black Diamond or King County. In addition, we were to provide a recommendation on the classification of the mine hazard and any recommended mitigation based on the proposed land use.

Portions of Parcels B and E are contained within the mapping of the Coal Mine Hazard Zone in the City of Black Diamond's Municipal Code, chapter 19.12, Environmentally Sensitive Areas.

The King County Sensitive Areas Ordinance mapping for coal mine hazard areas includes a small hazard area extending south into the north boundary of Parcel F. This appears to correspond to deep workings on the #14 Mine. None of the other Villages King County Parcels contain mapped mine hazard zones. The King County South Parcel lies just north of a hazard area mapped for the abandoned Kummer Mine. The combined mine hazard areas for Black Diamond and King County are shown on Figure 1. The following sections discuss the mine hazards in more detail.

Parcel B Mine Hazards

Parcel B is underlain by workings of the #11 Mine and Mine B. The main slope or entrance to these mines was located about 1000 feet south of Parcel B. The coal seams dip down to the northwest at about 19 to 36 degrees under Parcel B. The #11 workings extend about 2500 feet north of the south Parcel B boundary. The shallower Mine B workings only extend about 350 feet northwest of the southeast corner of the Parcel. There are no documented sinkholes or subsidence areas associated with the mines below Parcel B. The depth of the #11 Mine under Parcel B would warrant declassification of the mine hazard. The depth and limited extent of the Mine B workings under Parcel B would warrant, at most, a moderate hazard classification. Site development can occur in moderate mine hazard zones provided mitigation is performed to reduce the risk of property damage

due to regional tilt, compression, and extension that may occur due to regional subsidence. The area potentially affected by a moderate hazard classification on Parcel B extends about 300 feet into the site from the southeast corner.

Mine B was developed on the Little Seam and had a mined thickness of about 4.5 feet. The third level of Mine B extends under Parcel B at a depth of about 350 to 420 feet below ground surface.

The #11 Mine was developed on the McKay Seam and had a mined thickness of about 6 feet. The 4th through 9th levels of the #11 Mine extend under Parcel B at depths ranging from about 650 to 1500 feet below the ground surface.

Parcel E Mine Hazards

The northeast portion of Parcel E is underlain by workings of the #14 Mine. The #14 mine main slope was located about 3000 feet northeast of Parcel E. The coal seam dips down to the southwest at about 30 degrees. Below Parcel E the mined seam is quite deep, ranging from about 1,015 feet to 1,784 feet below the ground surface. There are no documented sinkholes or subsidence in this area of the #14 mine. The depth of the #14 Mine under Parcel E would warrant declassification of the mine hazard.

King County Mine Hazard Areas

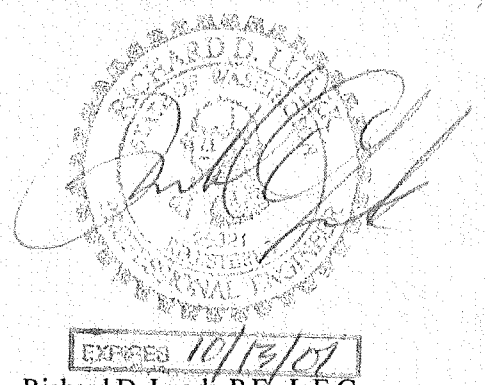
The mine hazard area at the north boundary of Parcel F appears to be associated with deep (elevation -769 feet) workings on the #14 Mine that terminate near the north property boundary. Due to the significant depth of these workings the hazard designation would warrant declassification.

The Kummer Mine and Kummer #4 North Mine are located at the intersection of Sections 23, 24, 25, and 26 on SE Green Valley Road. The mines were developed on an east dipping seam with most of the gangway development south of SE Green Valley Road. The workings north of the Green Valley Road end about 500 feet south of Parcel F. Based on the dip of the coal seam and the proximity to Parcel F, there are no mine hazards from the Kummer Mines extending on Parcel F.

We appreciate the opportunity to complete this scope of services for Black Diamond Properties on The Villages Project. If you have any questions or comments on this report, please contact us at (425) 883-0777.

Sincerely,

GOLDER ASSOCIATES INC.

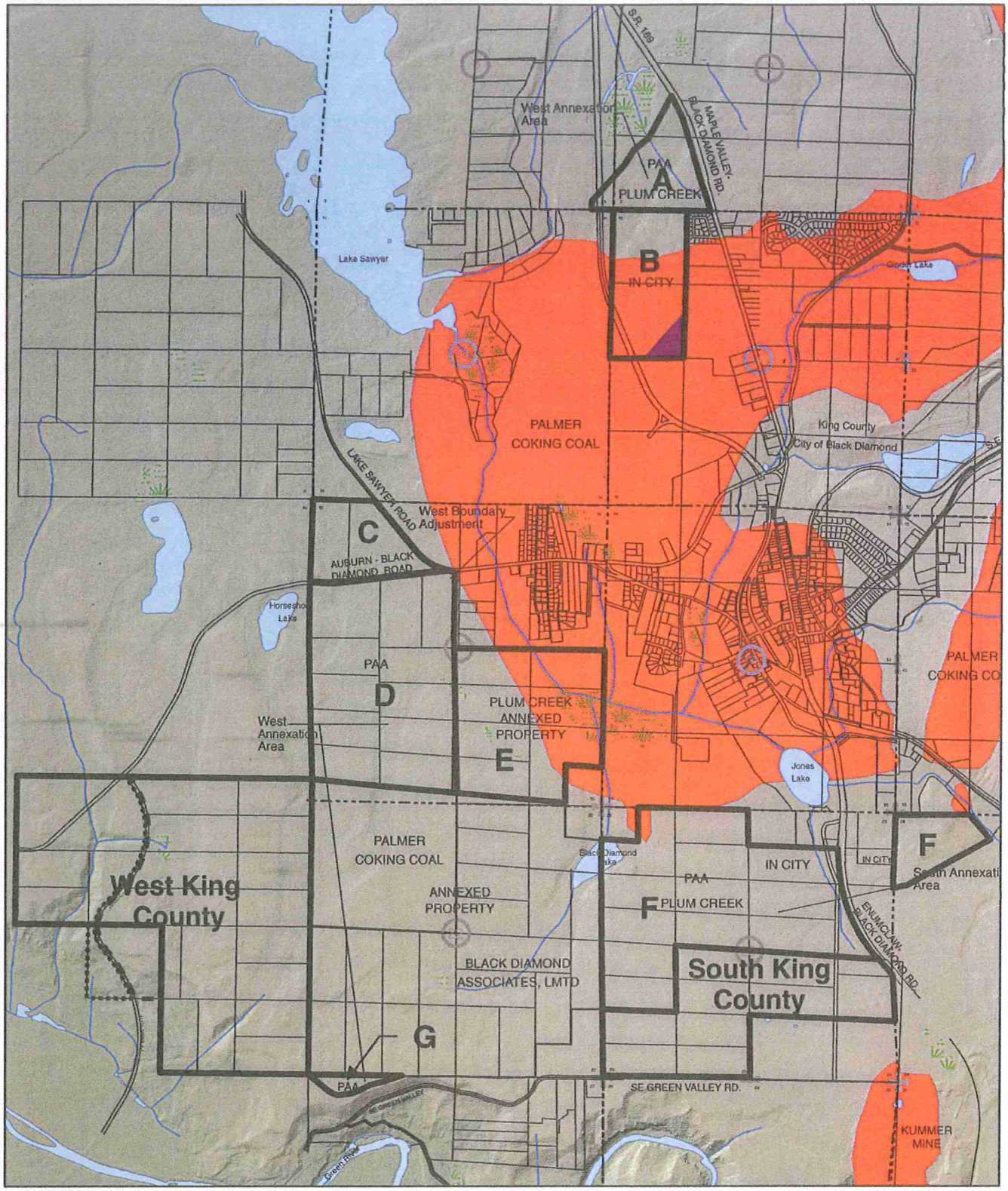


James G. Johnson, L.G., L.E.G.
Principal and Senior Consultant

Richard D. Luark, P.E., L.E.G.
Associate and Senior Consultant

JGJ/RDL/se

FIGURE



LEGEND

- King County Streams
- Wetland
- Coal Mine Hazard Area Defined by Black Diamond and King County
- Possible Moderate Hazard Zone

Note: Hillshade derived from LIDAR.

0 2,500

Scale 1" = 2,500 Feet

Map Projection: Washington State Plane, North Zone, NAD 83, Feet

Source: TRIAD Associates, PSLC, Golder Associates

N

This figure was originally produced in color. Reproduction in black and white may result in loss of information.

VILLAGES

Coal Mine Hazard Area Designated by Black Diamond and King County

Drawn: KBD	Revision: 1	Date: Mar. 15, 2006	Figure: 1

0631076300F04R02.mxd

Golder Associates

Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, Washington 98052
Telephone: (425) 883 0777
Fax: (425) 882 5498

Golder Associates

TECHNICAL MEMORANDUM

TO:	Curtis Koger and Jenny Saltonstall, Associated Earth Sciences Inc.	**DATE:**	March 14, 2008
FR:	Derek Holom and Jim Johnson, L.E.G., Golder Associates Inc.	**OUR REF:**	063-1076.501
RE:	The Villages Aquifer Testing and Sampling Results		

This technical memorandum summarizes the results of the aquifer testing conducted by Golder Associates Inc at The Villages project site in late 2006 and early 2007. Attached are the results of the aquifer testing. In total, there were 11 wells tested by means of a constant rate pumping test or a falling head test. A summary of the methodology of the aquifer testing is described below.

1.0 METHODOLOGY OF AQUIFER TESTING

1.1 Constant Rate Pumping Test

Constant rate pumping tests were conducted in 7 of the 11 wells tested to determine the transmissivity (T) of the aquifer at each well. The pumped wells include MW-6, MW-7, MW-9, MW-10, MW-12, MW-15, and MW-17. Tacoma Pump and Drilling was contracted to install and operate the pump in seven of the wells. Discharge was to the ground at a distance of 50 feet or more. Average flow rates were measured by a totalizer meter by calculating the difference between the readings at the start and end of the test. In some cases, the flow rates were measured with a 5-gallon bucket and stop watch. Manual water-level measurements were recorded using a water-level tape. Automated water-level measurements were recorded using a Solinst® pressure transducer datalogger owned by Associated Earth Sciences Inc. The pumping test data were analyzed using the Cooper-Jacob straight-line method and in some cases using the Uffink method for underdamped responses (oscillations in the water level during recovery). The results of the pumping tests are listed in Table 1 (see attached).

1.2 Falling Head Tests

Falling head tests, or slug tests, consist of adding a known volume (slug) to a well and recording the change in head (water level) versus time. A slug can be a weighted cylinder, such as a capped PVC tube filled with sand, or it can be simply a bucket of water. The wells that were tested or analyzed using the falling head technique were MW-5, MW-8, MW-13, and MW-19. Two 5-gallon buckets of water were simultaneously added to each well while automatically recording water levels with an

INW[1] pressure transducer datalogger. The falling head test data were analyzed using the Hvorslev method. Results of the falling head tests are listed in Table 1.

2.0 METHODOLOGY OF WATER QUALITY SAMPLING

Water quality samples were collected from 11 wells, which included all of the tested wells except for MW-5. DH-3 was not tested for aquifer parameters, but a water quality sample was collected and analyzed. A water quality sample was collected from each of the pumped wells at the end of the aquifer test. Water quality samples were collected with a bailer for the wells that were not pumped. In all cases, three well bore volumes were purged before collecting a sample to obtain a more accurate water sample of the aquifer formation. All samples were submitted to Anatek Labs in Redmond, WA to be analyzed. The lab results are presented in Table 2 (see attached).

[1] INW stands for Instrumentation Northwest, based in Kirkland, WA.

TABLES

TABLE 1

Summary of the Aquifer Testing for The Villages at Black Diamond, WA

Well ID	Well Depth (feet)	Depth to Water[3] (feet bgs)	Groundwater Elevation (ft amsl)	Ground Elevation (ft amsl)	Aquifer Unit	Aquifer Test	Water Quality Sample	Average K[a] (ft/day)	Average T[b] (ft^2/day)	Comments
MW-1	59.6	DRY	N/A	?	Shallow	--	No	--	--	Dry, no water available for sample or test
MW-2	66.9	53.46	508.34	561.8	Deep[1]	--	No	--	--	Not completed in Qpogc, Qva, or Qvr aquifer
MW-3	81.6	23.68	537.92	561.6	Deep[1]	--	No	--	--	Not completed in Qpogc, Qva, or Qvr aquifer
MW-4	67	62.45	552.65	615.1	Deep[2]	--	No	--	--	Limited access
MW-5	70	67.15	537.85	605	Deep[2]	SLUG	No	8.7	--	Hvorslev Falling Head Test Method
MW-6	178	98.46	491.54	590	Deep	PUMP	Yes	--	27,000	Cooper-Jacob and Uffink Analysis Methods
MW-7	126	58.28	493.72	552	Deep	PUMP	Yes	--	21,550	Cooper-Jacob Straightline Method
MW-8	27	15.53	536.57	552.1	Shallow	SLUG	Yes	0.24	--	Hvorslev Falling Head Test Method
MW-9	24	2.24	548.86	551.1	Shallow	PUMP	Yes	--	100	Cooper-Jacob Straightline Method
MW-10	173	99.18	480.82	580	Deep	PUMP	Yes	--	44,800	Cooper-Jacob and Uffink Analysis Methods
MW-11	304	69.50	465.5	535	Bedrock	--	No	--	--	Not completed in Qpogc, Qva, or Qvr aquifer
MW-12	79	49.14	485.86	535	Deep	PUMP	Yes	--	2,500	Cooper-Jacob Straightline Method
MW-13	49	43.91	491.09	535	Deep	SLUG	Yes	370	--	Hvorslev Falling Head Test Method
MW-14	110.5	83.62	603.38	687	Deep[1]	--	No	--	--	Not completed in Qpogc, Qva, or Qvr
MW-15	341.5	186.58	490.42	677	Bedrock	PUMP	Yes	--	2	Cooper-Jacob Straightline Method
MW-16	31.6	DRY	N/A	?	Shallow	--	No	--	--	Dry, no water available for sample or test
MW-17	87.5	52.34	484.66	537	Deep	PUMP	Yes	--	108,000	Cooper-Jacob and Uffink Analysis Methods
MW-18	23.8	21.59	515.41	537	Shallow	--	No	--	--	Fallen trees are blocking access
MW-19	176.4	104.70	495.3	600	Deep[1]	PUMP	Yes	0.94	--	Hvorslev Falling Head Test Method

Aquifer Units

[1] Perched zone within Qpo formation

[2] Completed in Qva aquifer

Shallow is recessional outwash deposits (Qvr)

Deep is pre-Olympia coarse-grained glacial outwash of sands and gravels (Qpog-c)

[3] Water level measurements taken in mid-December 200(

Aquifer Parameters

[a] Hydraulic conductivity

[b] Transmissivity

TABLE 2

Water Quality Results for The Villages at Black Diamond, WA

Constiuent	Unit	MW-06	MW-07	MW-09	MW-15	MW-19	MW-10	MW-12	MW-17	MW-13	DH-3	MW-08
Aquifer Unit		Qpog	Qpog	Qvr	Thb	Qpon	Qpog	Qpog	Qpog	Qpog	Qvr?	Qvr
pH		6.88	6.45	5.73	8.92	9.03	6.64	6.11	6.62	6.38	6.14	na
Temperature	C°	9.8	9.4	10.1	10.7	14	10	9	8.9	8.7	5.7	na
Conductivity	µs	70.5	62.3	43.1	112.6	74.4	74.8	43.1	66.7	31.9	17.2	na
Turbidity	NTU	0.69	0.84	137	51.3	36.9	1.2	31.1	2.7	200	280.0	na
Fecal Coliforms	CFU/100 m	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
TOC	mg/l	< 1	< 1	< 1	< 1	< 1	< 1	2.7	4.1	< 1	1.2	< 1
Alkalinity	mg/l	58	52	32	140	90	58	38	54	34	10	30
Cl	mg/l	3.1	2.9	2.3	3.6	1.8	2.5	2	< 1	< 1	7.4	4.5
Hardness (CaCO3)	mg/l	68	59	33	11	69	61	34	55	30	11	28
S(6)	mg/l	9.3	9	3.5	1.1	6.6	7.2	2.1	6.3	1.9	1.6	5.9
Ca	mg/l	20	18	8.9	3	18	18	8.6	14	7.1	3.2	7.6
P	mg/l	0.83	0.69	0.34	0.71	1.3	0.53	1.6	1.1	0.5	0.42	0.78
Mg	mg/l	4.4	3.4	2.6	0.91	5.8	4	3.1	4.8	2.9	0.81	2.1
Na	mg/l	7.8	3.3	5.6	54	12	3.7	4.4	4.9	3.1	1.9	4.5
N(3)	mg/l	<0.005	<0.005	<0.005	0.24	0.22	<0.005	0.05	0.013	0.037	<0.005	0.03
N(5)	mg/l	0.38	1.2	0.39	0.94	1	0.95	0.24	0.46	0.1	0.33	0.42
Total Phosphate	mg/l	<0.005	<0.005	<0.005	0.22	0.13	0.019	0.019	0.048	<0.005	<0.005	<0.005
Fe	mg/l	<0.005	0.005	0.077	0.027	<0.005	0.018	0.029	0.009	<0.005	0.405	0.058
Mn	mg/l	0.0027	0.0039	0.0459	0.0251	0.0947	0.0007	0.0142	0.0008	0.0117	0.0054	0.014
Cu	mg/l	<0.001	0.002	0.004	0.002	0.003	0.004	0.004	0.004	0.004	<0.001	0.003
Pb	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zn	mg/l	0.006	0.009	0.032	0.038	0.083	0.013	0.006	0.003	0.004	0.002	0.002

Notes:
Raw data results from laboratory; not internally checked
na - not available
< indicates non-detect

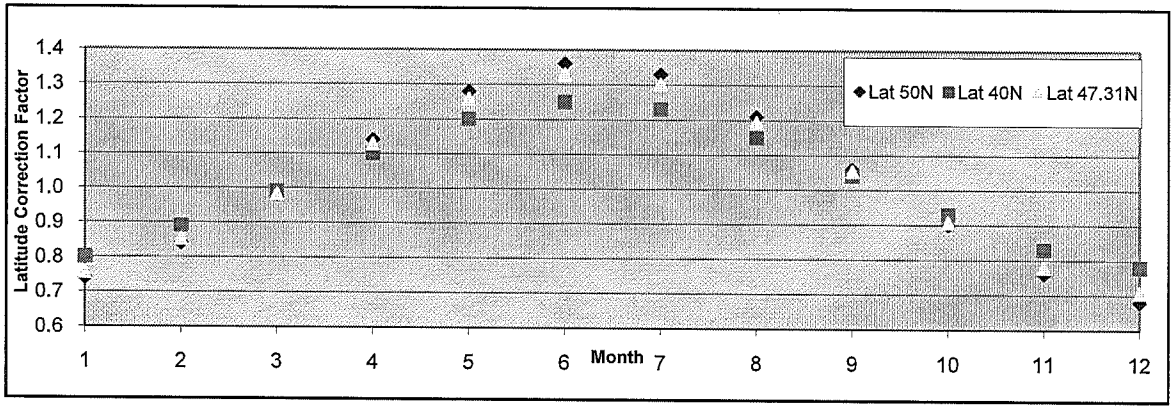
Evapotranspiration Values for Lawson Hills Pre-Development Condition

	Evapotranspiration (in)			Landsburg Station Data									
Method	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Annual**
Thornthwaite	1.557	0.819	0.462	0.774	0.524	1.031	1.754	2.814	3.951	4.547	3.855	2.946	25.033

Thornthwaite method pg. 138 in Water in Environmental Planning by Dunne and Leopold, 1978

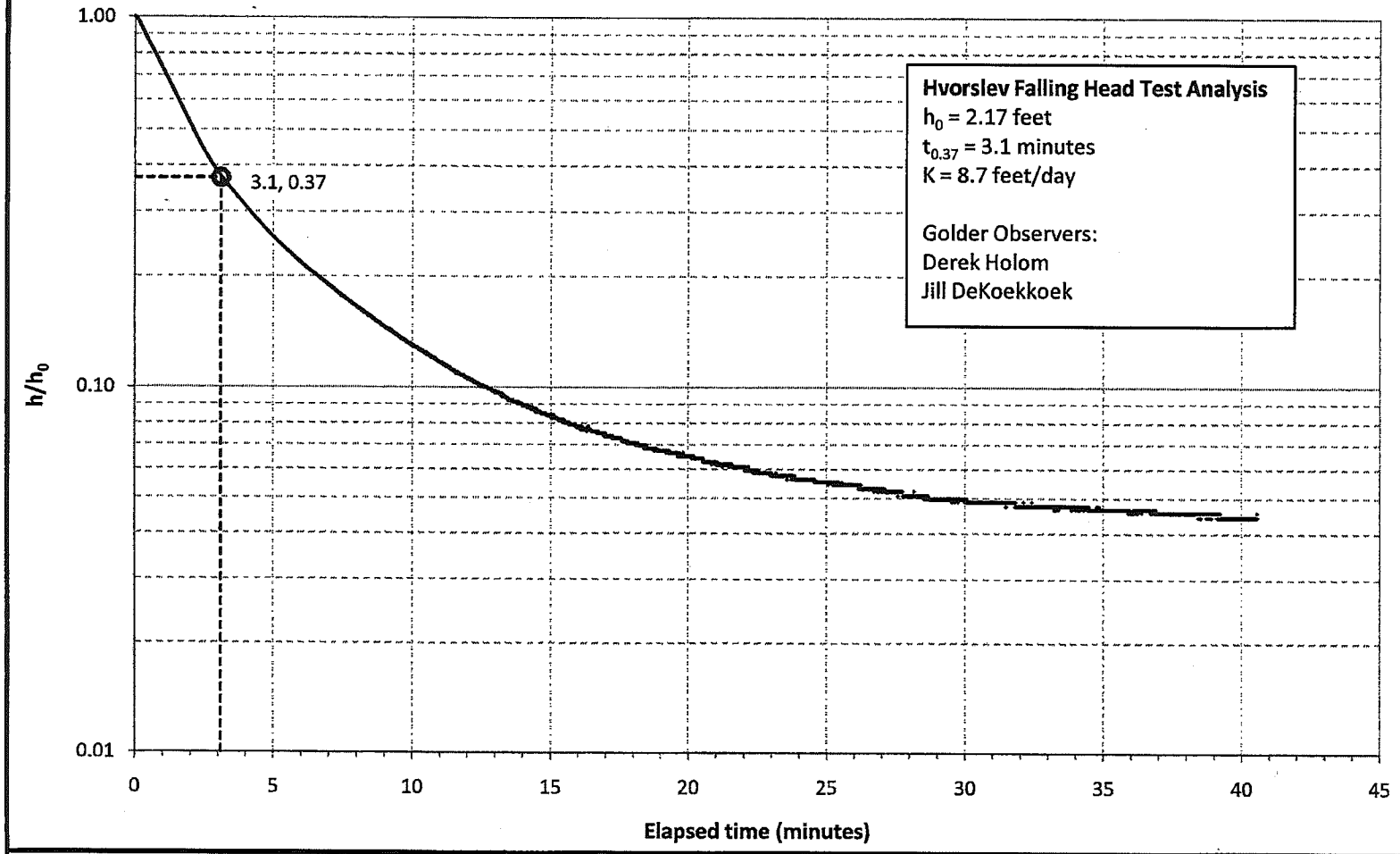
	Temperature (C)			Landsburg Station Data									
	Oct	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Annual**
	9.433	6.044	3.917	5.894	3.700	6.028	8.622	12.017	15.567	18.028	16.800	14.722	10.064

	Latitude Correction Factor											
Latitude (N)	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
50	0.740	0.840	0.980	1.140	1.280	1.360	1.330	1.210	1.060	0.900	0.760	0.680
40	0.800	0.890	0.990	1.100	1.200	1.250	1.230	1.150	1.040	0.930	0.830	0.780
47.31	0.756	0.853	0.983	1.129	1.258	1.330	1.303	1.194	1.055	0.908	0.779	0.707



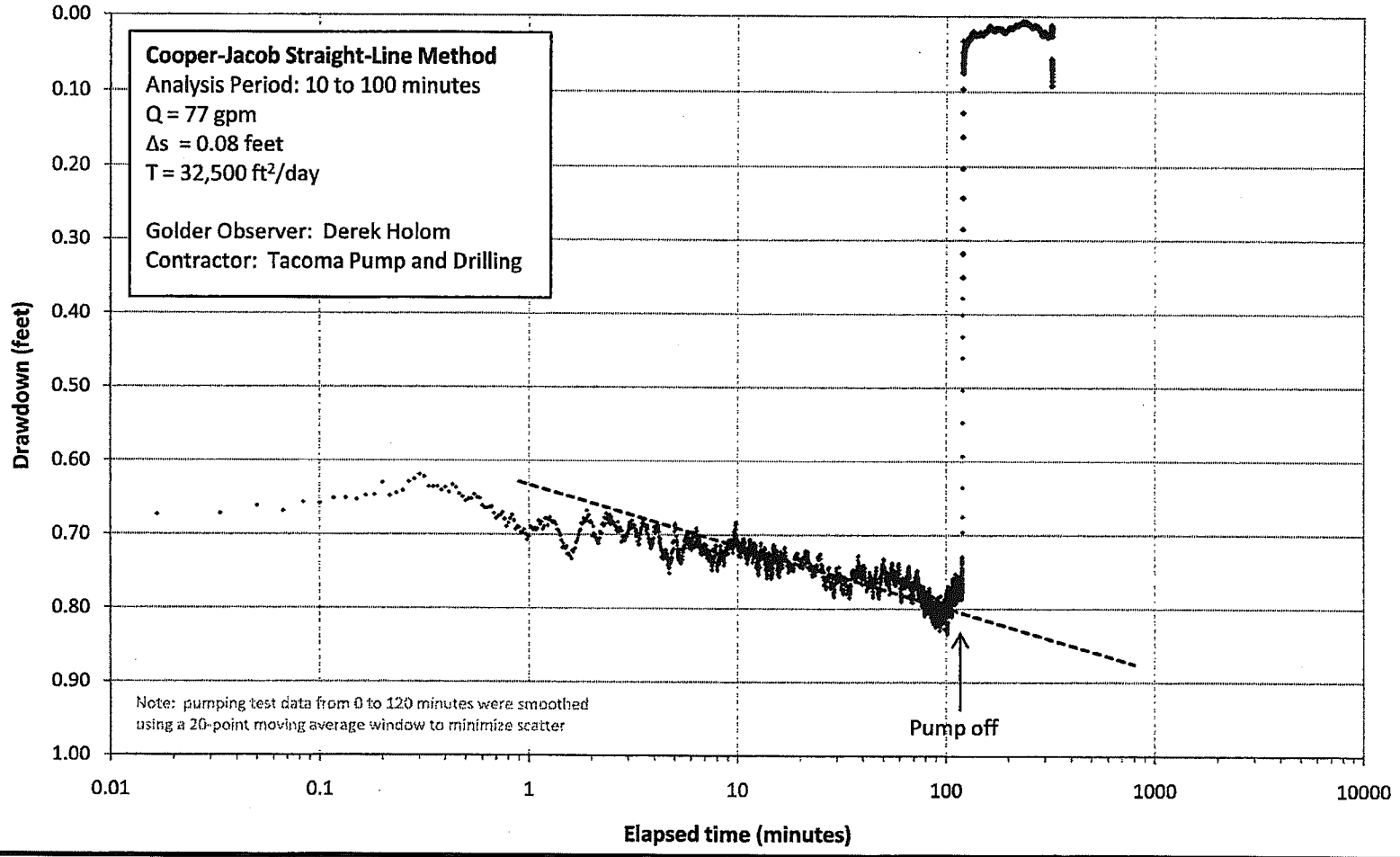
Temperature Data Source: http://www.wrcc.dri.edu/Climsum.html

FIGURES



Golder Associates	Title: MW-5 Falling Head Test		Drawn: DH
			Checked: MK
			Reviewed: CA
	Project Name: The Villages	Project No.: 063-1076.501	FIGURE 1
	Client Name: BD Villages, LP	Date: February 26, 2008	

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-5 Falling Head Test.xlsx

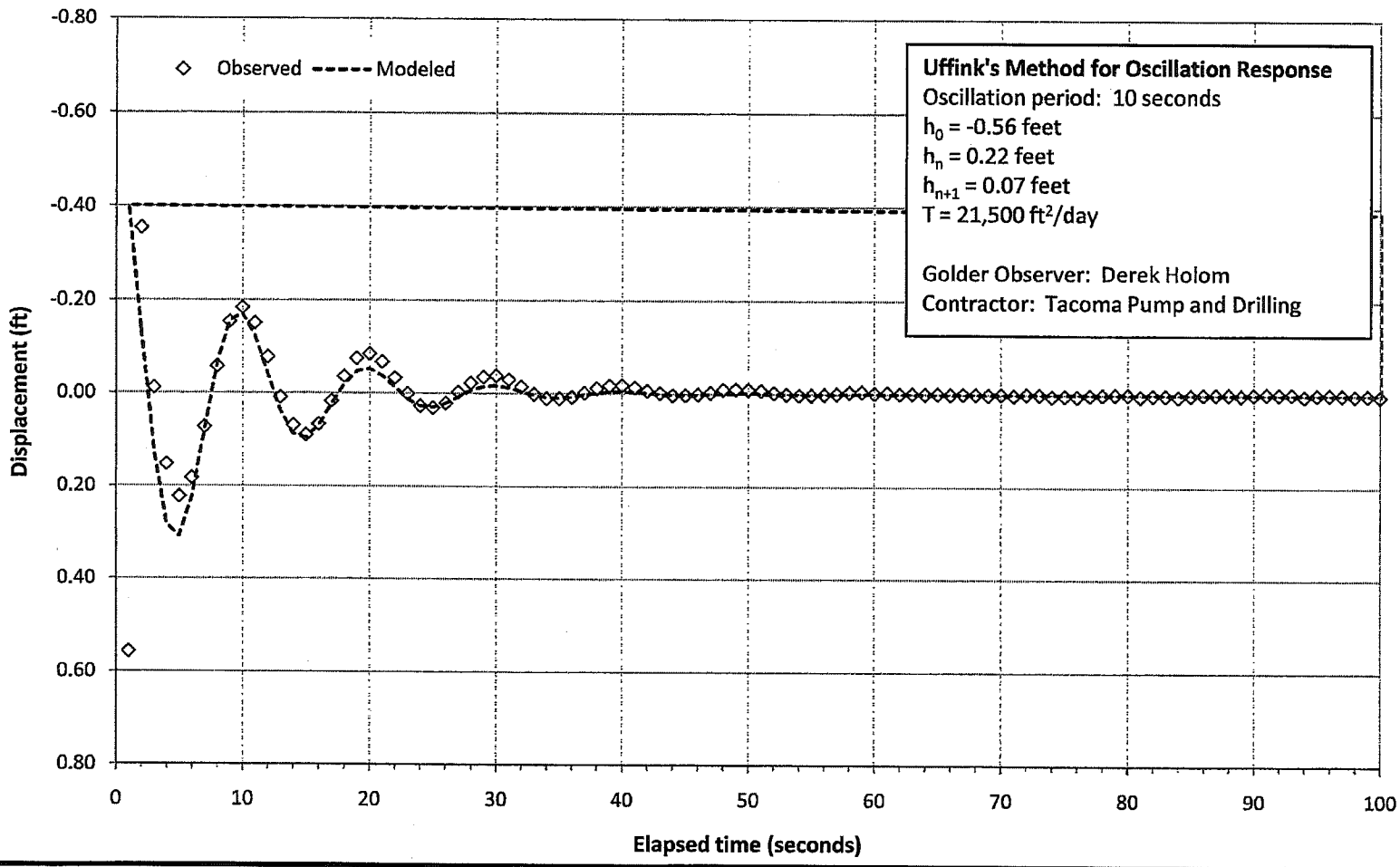


Golder Associates

Title	MW-6 Constant Rate Pumping Test Analysis		
Project Name	The Villages	Project No.	063-1076.501
Client Name	BD Villages, LP	Date	February 26, 2008

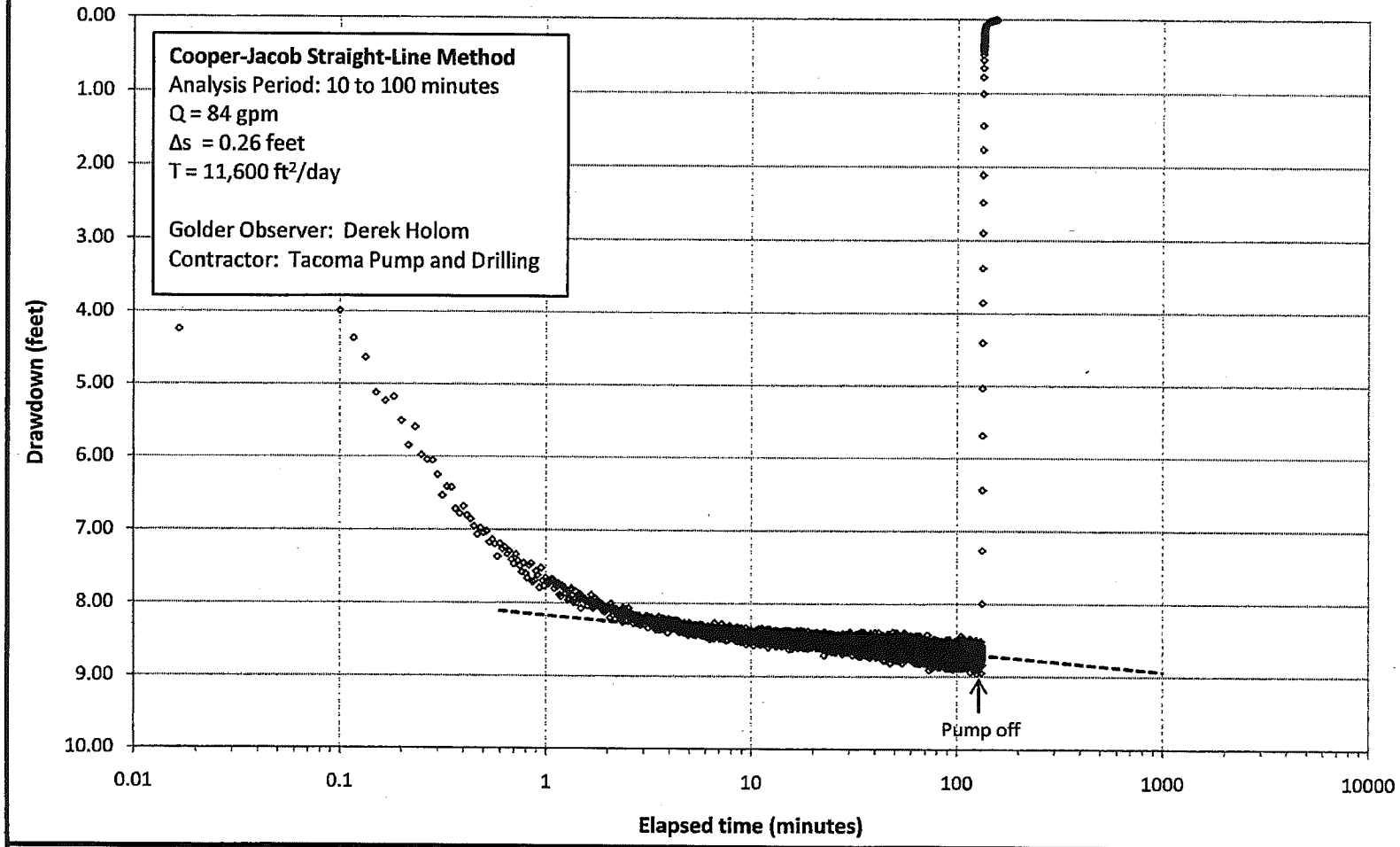
Drawn	DH
Checked	MK
Reviewed	RA
FIGURE	2

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-6 Pumping Test.xlsx



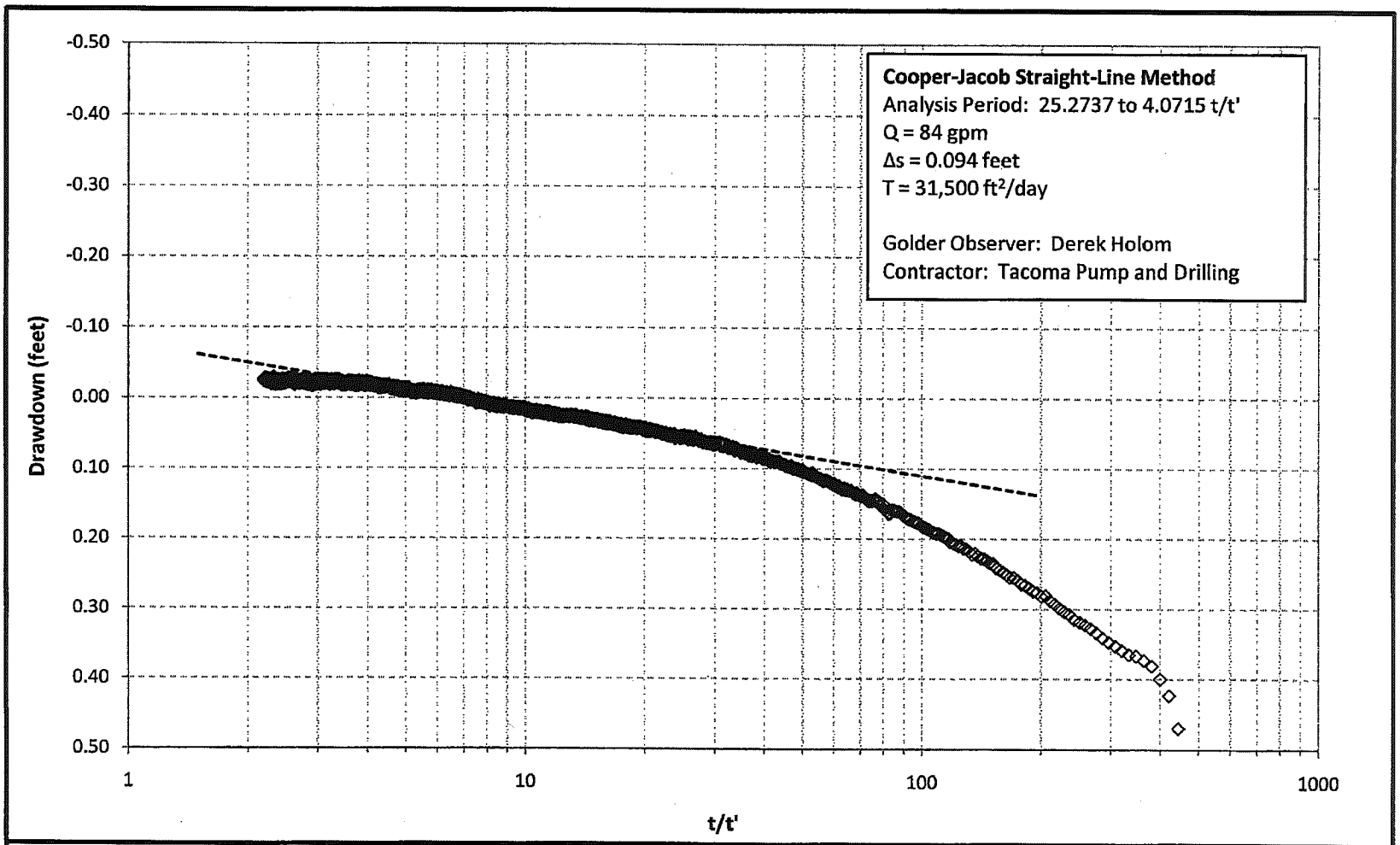
Golder Associates	Title: MW-6 Uffink's Method for Oscillation Response		Drawn: DH
			Checked: MK
			Reviewed: AA
	Project Name: The Villages	Project No.: 063-1076.501	
	Client Name: BD Villages, LP	Date: February 26, 2008	FIGURE 3

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-6 Pumping Test.xlsx



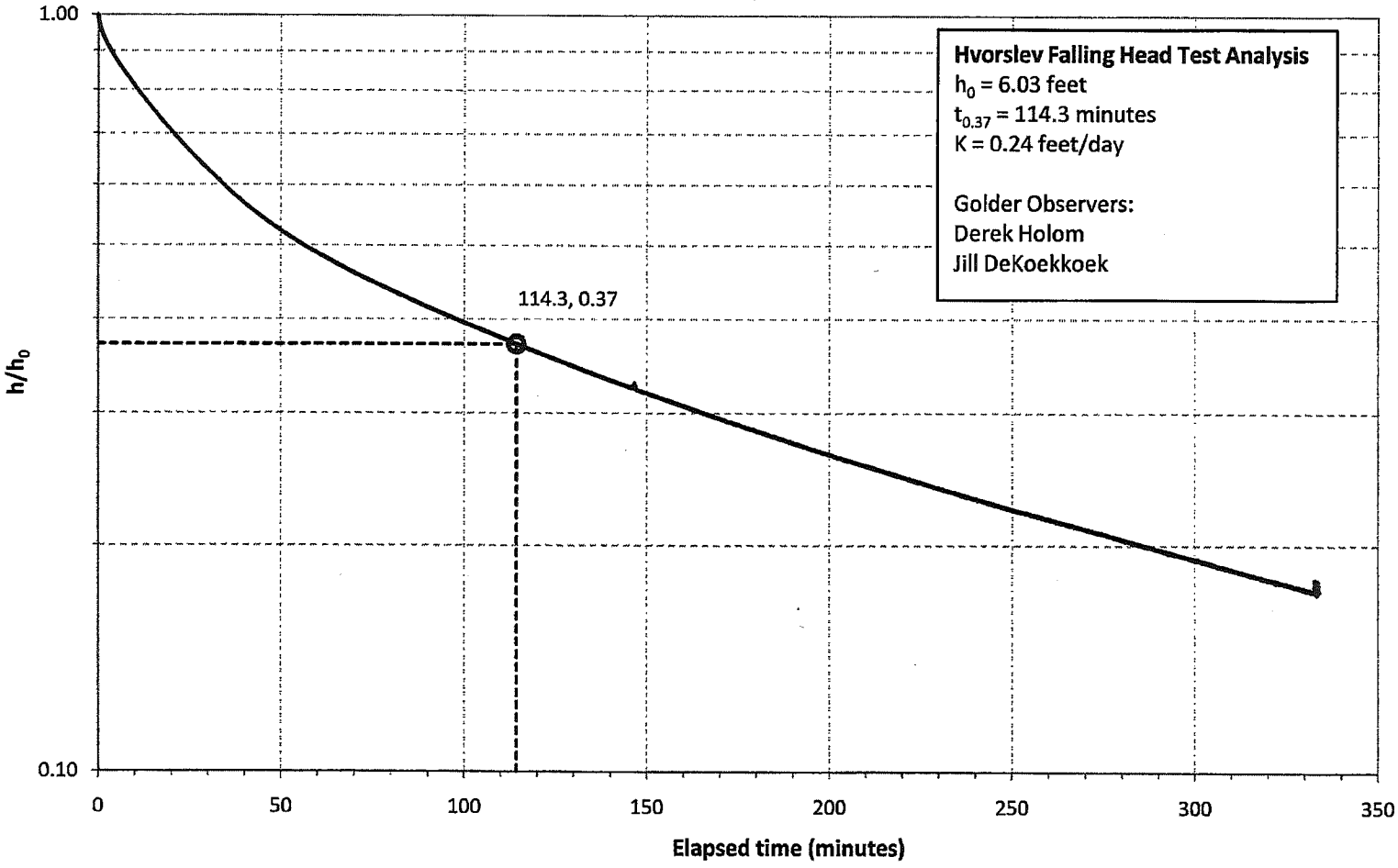
Golder Associates	Title: MW-7 Constant Rate Pumping Test Analysis		Drawn: DH
			Checked: MK
			Reviewed: CA
	Project Name: The Villages	Project No.: 063-1076.501	
	Client Name: BD Villages, LP	Date: February 26, 2008	FIGURE 4

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-7 Pumping Test.xlsx



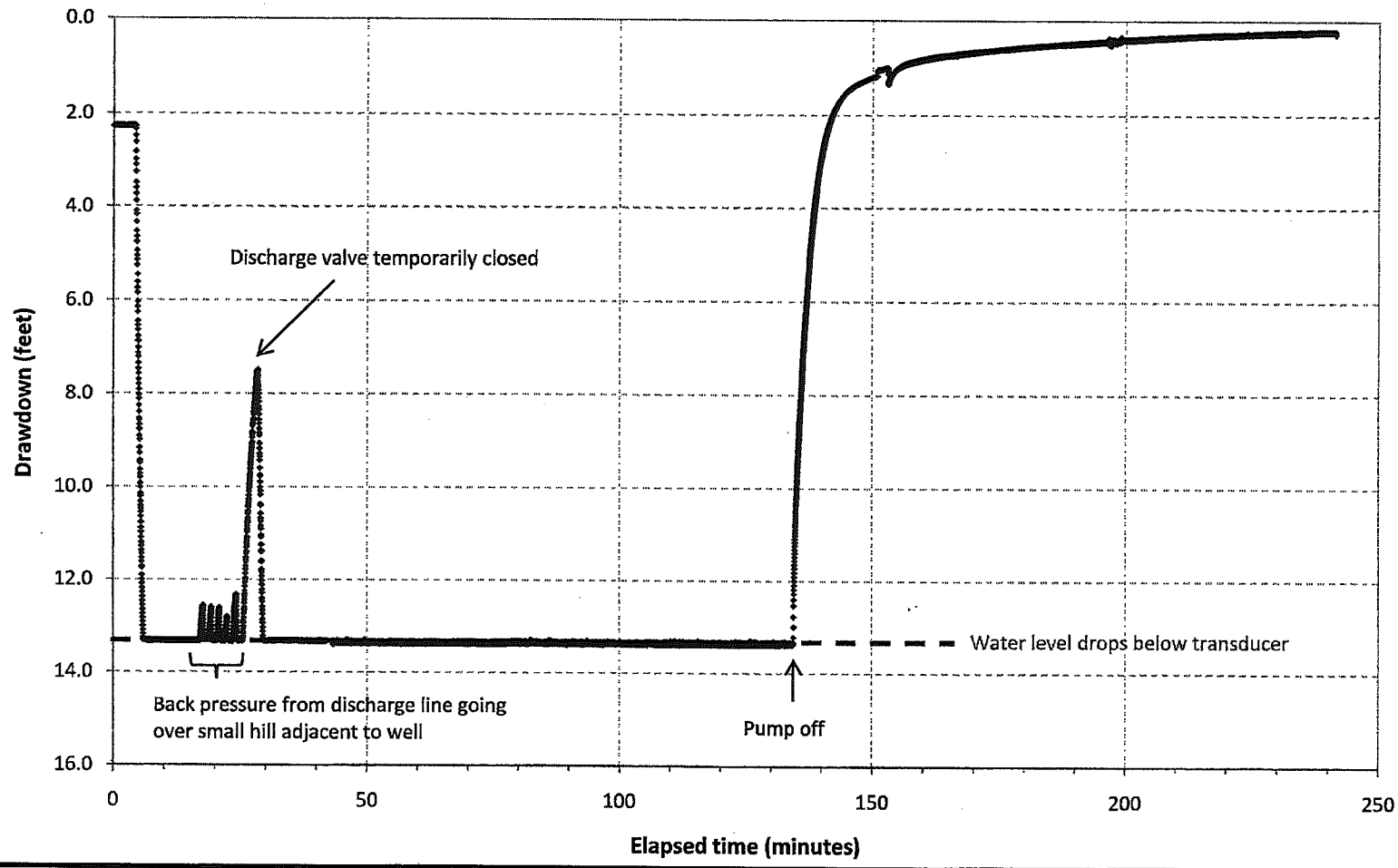
Golder Associates	Title: MW-7 Recovery Analysis		Drawn: DH
			Checked: MK
			Reviewed: NA
	Project Name: The Villages	Project No.: 063-1076.501	
	Client Name: BD Villages, LP	Date: February 26, 2008	FIGURE 5

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-7 Pumping Test.xlsx



Golder Associates	Title: MW-8 Falling Head Test		Drawn: DH
			Checked: MK
			Reviewed: RA
	Project Name: The Villages	Project No.: 063-1076.501	
	Client Name: BD Villages, LP	Date: February 26, 2008	FIGURE 6

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-8 Falling Head Test.xlsx



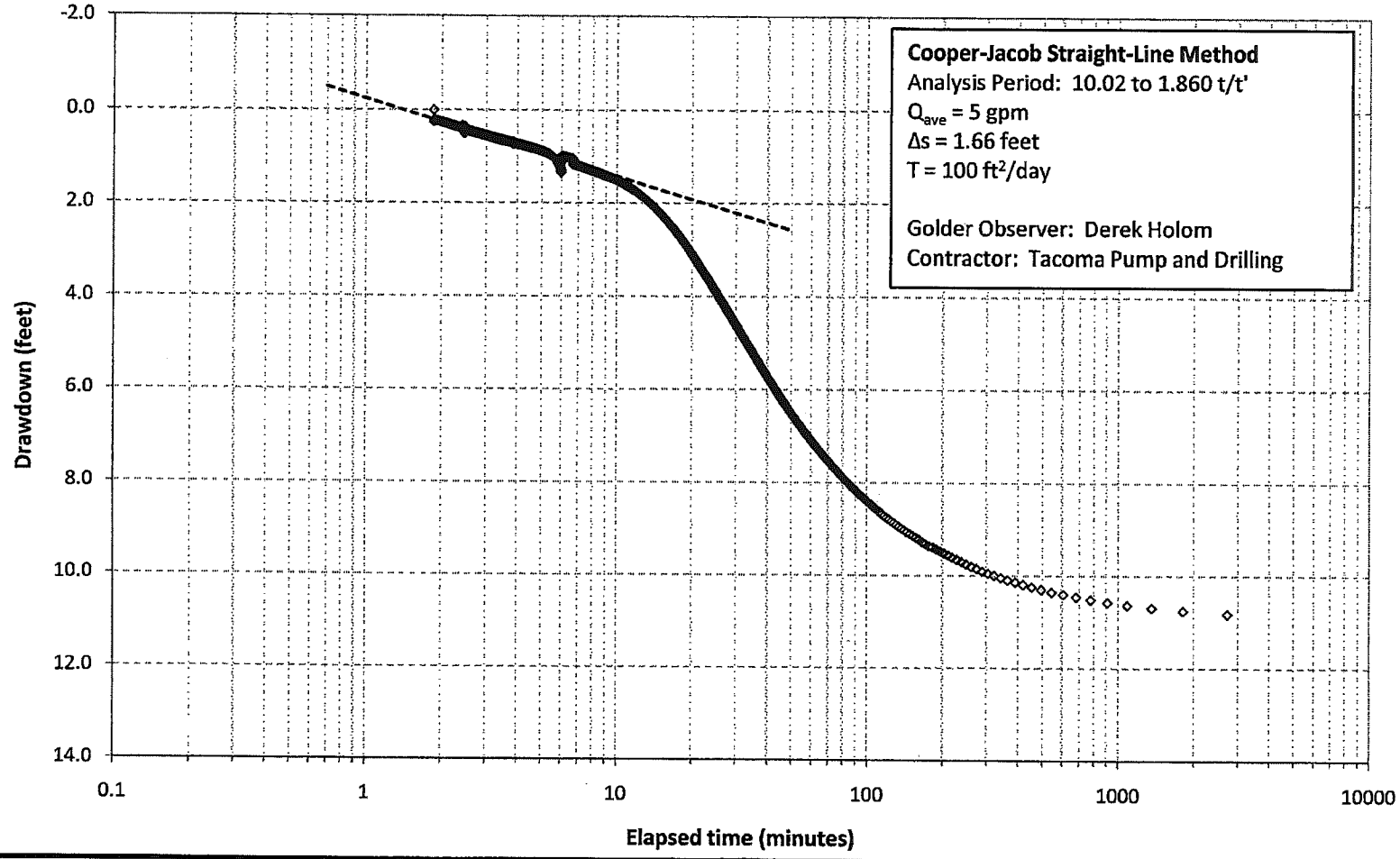
Golder Associates

Title	MW-9 Hydrograph (Pumping Test and Recovery Data)		
Project Name	The Villages	Project No.	063-1076.501
Client Name	BD Villages, LP	Date	February 26, 2008

Drawn	DH
Checked	MK
Reviewed	CA

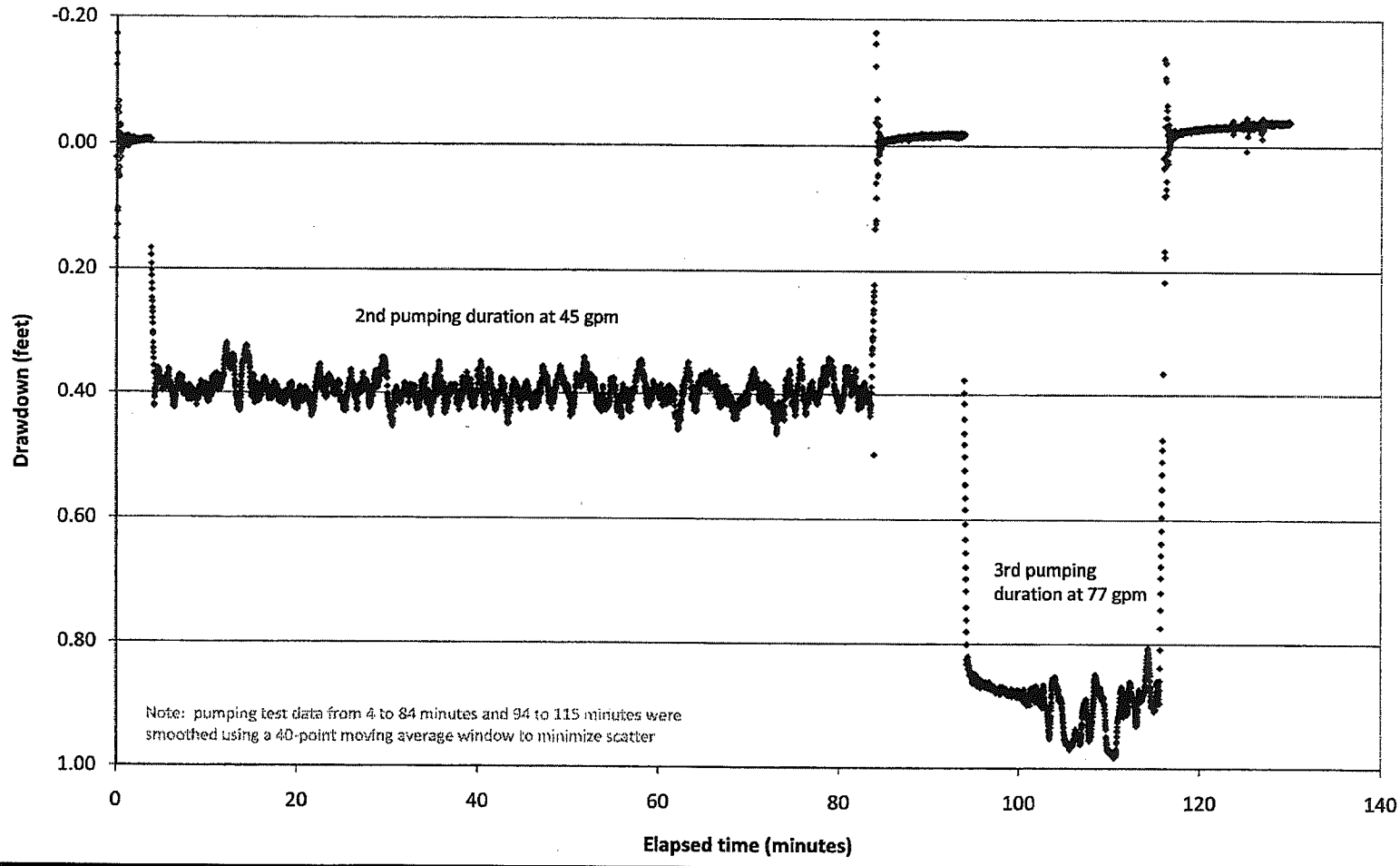
FIGURE 7

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-9 Pumping Test.xlsx



Golder Associates	Title: MW-9 Recovery Analysis		Drawn: DH
			Checked: MK
			Reviewed: RA
	Project Name: The Villages	Project No.: 063-1076.501	
	Client Name: BD Villages, LP	Date: February 26, 2008	FIGURE 8

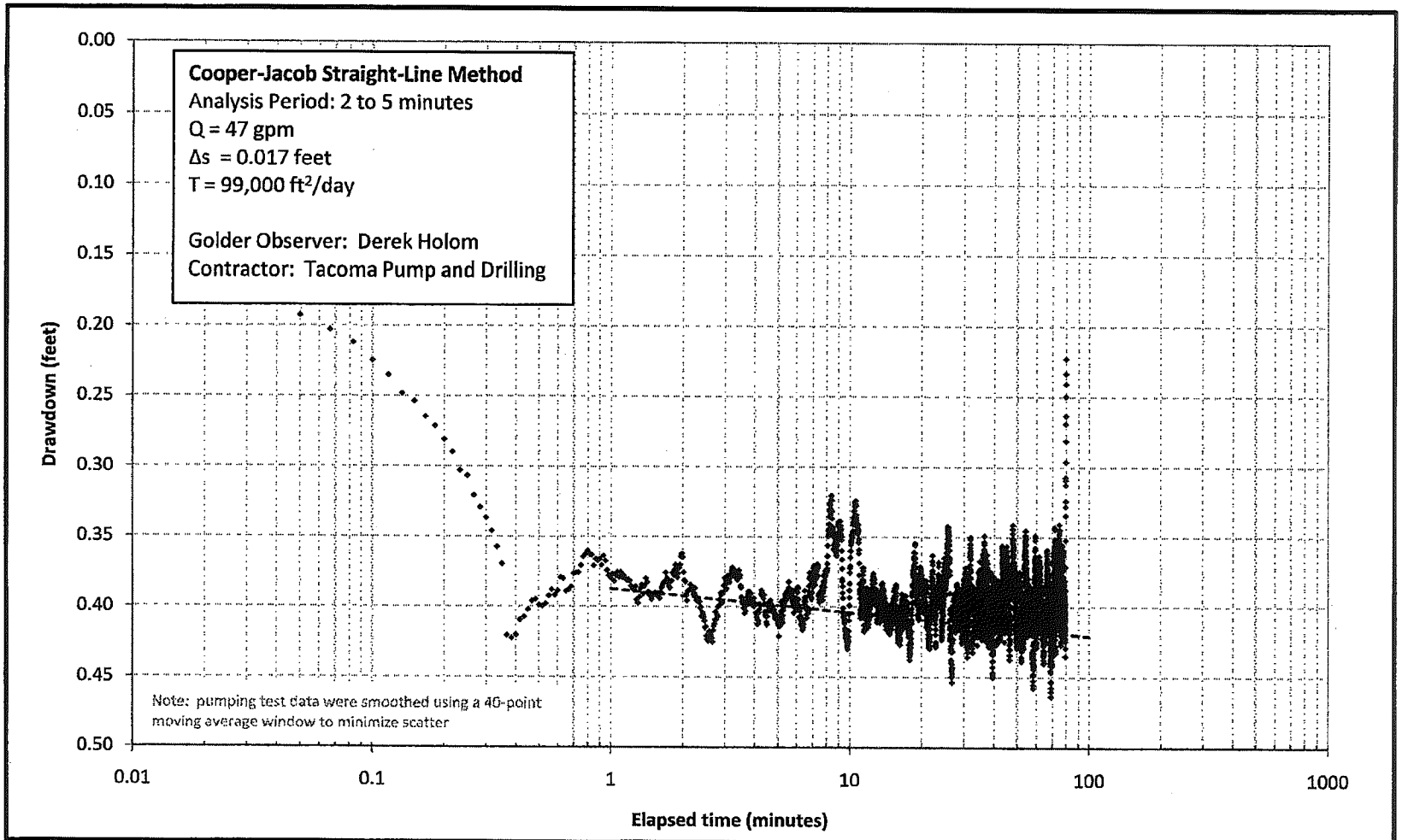
\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-9 Pumping Test.xlsx



Golder Associates

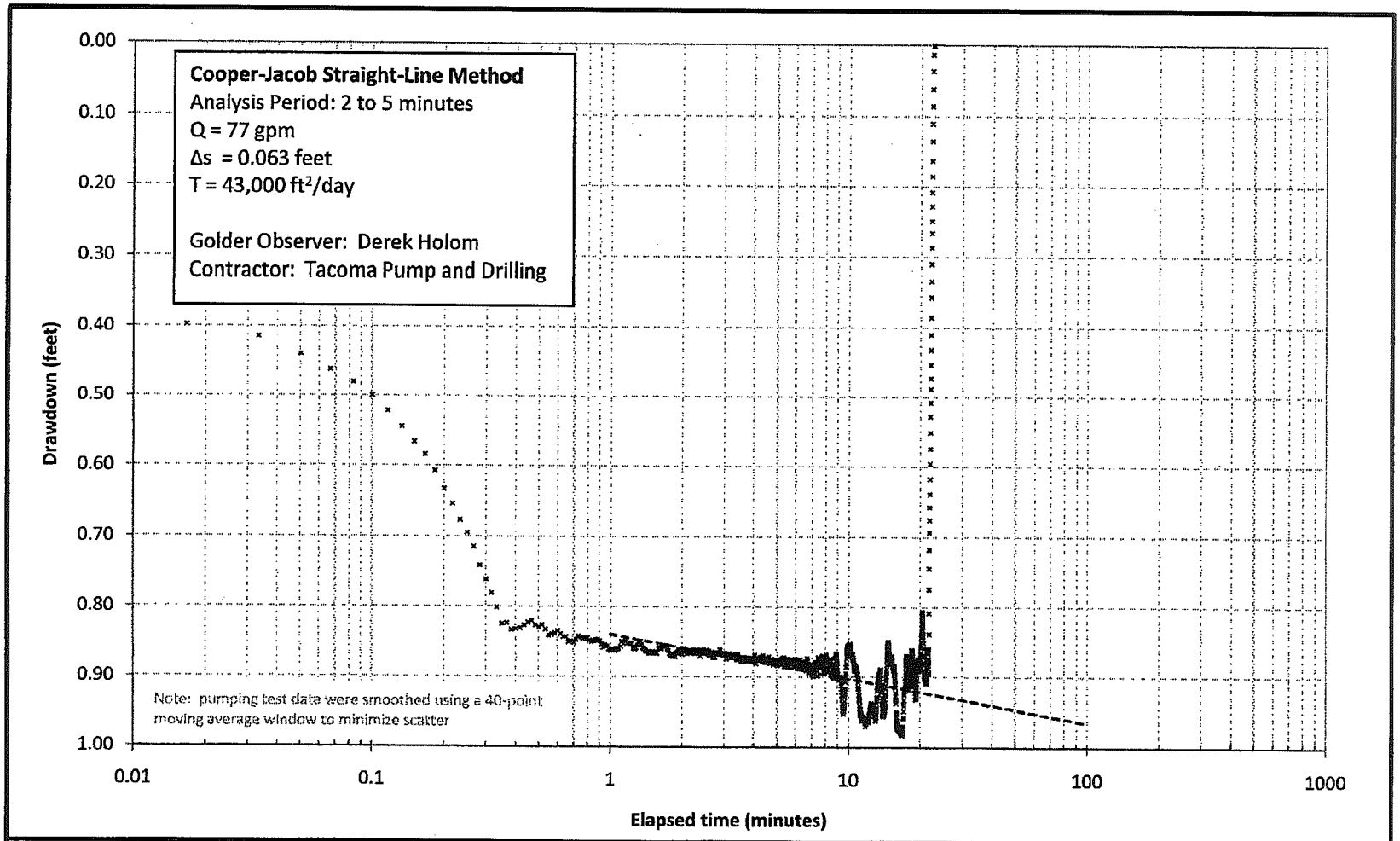
Title	MW-10 Pumping Tests Hydrograph	Drawn	DH
Project Name: The Villages	Project No.: 063-1076.501	Checked	MPK
Client Name: BD Villages LP	Date: March 13, 2008	Reviewed	BL
		FIGURE	9

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-10 Pumping Test.xlsx



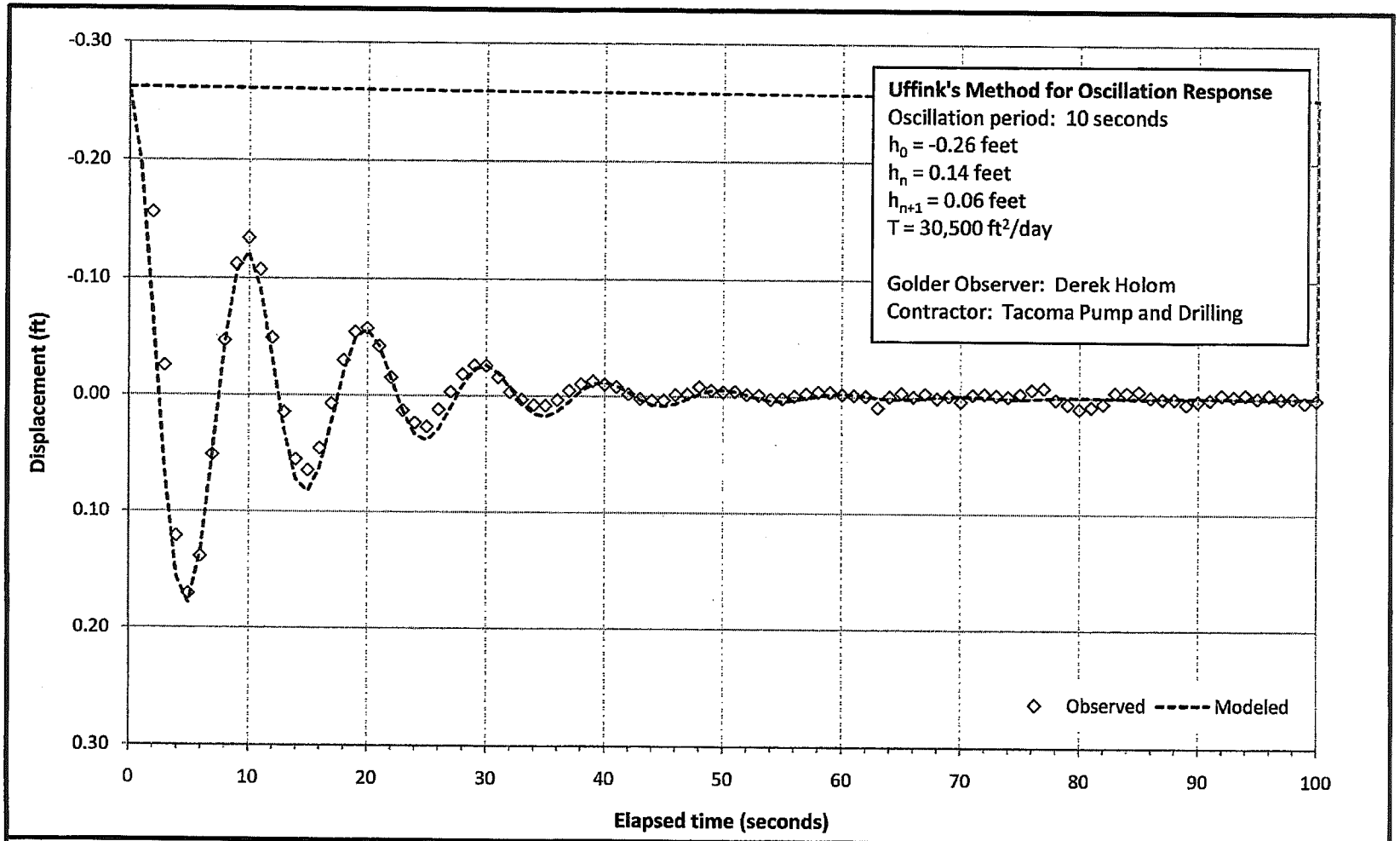
Golder Associates	Title: MW-10 2nd Constant Rate Pumping Test Analysis		Drawn: DH
			Checked: MPK
			Reviewed:
	Project Name: The Villages	Project No.: 063-1076.501	
	Client Name: BD Villages LP	Date: March 13, 2008	FIGURE 10

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-10 Pumping Test.xlsx



Golder Associates	Title: MW-10 3rd Constant Rate Pumping Test Analysis		Drawn: DH
			Checked: MPK
			Reviewed:
	Project Name: The Villages	Project No.: 063-1076.501	
	Client Name: BD Villages LP	Date: March 13, 2008	FIGURE 11

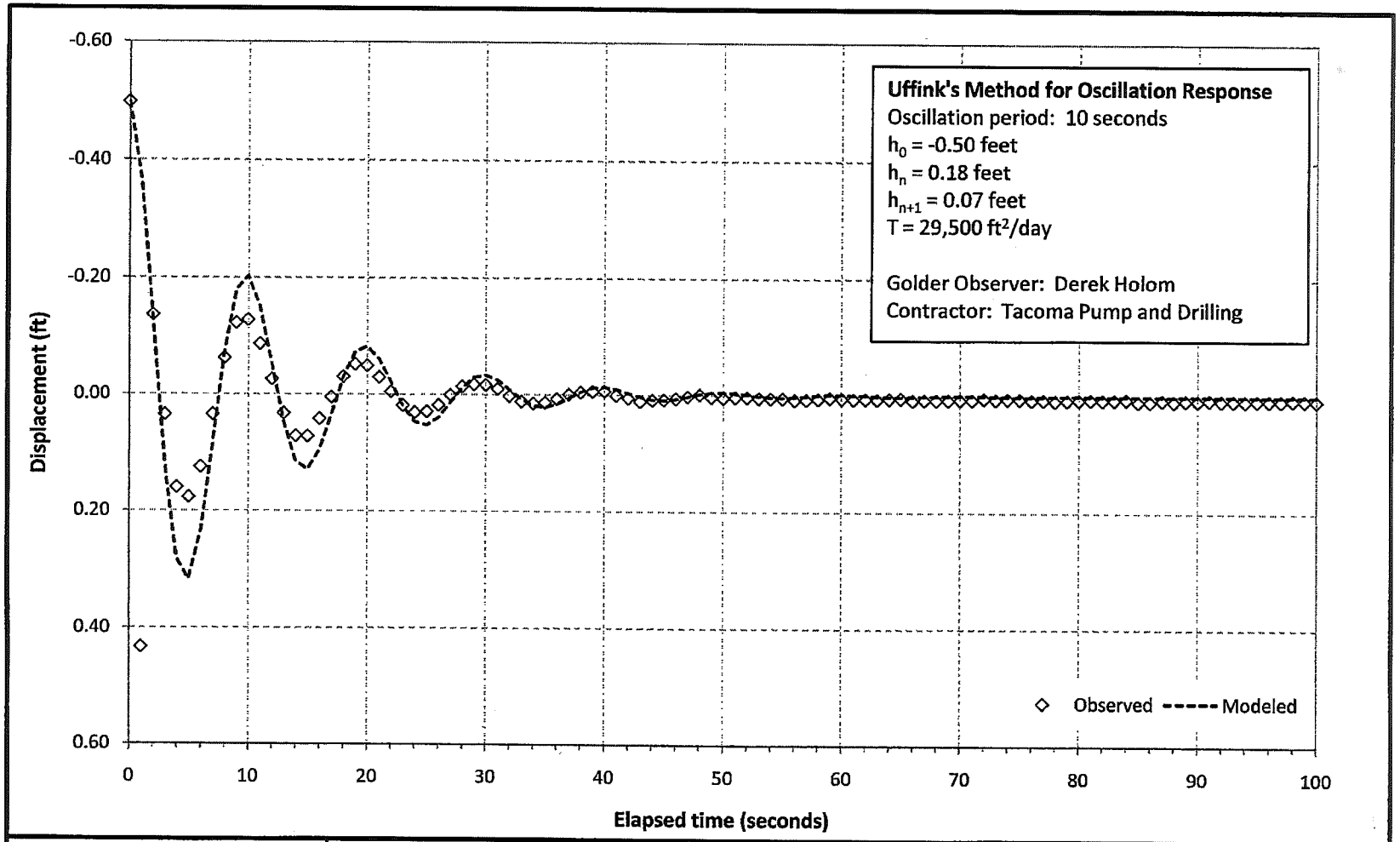
\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-10 Pumping Test.xlsx



Golder Associates

Title	MW-10 Oscillation Response #1	Drawn	DH
Project Name: The Villages	Project No.: 063-1076.501	Checked	MPK
Client Name: BD Villages LP	Date: March 13, 2008	Reviewed	
		FIGURE	12

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-10 Pumping Test.xlsx



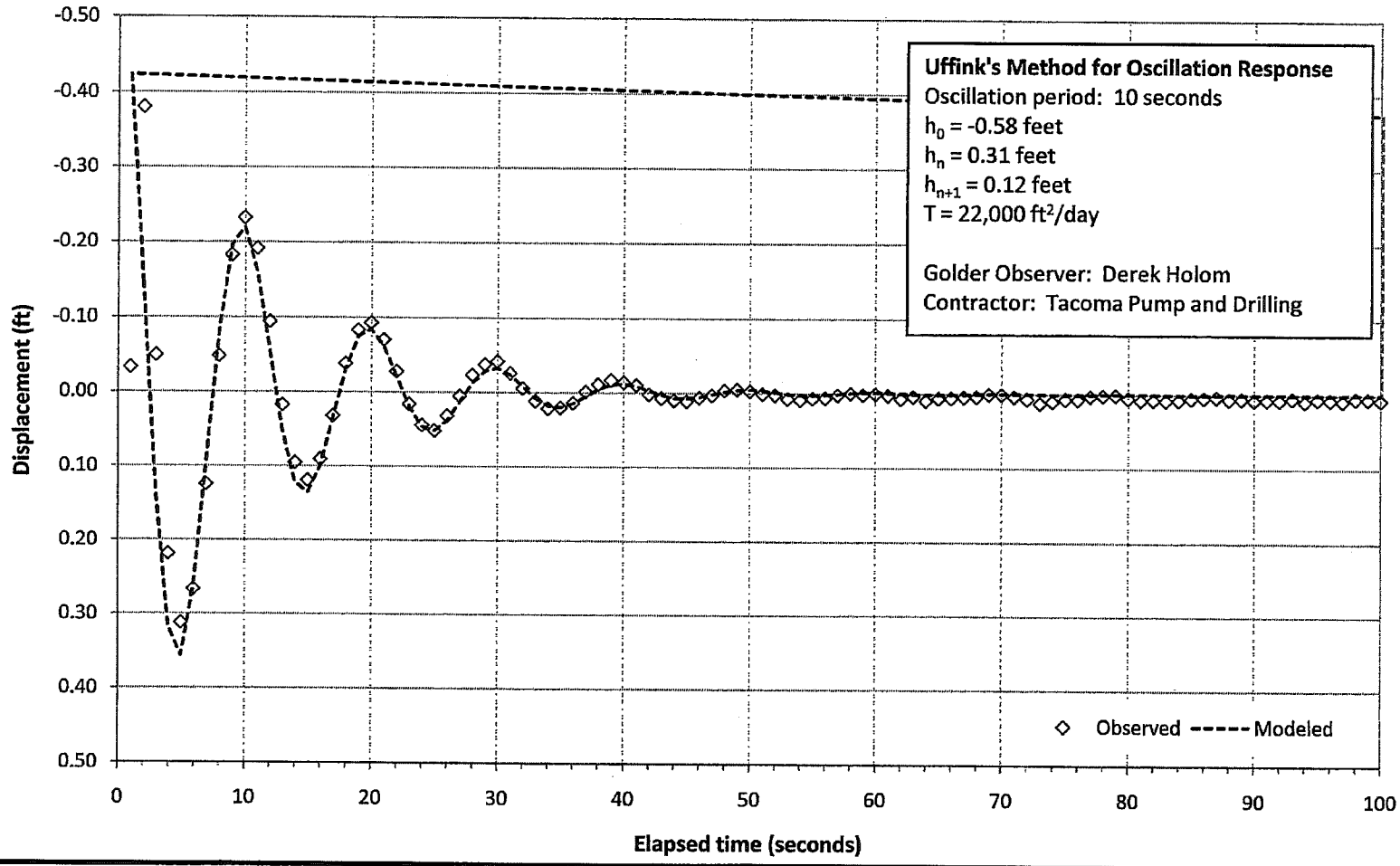
Golder Associates

Title	MW-10 Oscillation Response #2		
Project Name	The Villages	Project No. 063-1076.501	
Client Name	BD Villages LP	Date March 13, 2008	

Drawn	DH
Checked	MPK
Reviewed	

FIGURE 13

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-10 Pumping Test.xlsx



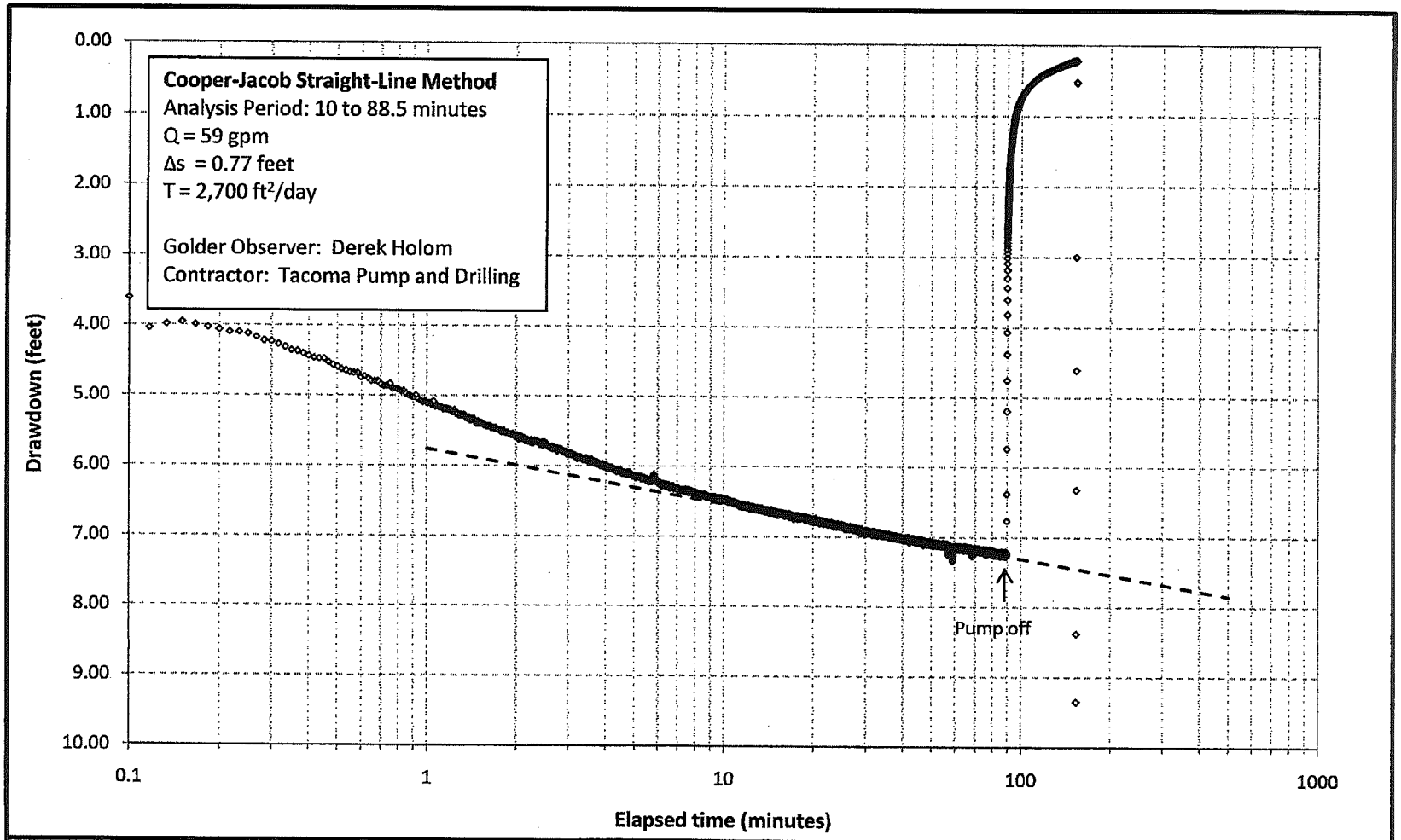
Golder Associates

Title	MW-10 Oscillation Response #3		
Project Name	The Villages	Project No.	063-1076.501
Client Name	BD Villages LP	Date	March 13, 2008

Drawn	DH
Checked	MPK
Reviewed	KA

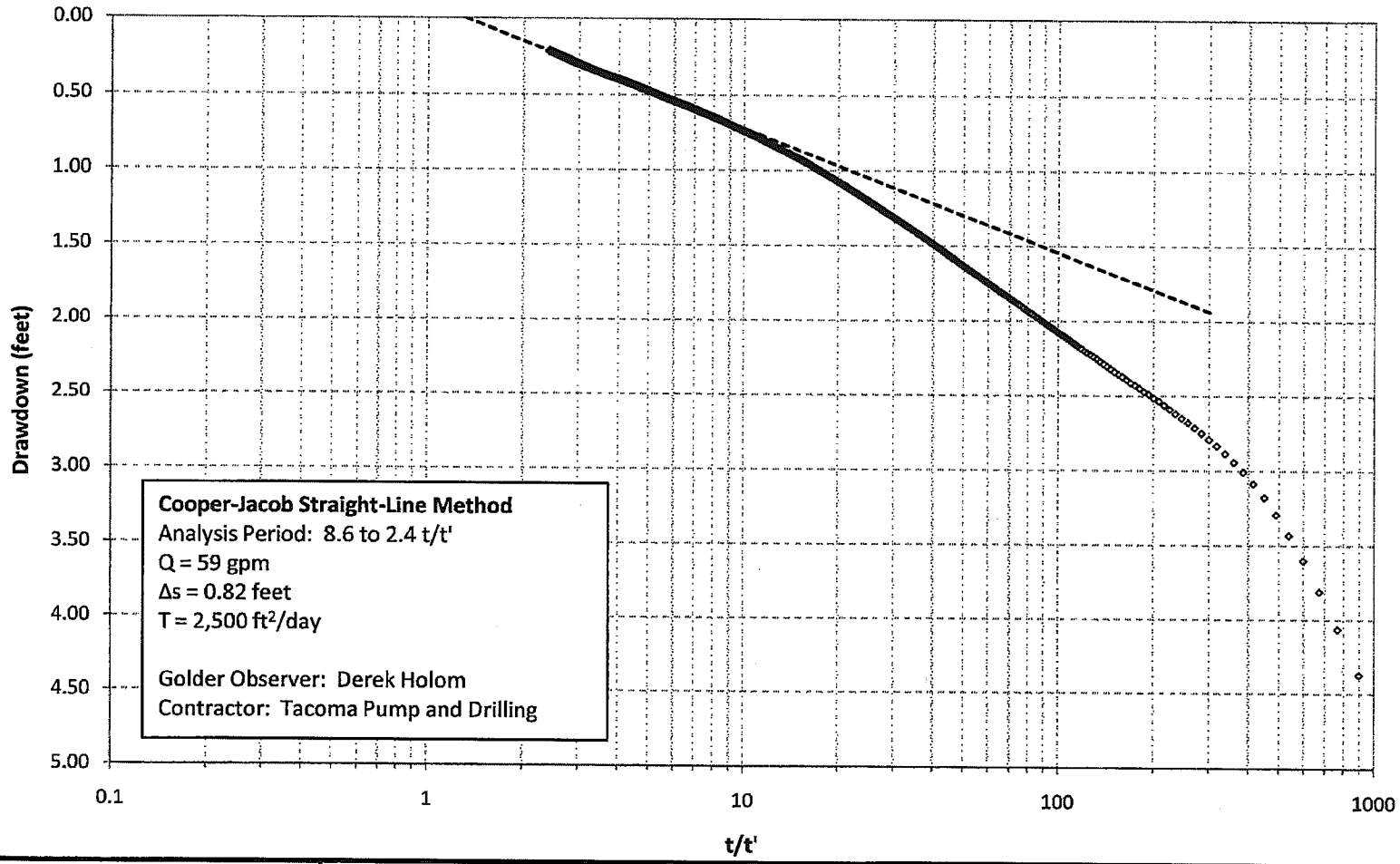
FIGURE 14

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-10 Pumping Test.xlsx



Golder Associates	Title: MW-12 Constant Rate Pumping Test Analysis		Drawn: DH
	Project Name: The Villages	Project No.: 063-1076.501	Checked: MK
	Client Name: BD Villages, LP	Date: February 26, 2008	Reviewed:
			FIGURE 15

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2008\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-12 Pumping Test.xlsx



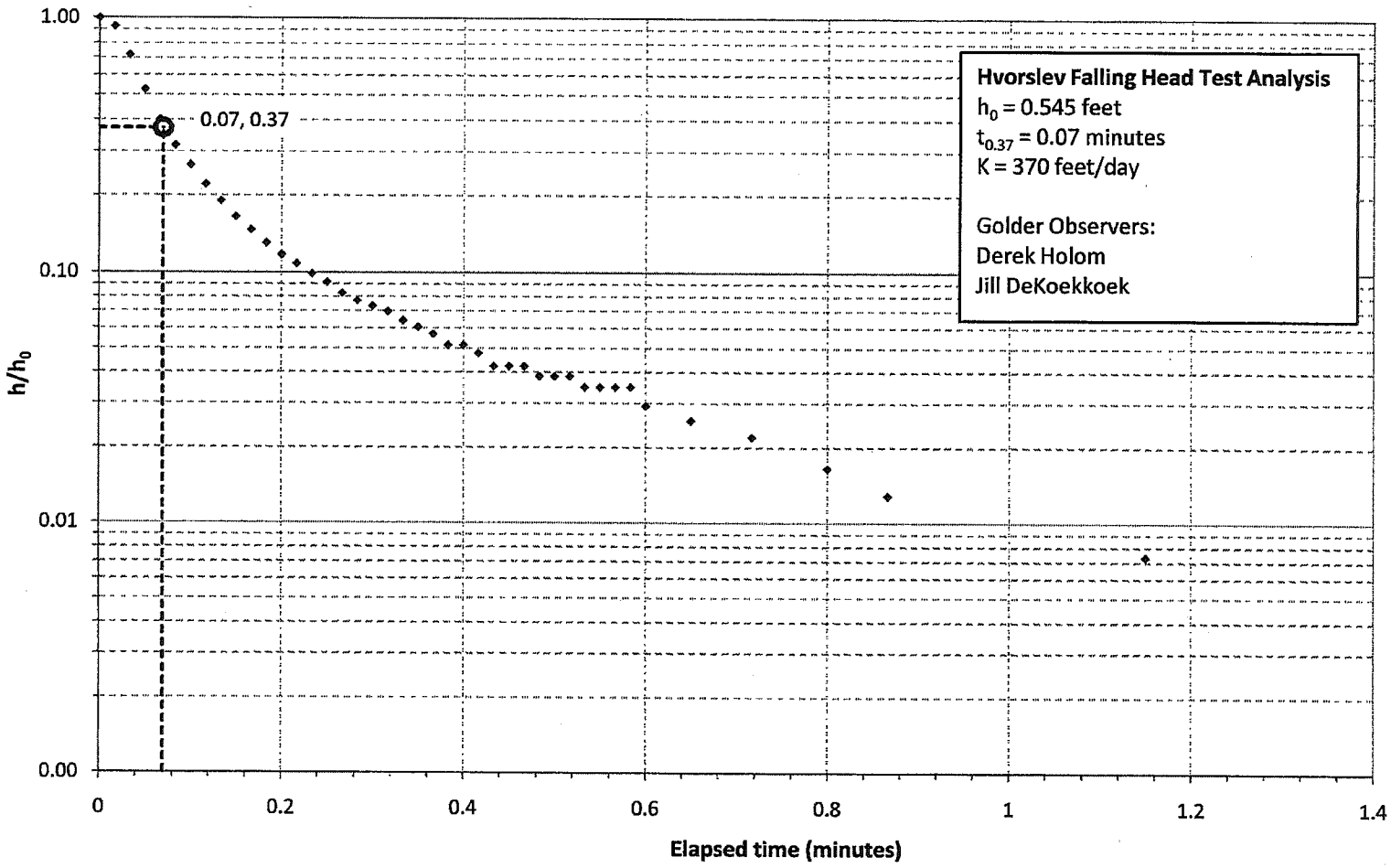
Golder Associates

Title	MW-12 Recovery Analysis		
Project Name	The Villages	Project No.	063-1076.501
Client Name	BD Villages, LP	Date	February 26, 2008

Drawn	DH
Checked	MK
Reviewed	KA

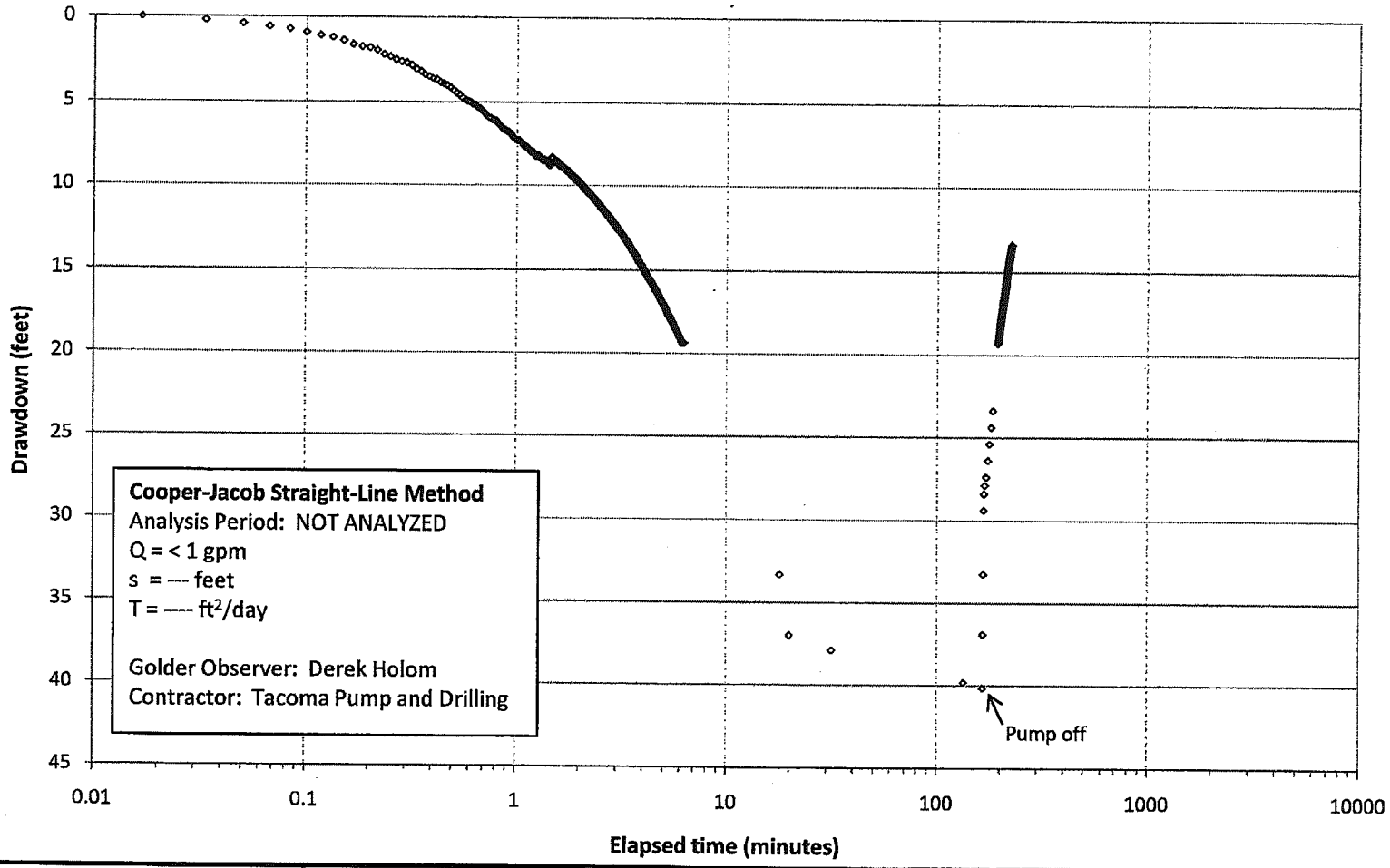
FIGURE 16

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-12 Pumping Test.xlsx



Golder Associates	Title: MW-13 Falling Head Test		Drawn: DH
			Checked: MK
			Reviewed: KA
	Project Name: The Villages	Project No.: 063-1076.501	FIGURE 17
	Client Name: BD Villages, LP	Date: February 26, 2008	

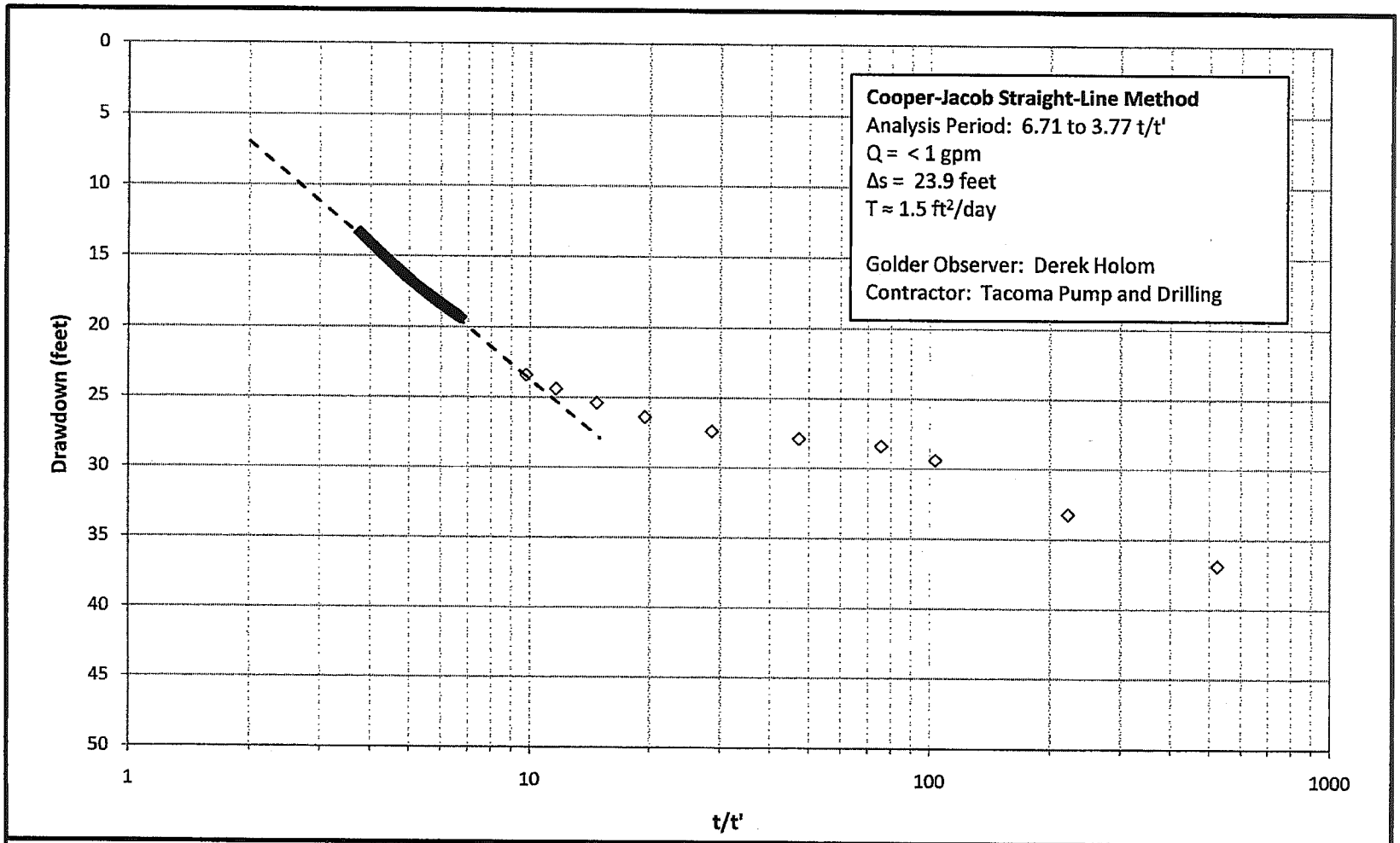
\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-13 Falling Head Test.xlsx



Golder Associates

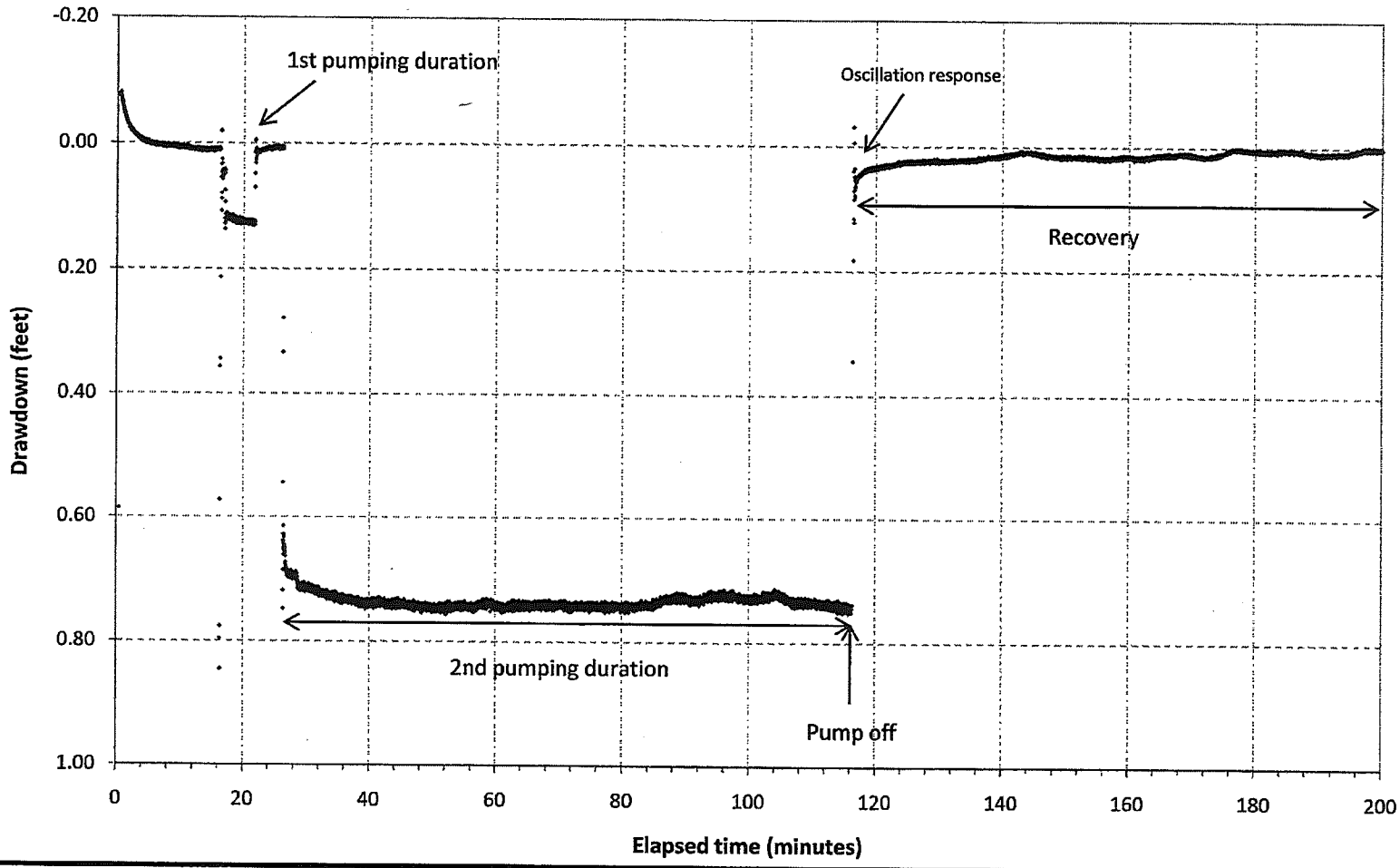
Title	MW-15 Constant Rate Pumping Test		Drawn: DH; Checked: MK; Reviewed: RCA
Project Name: The Villages		Project No.: 063-1076.501	
Client Name: BD Villages, LP		Date: February 26, 2008	FIGURE 18

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-15 Pumping Test.xlsx



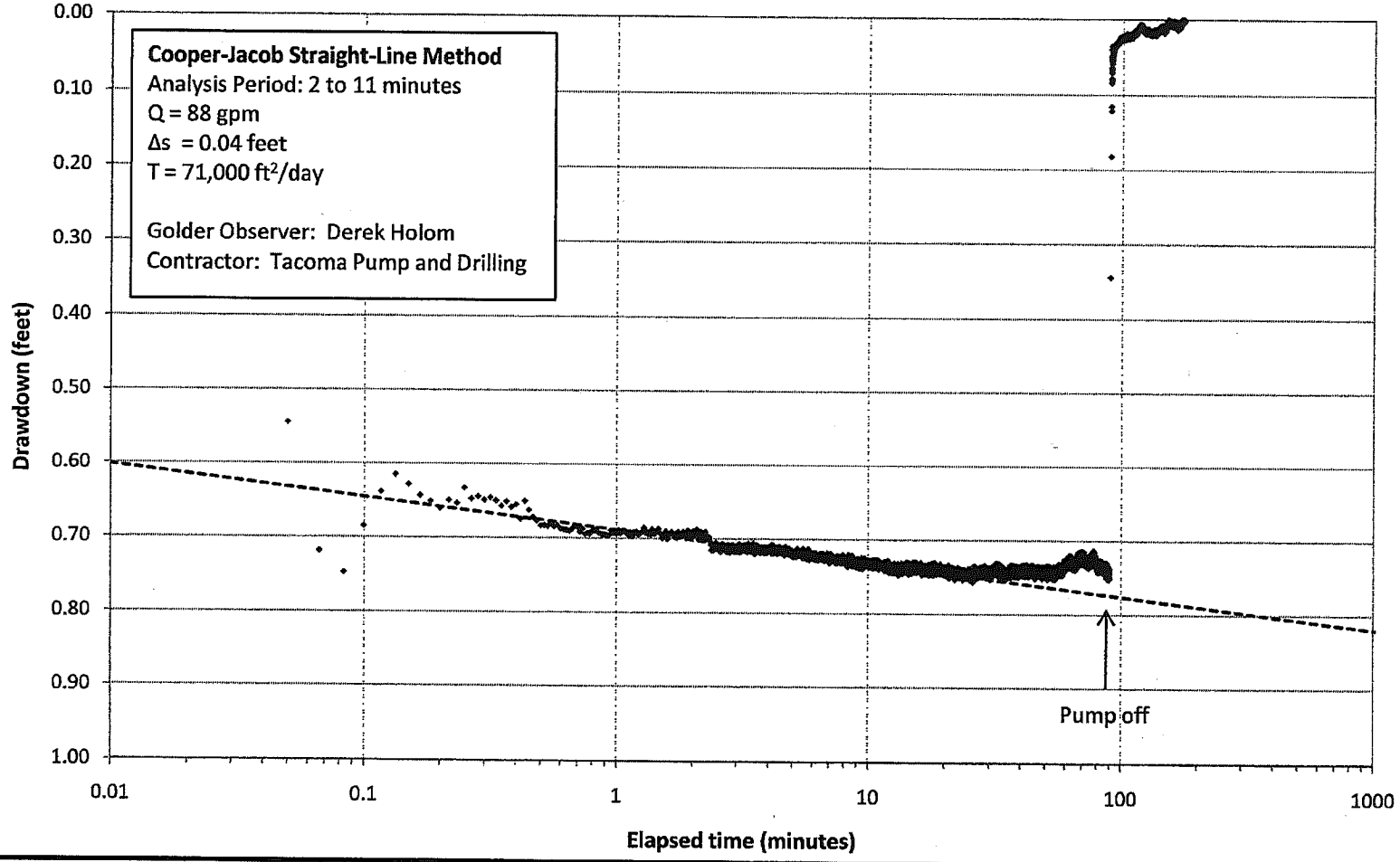
Golder Associates	Title: MW-15 Recovery Analysis		Drawn: DH
			Checked: MK
			Reviewed: KA
	Project Name: The Villages	Project No.: 063-1076.501	
	Client Name: BD Villages, LP	Date: February 26, 2008	FIGURE 19

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-15 Pumping Test.xlsx



Golder Associates	Title: MW-17 Pumping Tests Hydrograph		Drawn: DH
	Project Name: The Villages	Project No.: 063-1076.501	Checked: MK
	Client Name: BD Villages, LP	Date: February 26, 2008	Reviewed: RA
			FIGURE 20

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-17 Pumping Test.xlsx



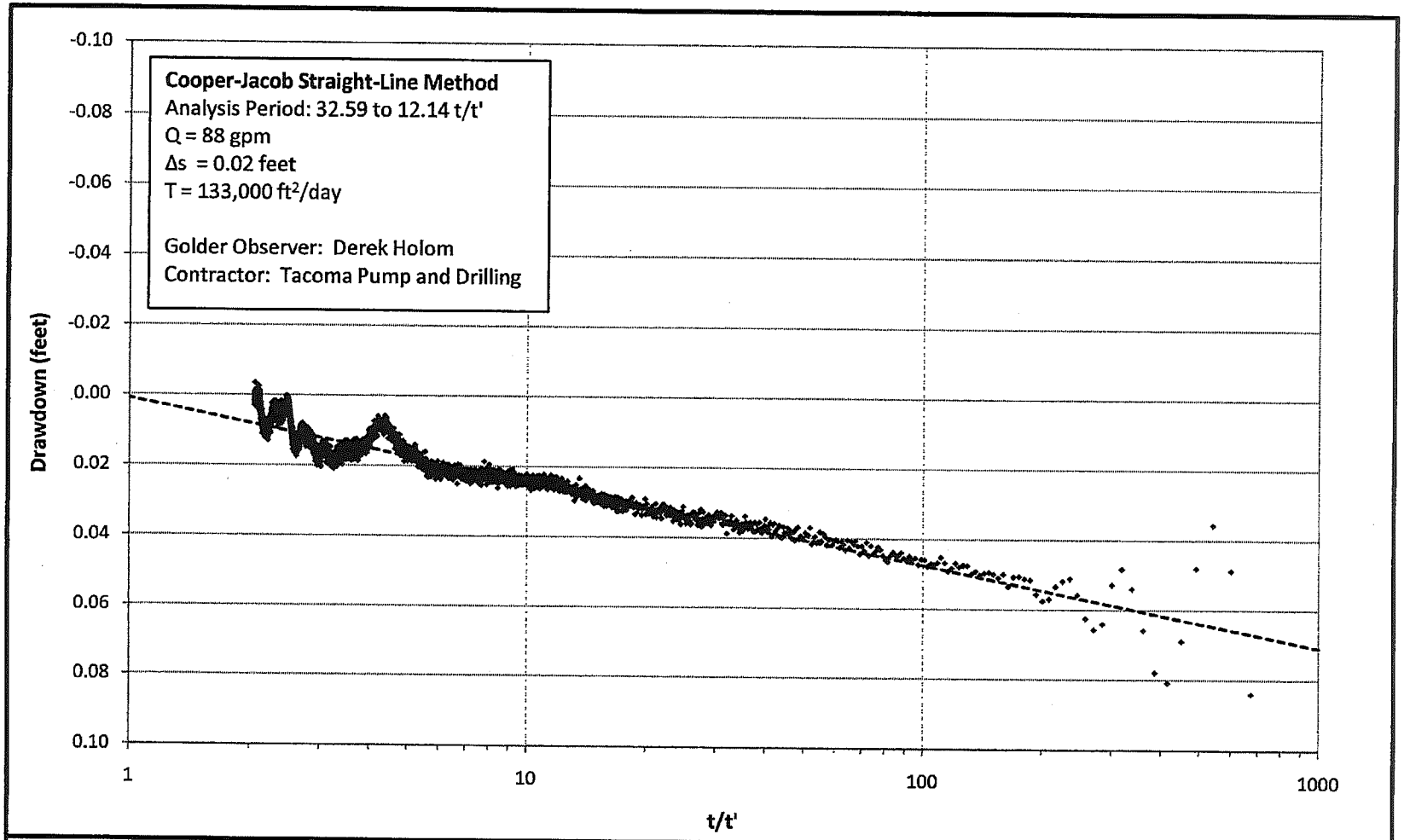
Golder Associates

Title	MW-17 Constant Rate Pumping Test Analysis		
Project Name	The Villages	Project No.	063-1076.501
Client Name	BD Villages, LP	Date	February 26, 2008

Drawn	DH
Checked	MK
Reviewed	RA

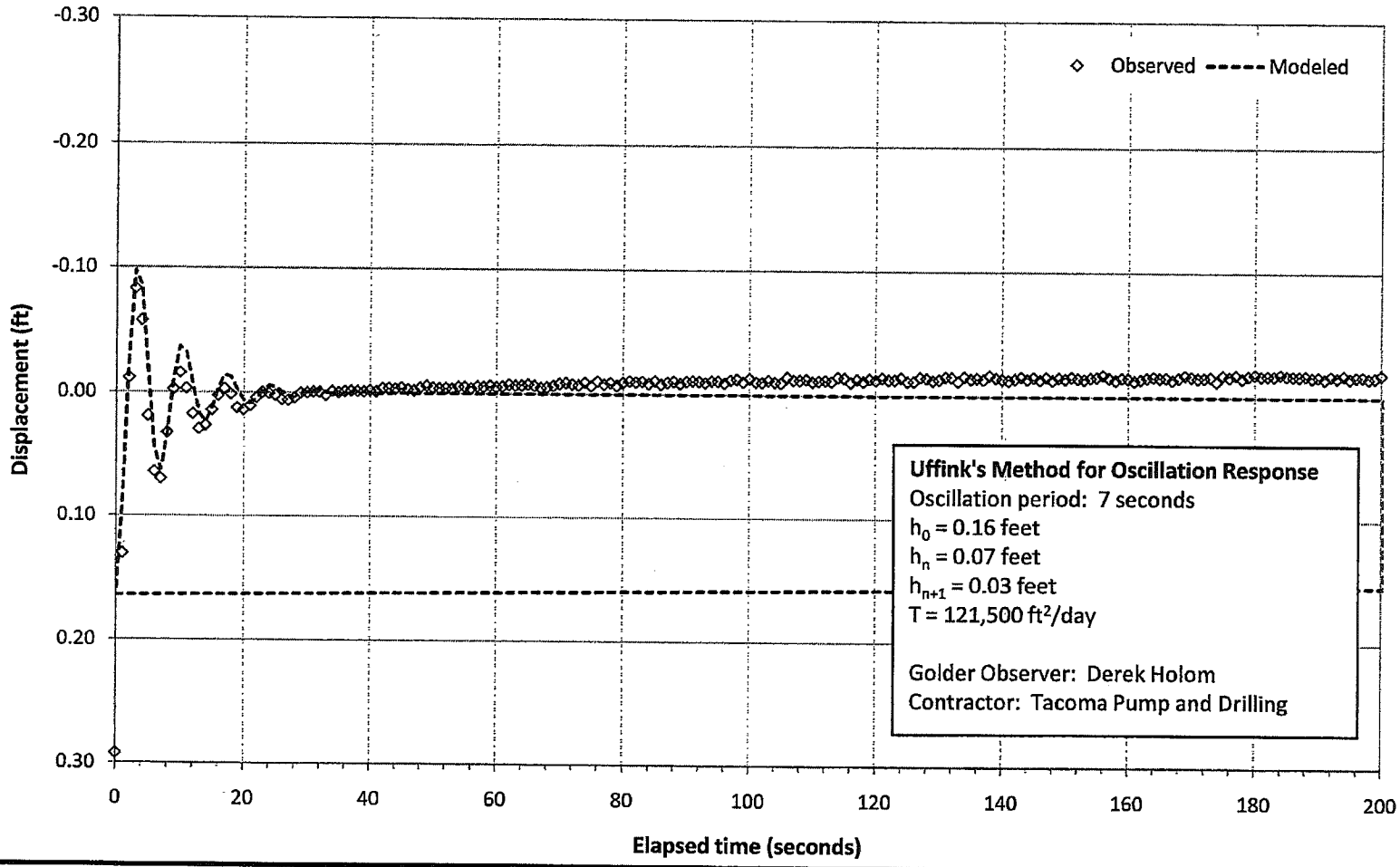
FIGURE 21

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-17 Pumping Test.xlsx



Golder Associates	Title: MW-17 Recovery Analysis		Drawn: DH
	Project Name: The Villages	Project No.: 063-1076.501	Checked: MK
	Client Name: BD Villages, LP	Date: February 26, 2008	Reviewed: RA
			FIGURE 22

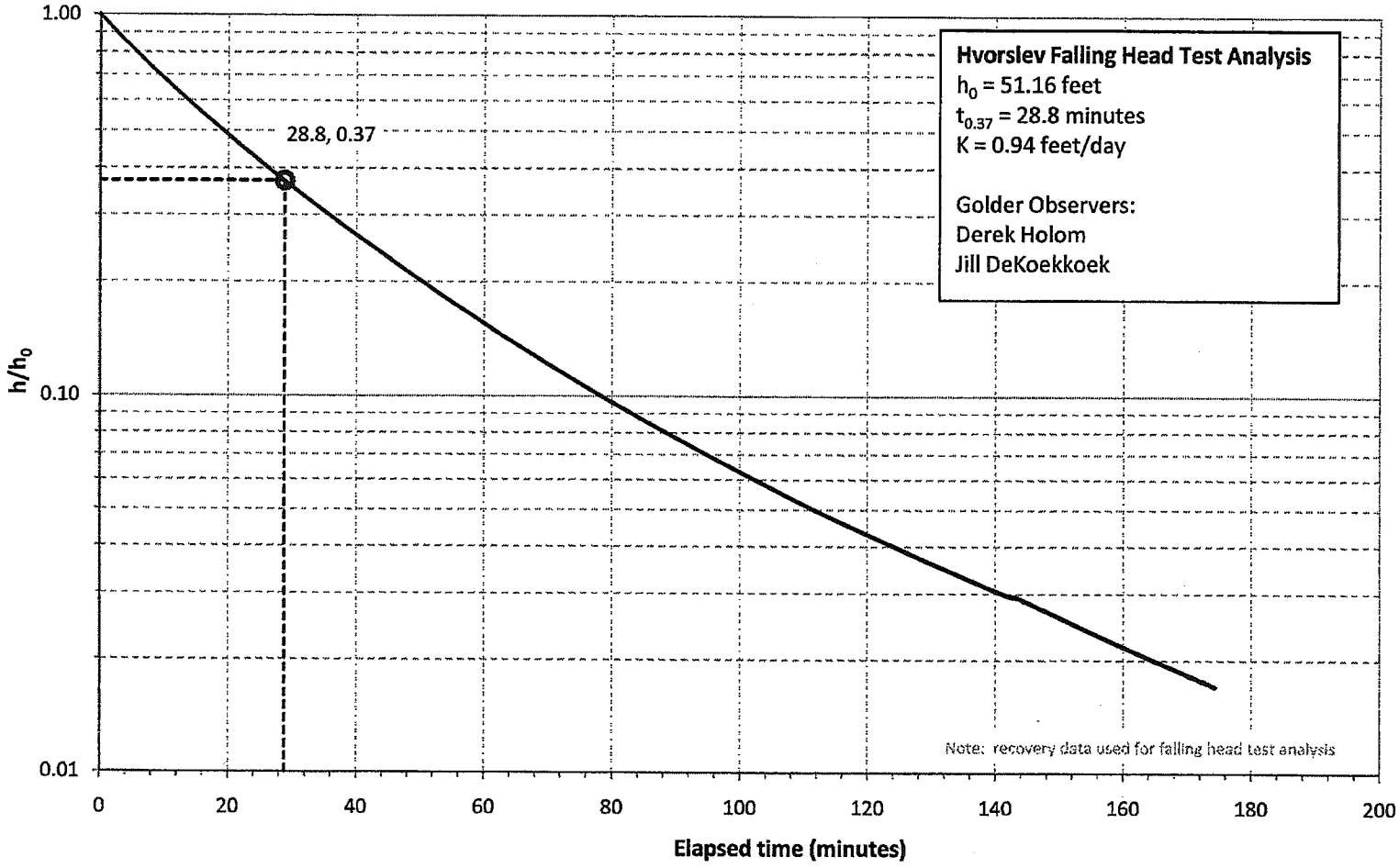
\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-17 Pumping Test.xlsx



Golder Associates

Title	MW-17 Uffink's Method for Oscillation Response	Drawn	DH
Project Name: The Villages	Project No.: 063-1076.501	Checked	MK
Client Name: BD Villages, LP	Date: February 26, 2008	Reviewed	MA
		FIGURE	23

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-17 Pumping Test.xlsx



Golder Associates	Title: MW-19 Falling Head Test		Drawn: DH
	Project Name: The Villages	Project No.: 063-1076.501	Checked: MK
	Client Name: BD Villages, LP	Date: February 26, 2008	Reviewed:
			FIGURE 24

\\SEA1-S-FS1\Data1\Engineering\PROJECTS\2006\063-1076_BDP_The Villages_Johnson\501 Aquifer Testing and Geophysics\Groundwater Data\Aquifer Test Data\Updated 2008\MW-19 Falling Head Test.xlsx

Golder Associates Inc.
18300 NE Union Hill Road, Suite 200
Redmond, Washington 98052
Telephone: (425) 883 0777
Fax: (425) 882 5498

Golder Associates

TECHNICAL MEMORANDUM

TO: Colin Lund, Yarrow Bay Development
Jenny Saltonstall, L.E.G., AESI

DATE: September 5, 2008

FR: Jay Pietraszek – Golder Associates
Jim Johnson, L.E.G. – Golder Associates JJ

OUR REF: 063-1076.401

RE: Horseshoe Lake Water Level Data, Support for EIS

ATTACHMENTS: Figure 1 – Horseshoe Lake Water Levels (01/19/07 to 07/31/08)
Excel File – Horseshoe Lake data 090308.xls

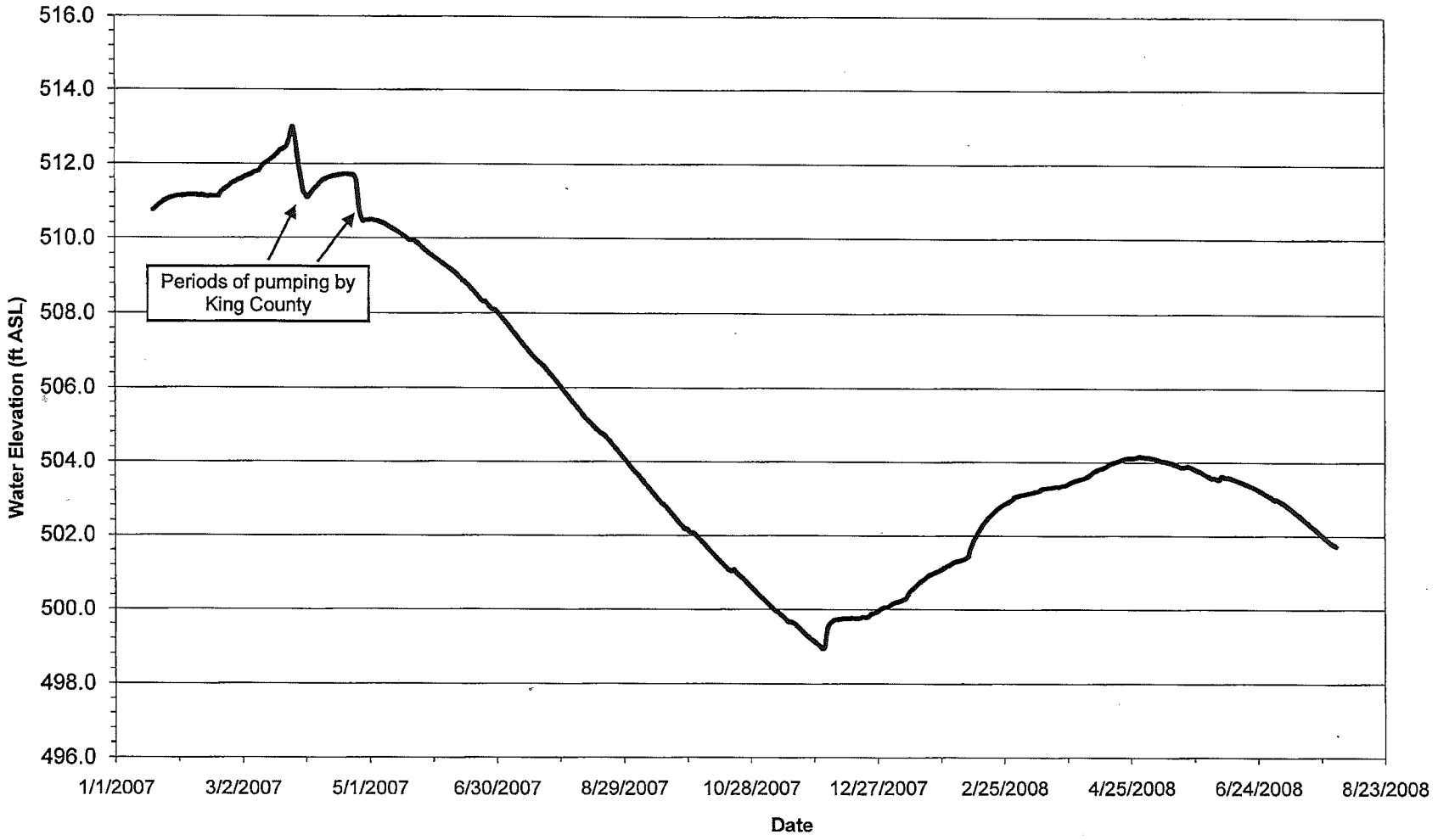
The memorandum provides water level data from Horseshoe Lake, as requested by Jennifer Saltonstall of Associated Earth Sciences in an email correspondence on September 3, 2008.

Golder Associates Inc. (Golder) has monitored water levels at Horseshoe Lake from January 2007 through the present using a pressure transducer and data logger (transducer). Triad (Triad) Associates surveyed the water elevation of Horseshoe Lake on May 19, 2008. Golder correlated the transducer data to Triad's surveyed water elevation, as described in a Golder memorandum dated May 30, 2008.

The water level data are presented in the attached figure, and the raw data are provided in the attached spreadsheet titled "Horseshoe Lake data 090308.xls". The data extend from January 19, 2007 to July 31, 2008.

We hope this information meets your needs. Please contact us if you have questions, or if we can provide additional information.

ATTACHMENT



Golder Associates

The Villages - Surface Water Monitoring

TITLE

Horseshoe Lake Water Levels (01/19/07 to 07/31/08)

DRAWN	JP	DATE	Sep-08	JOB NO.	063-1076.401
CHECKED	SH	SCALE	na	DWG. NO.	na
REVIEWED	JJ	FILE NAME	011907_HSL.xls	FIGURE NO.	1

APPENDIX 8

APPENDIX 8
SEISMIC DATABASE

Table A8-1
Historical Seismicity in the Vicinity of the Site (M>2.0)

Date	Latitude (°N)	Longitude (°W)	Depth (km)	Magnitude
12/31/1962	47.1000	122.0000	33.00	Unk
7/30/1966	47.2000	122.0000	16.00	3.4
5/14/1971	47.4943	122.2525	25.08	2.2
7/18/1971	47.4953	122.0260	18.25	2.3
9/12/1971	47.2692	122.1998	14.99	2.4
10/7/1971	47.4522	121.7727	21.53	2.1
5/12/1972	47.5555	121.9733	15.94	2.2
5/26/1972	47.4378	121.7998	18.75	2.3
8/13/1972	47.4023	121.8277	14.46	3.0
8/16/1972	47.5473	121.8222	4.74	2.1
8/19/1972	47.4845	121.9525	0.02	2.1
10/10/1972	47.1025	121.8127	9.31	2.2
10/23/1972	47.2103	122.1933	13.76	2.0
1/14/1973	47.4188	121.8233	18.74	2.2
4/8/1973	47.4173	121.8670	9.69	2.3
4/20/1973	47.5465	122.0280	20.77	2.2
5/26/1973	47.3508	121.9430	21.67	2.2
5/28/1973	47.0955	121.8753	17.82	2.8
11/8/1973	47.4328	121.8283	19.85	2.4
5/22/1974	47.3423	122.0250	19.22	3.0
5/24/1974	47.4285	122.0053	15.98	2.2
7/24/1974	47.3828	121.8778	18.88	2.2
8/17/1974	47.4153	121.8167	20.58	2.2
11/6/1974	47.4208	121.9990	20.28	2.3
11/11/1974	47.5015	122.0095	22.29	2.3
2/5/1975	47.4588	122.0152	14.70	2.0
3/4/1975	47.4075	121.8225	19.96	2.0
3/19/1975	47.3328	122.0270	20.44	2.8
6/30/1975	47.3555	122.0148	18.74	2.3
7/12/1975	47.3785	121.7983	13.69	2.0
8/25/1975	47.5115	121.8763	22.64	2.0
9/2/1975	47.4915	121.8463	15.26	2.2
9/2/1975	47.0877	122.1228	7.45	2.6
9/3/1975	47.3673	121.9713	0.03	2.8
9/8/1975	47.4653	122.0102	12.04	2.6
2/11/1976	47.3957	122.1068	18.70	2.1

Date	Latitude (°N)	Longitude (°W)	Depth (km)	Magnitude
5/9/1976	47.2948	122.2260	21.76	2.0
10/18/1976	47.4097	122.0197	14.24	2.4
3/5/1977	47.0995	121.8350	9.75	2.3
3/12/1977	47.4120	121.9133	13.10	2.4
3/14/1977	47.5295	121.7793	9.81	2.1
3/14/1977	47.4115	121.8873	14.00	2.2
3/15/1977	47.3187	122.1148	65.10	2.1
3/17/1977	47.5223	122.0045	32.36	2.1
3/26/1977	47.2017	122.1695	9.23	2.3
3/26/1977	47.2037	122.1805	13.88	2.8
4/2/1977	47.1988	122.1373	24.80	2.2
4/4/1977	47.2028	122.1753	18.37	2.4
4/6/1977	47.3110	121.8555	19.63	2.2
4/7/1977	47.3872	121.8057	18.12	2.1
5/25/1977	47.4310	121.8040	19.53	2.3
6/12/1977	47.2100	122.1770	4.42	2.1
6/12/1977	47.2127	122.1713	7.31	2.2
6/19/1977	47.2075	122.1857	2.62	2.1
7/18/1977	47.0685	122.2412	0.56	2.3
2/1/1979	47.5307	121.9075	7.38	3.5
9/5/1979	47.5257	121.9980	4.07	2.1
12/10/1979	47.4285	121.8122	19.33	2.2
5/3/1980	47.2792	122.0018	13.70	2.0
6/23/1980	47.5427	122.2508	0.05	3.7
6/23/1980	47.5405	122.2477	0.02	3.3
8/27/1980	47.1032	121.8775	17.15	2.0
9/19/1980	47.3902	121.7733	17.88	2.2
11/23/1980	47.5312	121.9127	7.35	2.8
4/19/1981	47.4250	122.0807	17.47	2.4
9/6/1981	47.3245	122.2697	7.87	2.3
2/16/1982	47.4370	121.8030	18.57	2.0
4/9/1982	47.4205	121.8093	19.69	2.1
4/19/1982	47.4235	121.9153	72.55	2.0
6/9/1982	47.5135	121.9327	7.28	2.5
7/1/1982	47.0637	122.0840	0.02	2.3
7/16/1982	47.0998	121.8847	17.73	2.4
12/15/1982	47.1203	121.8220	15.15	2.4
12/29/1982	47.3233	121.8527	9.23	2.2
12/31/1982	47.1433	122.0270	14.27	2.4
1/12/1983	47.4065	122.0305	21.75	2.0
1/24/1983	47.0737	121.9698	6.62	3.0
2/2/1983	47.0615	121.9230	2.81	2.0

Date	Latitude (°N)	Longitude (°W)	Depth (km)	Magnitude
2/25/1983	47.0797	122.1178	10.17	2.1
3/11/1983	47.4337	121.8082	18.47	2.0
6/26/1983	47.4325	121.9163	0.04	2.0
7/23/1983	47.5360	121.9648	14.82	2.2
10/5/1983	47.4603	121.8377	21.82	3.0
11/27/1983	47.2638	121.9577	15.23	2.3
12/16/1983	47.3203	122.0043	12.91	3.0
2/11/1984	47.0718	122.1085	12.20	2.3
2/20/1984	47.4355	121.8028	18.63	2.3
3/21/1984	47.1028	122.0678	6.30	2.0
5/4/1984	47.5205	121.9063	20.75	2.1
7/22/1984	47.3908	121.7798	18.57	2.1
9/24/1984	47.1117	122.1045	8.32	2.1
11/24/1984	47.4123	121.8503	16.63	2.2
11/30/1984	47.4130	121.8368	17.94	2.2
1/29/1985	47.4272	121.8053	17.55	2.7
2/8/1985	47.4778	121.8282	18.87	2.0
6/16/1985	47.4343	121.8262	17.03	3.1
8/4/1985	47.0873	121.8717	11.40	2.0
9/20/1985	47.4978	122.0210	0.03	2.0
9/25/1985	47.4947	122.0255	0.78	2.2
2/3/1986	47.2852	121.9398	12.85	2.4
3/2/1986	47.5462	121.9910	15.65	2.1
3/3/1986	47.5540	121.7735	11.18	2.0
6/8/1987	47.3852	121.9955	6.53	2.0
6/21/1987	47.4478	121.8058	21.78	2.3
1/8/1988	47.0655	122.1477	0.02	2.7
1/9/1988	47.0680	122.1643	6.90	2.2
1/11/1988	47.0712	122.1640	5.53	2.2
1/26/1988	47.4142	121.8157	19.69	2.9
2/6/1988	47.3870	121.7783	18.01	2.2
7/6/1988	47.4338	121.8297	18.38	2.1
8/16/1988	47.4280	121.8610	19.00	2.6
9/13/1988	47.4348	121.8173	18.40	2.4
11/3/1988	47.4335	121.8597	19.46	2.0
12/11/1988	47.1730	121.8832	15.21	2.7
2/28/1989	47.1612	121.8315	13.74	2.0
4/21/1989	47.3922	122.0562	4.50	2.8
1/1/1990	47.1025	122.0712	9.62	2.2
1/2/1990	47.1070	122.0787	10.68	2.2
1/2/1990	47.1045	122.0775	10.10	2.7
1/5/1990	47.1040	122.0888	3.34	2.0

Date	Latitude (°N)	Longitude (°W)	Depth (km)	Magnitude
1/15/1990	47.4207	122.0872	19.39	2.6
3/6/1990	47.4717	122.0283	14.94	2.6
4/11/1990	47.4287	122.0687	19.45	2.3
4/11/1990	47.4232	122.0767	16.82	2.3
7/14/1990	47.4120	122.0848	4.30	2.1
7/16/1990	47.1862	122.1435	16.62	2.1
8/29/1990	47.4772	121.8037	0.02	2.0
12/11/1990	47.1865	122.2025	11.82	2.1
12/30/1990	47.4738	121.8122	17.07	3.5
3/12/1991	47.3992	122.0830	3.23	2.0
3/22/1991	47.3972	122.0805	6.00	2.6
4/11/1991	47.5555	122.1085	13.01	2.3
7/14/1991	47.2338	121.9442	16.96	2.5
8/6/1991	47.3995	122.0900	5.10	2.0
10/3/1991	47.0923	121.9218	17.54	2.2
4/19/1992	47.4610	122.0535	23.08	3.1
9/1/1992	47.3615	121.7843	17.92	2.3
8/20/1993	47.4262	121.7813	15.68	2.0
1/21/1994	47.3957	122.0298	8.30	2.0
4/19/1994	47.3727	121.8037	12.18	2.9
4/24/1994	47.1782	121.9992	15.41	2.2
4/25/1994	47.5267	121.8752	20.21	2.0
6/18/1994	47.5115	121.8648	17.83	2.5
6/18/1994	47.5125	121.8653	17.27	2.7
7/25/1994	47.1038	121.8688	15.79	2.1
9/10/1994	47.1845	121.9652	17.73	3.9
11/29/1994	47.4342	121.8255	18.87	2.9
2/24/1995	47.5562	122.0380	9.73	2.2
3/8/1995	47.4815	121.7772	17.61	2.2
9/9/1995	47.4988	121.7937	18.17	2.5
1/21/1996	47.4507	121.7875	21.16	3.3
1/21/1996	47.4497	121.7948	20.38	2.8
5/16/1996	47.4355	121.9760	16.50	2.0
2/6/1997	47.5550	121.8212	3.31	2.3
4/19/1997	47.4617	121.8477	15.85	2.4
6/20/1997	47.4163	121.9250	2.92	2.2
7/29/1997	47.4772	121.8663	17.46	2.2
8/11/1997	47.4612	122.0205	5.47	2.0
1/22/1998	47.1987	121.9485	16.48	2.0
4/18/1998	47.2378	121.8108	16.24	2.0
12/7/1999	47.1633	121.8218	15.41	2.1
12/20/1999	47.1755	121.9432	18.05	2.2

Date	Latitude (°N)	Longitude (°W)	Depth (km)	Magnitude
6/28/2000	47.4035	122.0678	12.97	2.0
2/14/2001	47.5182	121.8973	6.63	3.1
2/24/2001	47.5313	122.0682	22.58	2.2
3/6/2001	47.3407	121.9587	22.99	2.2
3/9/2001	47.3862	122.0457	12.47	2.5
7/24/2001	47.4927	122.0205	16.44	2.2
1/26/2002	47.1305	122.1325	8.51	2.4
3/24/2002	47.4618	122.0532	19.79	2.3
3/26/2002	47.2855	122.2158	18.06	2.4
3/26/2002	47.2890	122.2257	18.18	2.1
6/15/2002	47.4782	121.7930	17.81	2.2
7/22/2002	47.4090	121.7848	28.05	3.1
7/31/2002	47.4013	122.1773	49.30	2.9
2/8/2003	47.5195	121.8980	5.75	2.8
10/25/2003	47.5337	121.8927	18.62	2.3
11/12/2003	47.5397	121.9400	21.26	2.0
11/24/2003	47.4448	121.9938	19.19	2.0
12/13/2003	47.2873	122.0147	18.59	2.1
4/29/2004	47.4248	122.0793	21.69	2.3
6/29/2004	47.4142	122.0507	6.57	2.0
9/3/2004	47.2340	121.8402	15.23	2.0
4/5/2005	47.4900	121.8218	21.70	2.0
4/29/2005	47.3930	122.0447	7.06	2.1
6/10/2005	47.5440	121.7998	18.16	2.4
6/10/2005	47.5417	121.8035	18.42	2.0
11/28/2005	47.4373	121.8337	20.75	2.0
12/14/2005	47.5340	122.0518	17.80	2.3
12/31/2005	47.3310	122.0107	18.75	2.0
2/9/2006	47.4800	121.8090	8.40	2.9
5/24/2006	47.5267	121.8075	13.43	2.2
7/7/2006	47.4348	121.8012	20.01	2.4
8/27/2006	47.5370	121.9790	18.66	2.4
9/7/2006	47.4262	121.8212	19.06	2.1
9/29/2006	47.3073	122.2357	20.54	2.3
9/1/2007	47.0652	122.1255	13.72	2.1
9/8/2007	47.4762	121.9950	22.36	2.1
9/18/2007	47.5485	122.0857	38.27	2.3
9/29/2007	47.4362	121.7955	18.46	2.2
10/22/2007	47.4622	121.8390	23.20	2.1
2/5/2008	47.4032	122.0670	11.32	2.6

km – kilometers
Unk – Unkown?

APPENDIX 9

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

RECEIVED
DEPARTMENT OF ECOLOGY
DEC-4 73 060969
CASH ___ OTHER ___ NONE ___

Name ROBERT S. GREENWOOD

Address 30416 - 227th Ave. S.E.

Kent, Wash. Zip Code 98031

(Short Form) Ø9

Phone No. 886-2281

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: Beginning at the southeast corner of said government lot 1; thence north along the east line thereof 210.90 feet thence north 45 degrees 00' west 421.84 feet; thence north 14 degrees 27' west 178.20 feet; thence north 12 degrees 29' east 235.50 feet; thence north 16 degrees 58' west 160 feet to the true point of beginning; thence continuing north 16 degrees 58' west 40 feet; thence north 60 degrees 02' 13" east 180.43 feet, more or less, to the east line of said government lot 1; thence on said east line south to a point which is north 65 degrees 26' 32" east 191.26 feet from the true point of beginning; thence south 65 degrees 26' 32" west 191.26 feet to the true point of beginning. (TOGETHER with shore lands of the second class adjoining.)

If located within the limits of a recorded platted property:

Lot four (4) Block three (3) of Lochow's Lake Sawyer tracts, Div. No. 2
(Give name of plat or addition)

In addition, please indicate Sec. 9 T. 21 N., R. 6 E ~~W~~ W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned
Water Right Claim Registry No.

JAN 16 74 048696

Director, Department of Ecology
John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Robert S Greenwood

Date Dec 2, 1973

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

09-A-d

Groundwater Data Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471945122022201

General Location Details:

Unique Well ID: S_471945122022201
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 09 QS: NE/NE
Local Number: 21N/06E-09A01
City: Black Diamond Zipcode: 98042
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 27 Feet
Surface Elevation: 500 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: Greenwood

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

9-A-1

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 23 1974 109794
CASH OTHER NONE

Name GARRY E. & FRANCES J. WILLIS (Short Form) 09

Address 30436 - 224 AVE. S.E.

KENT, WASH Zip Code 98031 Phone No. 939-0477

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water
If surface water, please indicate source; give name if known.

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: BEGINNING AT THE NORTHWEST CORNER OF SAID GOVERNMENT LOT 1; THENCE ALONG THE NORTH LINE THEREOF, SOUTH 88°58'00" EAST 30 FEET TO THE EASTERLY MARGIN SOUTH 6°04'00" EAST 342.34 FEET; THENCE SOUTH 88°58'00" EAST 148.38 FEET; THENCE SOUTH 48°07'00" EAST 125.20 FEET TO THE TRUE POINT OF BEGINNING OF THE TRACT OF LAND HEREIN DESCRIBED; THENCE CONTINUING SOUTH 48°07'00" EAST 135.20 FEET; THENCE SOUTH 43°27'30" WEST 179.06 FEET TO THE NORTHERLY MARGIN OF SAID ESTABLISHED COUNTY ROAD; THENCE NORTHWESTERLY ALONG SAID NORTHERLY MARGIN 135.00 FEET, MORE OR LESS, TO A POINT WHICH BEARS SOUTH 46°43'00" WEST FROM THE TRUE POINT OF BEGINNING; THENCE NORTH 46°43'00" EAST 171.56 FEET TO THE TRUE POINT OF BEGINNING; ALSO KNOWN AS LOTS 6 AND 7 IN BLOCK 4 OF LOCHOWS LAKE SAWYER TRACTS, DIVISION NO. 2.

If located within the limits of a recorded platted property:

Lot 6 AND 7 Block 4 of LOCHOWS LAKE SAWYER TRS. #2
(Give name of plat or addition)

In addition, please indicate Sec. 9 T. 21 N., R. 6 E. W.M.

County in which lands are located: KING County

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered: SEP 4 74

This has been assigned Water Right Claim Registry No. 15253

Director, Department of Ecology: John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Garry E. & Frances J. Willis

Date May 18, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

09-A-09

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
AUG 13 73 045738
CASH ___ OTHER ___ NONE ✓

Water Right Claims Registration

Water Right Claim

Name Edward M. Shipman (Short Form) 09

Address 30602 - 224th S.E.

Kent, Wash. Zip Code 98031 Phone No. TU6-2626

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: Lots 8-9 of block 4 of Lochows Lake Sawyer TRS #2. Unrec community prop val incl in Lots val of undeeded STs + Alleys incl in Adj Lot Val Less C+M rgTs

If located within the limits of a recorded platted property:

Lot 8-9 Block 4 of Lochows Lake Sawyer TRS #2
(Give name of plat or addition)

In addition, please indicate Sec. 9 T. 21 N. R. 6 E E/W.W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered: This has been assigned Water Right Claim Registry No.

SEP 10 73 03 5020

Director, Department of Ecology John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Edward M. Shipman

Date August 10, 1973

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $20.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

09-A-03

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
AUG 15 73 046235
CASH ___ OTHER X NONE
recd 8/14 10/9

Water Right Claims Registration

Water Right Claim

Name John A. URQUHART

Address 30614 224th S.E.

KENT, WASH. Zip Code 98031

(Short Form) 09

Phone No. TU6-2601

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground-Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used:

Lot 1 Sec. 9 Twp 21N Rge 6E W.M.
IN King Co.
ALSO Known as Lots 10 & 11 BLK 4
KOCHOWS LAKE SAWYER TRACTS Div. #2
AN unrecorded PLAT.

If located within the limits of a recorded platted property:

Lot ___ Block ___ of ~~EOCH~~ (Give name of plat or addition)

In addition, please indicate Sec. 9 T. 21 N., R. 6 E/W, W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered ___ This has been assigned Water Right Claim Registry No.

OCT 1 1973 / 366

Director, Department of Ecology John Biggs

I hereby swear that the above information is true and accurate, to the best of my knowledge and belief.

X John A Urquhart

Date 8/11/73

If claim filed by designated representative, print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $200 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to: Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

09-A-04

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 25 74 141814
CASH ☑ CHECK ☐ NONE

1. NAME Eino O. & Allene T. Johnson

ADDRESS 30474-227 PLSE Lake Sawyer

PO Box 294 Black Diamond 98010 ZIP CODE PHONE NO 09

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground Water (SURFACE OR GROUND WATER)

W.R.I.A. (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS well

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 10 GPM PRESENTLY USED 10 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED PRESENTLY USED (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: None - For 12½ yrs.

4. DATE OF FIRST PUTTING WATER TO USE: MONTH June YEAR 56 thru ½-69

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: FEET AND

FEET FROM THE CORNER OF SECTION

BEING WITHIN OF SECTION 9 T. 21 N., R. 6 E (E or W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 15 BLOCK 3 OF

Lochows Lake Sawyer Trs #2 unrec (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Lat 15 Block 3

Lochows Lake Sawyer - Trs #2 Urec

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic Supply

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

MAR 375133465

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Allene T. Johnson

DATE June 24 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/ OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

09-A-05

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 28 1974 8 15
C.S.R. ✓ NONE

1. NAME Elno O. & Allene T. Johnson

ADDRESS 30474-227 Pl. SE Lake Sawyer

P.O. Box 294, Black Diamond ZIP CODE 98010 PHONE NO.

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground Water (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS Well

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 10 GPM PRESENTLY USED 10 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED PRESENTLY USED (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continuous

4. DATE OF FIRST PUTTING WATER TO USE: MONTH June YEAR 1956

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: FEET AND

FEET FROM THE CORNER OF SECTION

BEING WITHIN OF SECTION 9 T 21 N., R. 6 E (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 15 BLOCK 3 OF

Lochaws Lake Sawyer Tts "2" Unrec
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Lot 15 Block 3.

Lochaws Lake Sawyer Tts "2" Unrec

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic Supply

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

AP 315133613

DIRECTOR, DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Allene T. Johnson

DATE June 24 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

09-A-06

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

Name Gerald Breese & CHARLES F. DAY

Address 22513 - S.E. 304th Pl.

KENT, WASH. Zip Code 98031

(Short Form) 09

Phone No. 432-4844

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: _____

If located within the limits of a recorded platted property:

Lot E *36 & 37 Block 4 of LOCHOW'S LAKE SAWYER ADD.
(Give name of plat or addition)

In addition, please indicate Sec. 9 T. 21 N., R. 6 E/W, W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered FEB 1 1975

This has been assigned Water Right Claim Registry No. 121690

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Gerald D. Breese

Date JUNE 23, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

09-A-1807

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
No. 1374033893
CASH ___ OTHER ___ NONE ___

Water Right Claims Registration

Water Right Claim

Name Frederick M. Hart

Address 30404 - 225th Ave. SE

Kent Zip Code 98031 Phone No. 886-2263

Ø9

1) Source from which the right to take and make use of water is claimed. ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: Beginning at northeast corner of Government Lot 1 thence along the north line of said Government Lot, south 88°58' east 416.79 feet, to the true point of beginning of the tract; thence continuing along said north line, south 88°58'00" east 207.84 feet; thence south 7°32' west 43.00 feet; thence south 78°06'43" west 208.12 feet to a point south 1°02'00" west from the true point of beginning; thence north 1°02'00" east 89.29 feet to the true point of beginning.

If located within the limits of a ~~recorded~~ unrecorded platted property:

Lot 1 Block 2 of Lochow's Lake Sawyer Tracts Division No. 2 (Give name of plat or addition)

In addition, please indicate Sec. 9 T. 21 N., R. 6 E. W.W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

72575

~~[illegible]~~ 07257

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Frederick M Hart

Date March 17, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☒ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

09-A-08

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
1974 033692
CASH ___ OTHER ___ NONE ___

Water Right Claims Registration

Water Right Claim

Name Frederick M. Hart

Ø9

Address 30404-225th Ave. SE

Kent Zip Code 98031

Phone No. 886-2263

1) Source from which the right to take and make use of water is claimed. X Surface Water ☐ Ground Water

If surface water, please indicate source, give name if known:

Lake Sawyer

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☐ Domestic ☐ Stockwatering X Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: Beginning at northeast corner of Government Lot 1 thence along the north line of said Government Lot, south 88°58' east 416.79 feet, to the true point of beginning of the tract; thence continuing along said north line, south 88°58'00" east 207.84 feet; thence south 7°32" west 43.00 feet; thence south 78°06'43" west 208.12 feet to a point south 1°02'00" west from the true point of beginning; thence north 1°02'00" east 89.29 feet to the true point of beginning.

If located within the limits of a ~~recorded~~ unrecorded platted property:

Lot 1 Block 2 of Lochow's Lake Sawyer Tracts, Division No. 2
(Give name of plat or addition)

In addition, please indicate Sec. 9 T. 21 N., R. 6 E. E/W.W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No. 73571

~~Acc 91407257~~

Director, Department of Ecology

John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Frederick M Hart

Date March 17, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to.
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

09-A-09

State of Washington Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 20 1974 128907
CASH OTHER NONE

09

Water Right Claims Registration

Water Right Claim

Name ~~Sadie Mihalos~~

Address 626 13th Ave. E Apt 0

~~Seattle, Wa~~ Zip Code 98112

Phone No. EA 3-5025 (2)

1) Source from which the right to take and make use of water is claimed: [X] Surface Water [ ] Ground Water

If surface water, please indicate source: give name if known:

LAKE Sawyer

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

[X] Domestic [ ] Stockwatering [ ] Irrigation (lawn and garden) [ ] Other Use (specify) _____

3) Legal description of lands on which water is used: That portion of government lot one (1), ~~section nine (9), township twenty one (21) north, range six (6) east, W.M.,~~ described as follow: Beginning at the southeast corner of said government lot 1; thence north along the east line thereof of 210.90 feet; thence north ~~45 00' west 121.81 feet; thence north 14 27' west 178.20 feet; thence north 12 29' east 193 feet to the true point of beginning; thence continuing north 12 29' east 42.5 feet; thence south 87 11' east 200.40 feet, more or less, to the east line of said government lot 1; thence southerly along said east line to a point which is south 82 21' east 194.01 feet from the true point of beginning; thence north 82 21' west 194.01 feet to the true point of be~~ ginning; (Being known as lot nine (9) block three (3) Lochow's Lake Sawyer Tracts, Division No. 2 according to the unrecorded plat thereof: Together i

If located within the limits of a recorded platted property: with shore lands of the second class adjoining

Lot 9 Block 3 of L'chow's Lake Sawyer Tracts Division 2

(Give name of plat or addition)

In addition, please indicate Sec. 9 T. 21 N., R. 6 E E/W. W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

JAN 15 75 106136

Director, Department of Ecology John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Sadie Mihalos

Date June 18-1974

If claim filed by designated representative print or type full name and mailing address of agent below.

[ ] Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

09-A-11

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 25 7304 1696
CASH ___ OTHER ___ NONE ✓

WATER RIGHT CLAIM

1. NAME VERNON E OR MARY L CROWE
ADDRESS 5343 S MOORE ST
SEATTLE WASH ZIP CODE 98178

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: SURFACE (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS ___

B. IF SURFACE WATER, THE SOURCE IS LAKE SAWYER

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:
A. QUANTITY OF WATER CLAIMED 10 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 10 GPM
B. ANNUAL QUANTITY CLAIMED 1 ACRE FOOT (ACRE FEET PER YEAR) PRESENTLY USED 1 ACRE FOOT
C. IF FOR IRRIGATION, ACRES CLAIMED ___ PRESENTLY IRRIGATED ___
D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: CONTINUOUSLY

4. DATE OF FIRST PUTTING WATER TO USE: MONTH JUNE YEAR 1957

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: NORTH FEET WEST AND CORNER FEET OF LOT FROM THE DESCRIBED BELOW CORNER OF SECTION ___
BEING WITHIN ___ OF SECTION 9 T. 21 N., R. 6 (E. ~~OR W.~~) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 10 BLOCK 2 OF LOCHAWS LAKE SAWYER TRS #2
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Beginning at NW Corner Lot Lot S88°38' E along N LINE 30' to a point on Easterly Margin of 16 Road S6°04' E 141.44' S88°38' E 159.31' S59°42' E 465.86' S77°31' E 340.00' to Beginning of Tract S77°31' E 42.45' N12°29' E 74.49' N16°58' W 223.34' N34°27' W 74.99' S24°30' W 446.62' S13°07' E 304.42' To point of Beginning COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC SUPPLY

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: RIPARIAN

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE:
DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
JUL 13 7303 1521
DIRECTOR, DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF
X Vernon E. Crowe
DATE June 21 1973
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

09-A-16

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 20 74 128874
CASHIER'S STAMP
09

Name Sadie Mihalas

Address 626 13th Ave E., Apt 9

Seattle, WA Zip Code 98112

Phone No. EA2-5025

1) Source from which the right to take and make use of water is claimed: ☑ Surface Water ☐ Ground Water

If surface water, please indicate source; give name if known:

LAKE SAWYER
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☑ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: That certain portion of government lot 1 section 9, township 21 (21) north, range 6 six east WM described as follows: Beginning at the southeast corner of said government lot (1) thence north along the east line thereof 210.90 feet; thence north 45° west 421.84 feet; thence north 14 degrees 27' west 178.20 feet; thence north 12° 29' east 156.50 feet to the true point of beginning; thence north 12° 29 east 42.5 feet; thence south 82° 21' east 194.01 feet, more or less, to the east line of said government lot 1; thence southerly along said east line to a point from which the true point of beginning bears north 77 degrees 31' west; thence north 77° 31' west 164.60 feet to the true point of beginning; Being known as lot 10 (ten) block three (3) Lochon's Lake, Sawyer Tracts, Division #2 acc. to the unrecorded plat thereof together with shorelands of the second class adjoining said tract

If located within the limits of a recorded platted property: Lot 10 Block 3 of Lochon's Lake, Sawyer Tracts Div #2 (Give name of plat or addition)

In addition, please indicate Sec. 9 T. 21 N., R. 6E E/W, W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered JAN 13 1975

This has been assigned Water Right Claim Registry No. 081-08

John Biggs
Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Sadie Mihalas

Date June 18-1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $5.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

09-A-12

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

MAIL ADDRESS
2343 STEVENSON AVE.
ENUMCLAW, WA.
98022

1. NAME HOWARD F. PARKS
ADDRESS 30454 227 PL. S.E.
KENT, WA. ZIP CODE 98031

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: SURFACE WATER (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)
DEPARTMENT OF ECOLOGY
JUN 26 74 139117
CASH OTHER / NONE

A. IF GROUND WATER, THE SOURCE IS
B. IF SURFACE WATER, THE SOURCE IS LAKE SAWYER

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:
A. QUANTITY OF WATER CLAIMED 10 GPM PRESENTLY USED 10 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)
B. ANNUAL QUANTITY CLAIMED 1 ACRE FOOT PRESENTLY USED 1 ACRE FOOT (ACRE FEET PER YEAR)
C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED
D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: CONTINUOUSLY

4. DATE OF FIRST PUTTING WATER TO USE: MONTH JULY YEAR 1945

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: LAKE SHORE ~~FEET~~ PROPERTY LINE ~~AND~~
FEET FROM THE CORNER OF SECTION
BEING WITHIN OF SECTION 9 T. 21 N., R. 6 (E. OR W.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: PORTION OF GOVT. LOT 1, SEC 9, TOWN 21 NORTH, RANGE 6 EAST, W.M. IN KING COUNTY WASH. DESCRIBED AS FOLLOWS: BEGINNING AT SE CORNER OF SAID GOVT. LOT 1 THENCE NORTH ALONG EAST LINE 210.90 FEET; THENCE NORTH 45°0' WEST 421.84 FEET THENCE NORTH 14°27' WEST 178.20 FEET TO THE TRUE POINT OF BEGINNING, THENCE NORTH 12°29' EAST 110.50 FEET THENCE SOUTH 77°31' EAST 164.60 FEET, MORE OR LESS TO THE EAST LINE OF SAID GOVT. LOT; THENCE SOUTHERLY ALONG SAID EAST LINE TO A POINT FROM WHICH THE TRUE POINT OF BEGINNING BEARS SOUTH 80°24' WEST; THENCE SOUTH 80°24' WEST 174.23 FEET MORE OR LESS, TO THE TRUE POINT OF BEGINNING.
COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC SUPPLY

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: RIPARIAN

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED THIS HAS BEEN ASSIGNED
WATER RIGHT CLAIM REGISTRY NO.
MAR 1 0 75 144459
[signature]
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
X Howard F. Parks
DATE 6/17/74
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

09-A-13

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED JAN 7 1974 — WSR ___ OTHER ___ NONE ___

NAME George R. Sanchez & LeRuby D. Roten Sanchez

ADDRESS 30700 229th Pl. S.E. ZIP CODE 98031
Kent, Washington

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Surface (SURFACE OR GROUND WATER) W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS ___

B. IF SURFACE WATER, THE SOURCE IS Lake Sawyer

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 10 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 10 GPM

B. ANNUAL QUANTITY CLAIMED 1 Acre-foot (ACRE FEET PER YEAR) PRESENTLY USED 1 Acre-foot

C. IF FOR IRRIGATION, ACRES CLAIMED ___ PRESENTLY IRRIGATED ___

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: MONTH Continuously YEAR 1949

4. DATE OF FIRST PUTTING WATER TO USE: MONTH Jan YEAR 1949

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 935 FEET South AND 10 FEET West FROM THE Northeast CORNER OF SECTION 9

BEING WITHIN SE ¼ of NE¼ of NE ¼ OF SECTION 9 T. 21 N..R. 6 E (E.ORW.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 1 BLOCK 1 OF Lochow's Lake Sawyer Tracts Unrecorded
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Beg at the quarter Sec cor common to Sec 9 & 10, Twn 21N, Rg 6E WM, King Co Wn; Th N 1,530.9ft; Th N 45° W 125.94ft to a Pt on the Nly ln of a 40 foot roadway, being TPOB; Th N 45° W 80ft; Th N 68° 48' E 111.0ft; Th S 59° 16' E 45ft; Th S 49° 14' E 113.10ft to TPOB; Together with all uplands lying NEly of foregoing tract & between the NEly & SEly ln of sd tract produced NEly to Lake Sawyer-

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic Supply

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED ___ THIS HAS BEEN ASSIGNED ___ ENTRY NO. ___

For 53105248

Jan Pitt

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X LeRuby D. Sanchez
X George R. Sanchez

DATE 1-3-74

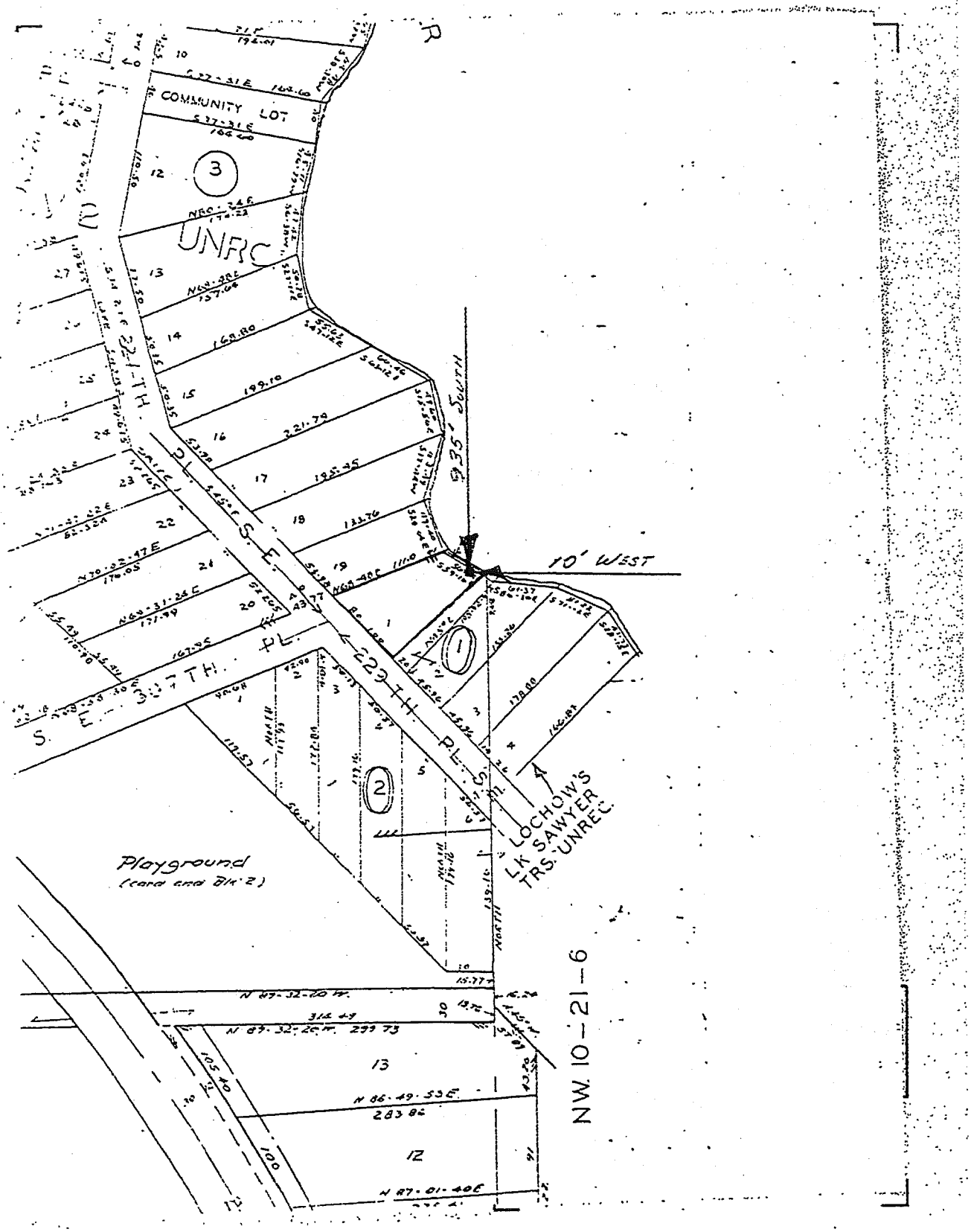
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO DEPARTMENT OF ECOLOGY WATER RIGHT CLAIMS REGISTRATION

MUST ACCOMPANY THIS WATER RIGHT CLAIM

09-A


COMMUNITY LOT
UNRC
221-TH. PL. S.E.
229TH. PL. S.E.
S.E. 307TH. PL.
935' SOUTH
10' WEST
LOCHOW'S
LK SAWYER
TRS. UNREC.
Playground
(card and Blk 2)
NW. 10-21-6

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 13 74 122474
CASH OTHER HOME

1. NAME Euel O. Atkinson

ADDRESS 9134-48th. Ave. So.

Seattle, Washington ZIP CODE 98118

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: LAKE SAWYER (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS

B. IF SURFACE WATER, THE SOURCE IS LAKE SAWYER

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED ONE GPM (CUBIC ~~FEET PER SECOND~~ OR GALLONS PER MINUTE) PRESENTLY USED ONE GPM

B. ANNUAL QUANTITY CLAIMED 1.66 AFPY (ACRE FEET PER YEAR) PRESENTLY USED 1.66 AFPY

C. IF FOR IRRIGATION, ACRES CLAIMED — PRESENTLY IRRIGATED —

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: —

4. DATE OF FIRST PUTTING WATER TO USE: MONTH — YEAR —

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: — FEET — ~~AND~~ 110 FT

FEET — FROM THE NE. CORNER OF ~~SECTION~~ LOT 8

BEING WITHIN OF SECTION 9, T. 21 N., R. 6E (E.OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 8 BLOCK 2 OF

LOCHOW'S LAKE SAWYER TRACTS
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: See attached sheets.

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: HOME, LAWN AND GARDENS

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: CHAPTER #284, LAWS OF 1969

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED FEB 11 75 THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO. 22

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Euel O. Atkinson

DATE 6-11-1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

09-1-15

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

RECEIVED
DEPARTMENT OF ECOLOGY
SEP 26 73 052530
CASH ___ OTHER ✓ NONE ___

Name C. M. FARLEY

(Short Form) Ø9

Address 30625 - 224 AVE. S.E.
KENT, WASH. Zip Code 98031

Phone No. TU 6-2494

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water
If surface water, please indicate source; give name if known:

_____
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:
✓ ☒ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☒ Other Use (specify) _____

3) Legal description of lands on which water is used: _____

[illegible] of Government [illegible] Section [illegible] Township [illegible] North [illegible] East [illegible]

[illegible] the North [illegible] said Government Lot 1; thence [illegible] 30.00 feet [illegible] the Easterly margin [illegible] County Road, thence South [illegible] East, [illegible] said Easterly margin 347.34 feet, thence South 86°55'00" East 148.[illegible] feet; thence South 48°07'00" East 493.00 feet to the true point of beginning of the tract herein described; thence continuing South 48°07'00" East 240.00 feet; thence South 41°53'00" West 180.00 feet to the Easterly margin of said established County Road; thence North 48°07'00" West, along said Easterly margin, 240.00 feet; thence North 41°53'00" East 180.00 feet to the true point of beginning; (ALSO KNOWN AS Lots 12, 13, 14 and 15 in Block 4 of Luchow's Lake Sawyer Tracts, Division No. 2, an unrecorded plat); situate in the County of King, State of Washington.

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned
Water Right Claim Registry No.

Dec 1973 044621

Director, Department of Ecology [signature]

I hereby swear that the above information is true and accurate to the best of my knowledge and belief

X C. M. Farley

Date 9-25-73

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

09-A ~~[illegible]~~ 16

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471938122022401

General Location Details:

Unique Well ID: S_471938122022401
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 09 QS: NE/NE
Local Number: 21N/06E-09A02
City: Black Diamond Zipcode: 98042
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 39 Feet
Surface Elevation: 525 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: Farley C. M.

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

9-A-16

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

JAN-7 74 052322

CASH ___ OTHER ___ NO. ___

Name Fred L Stark

Address 30650 224 S.E.

Kent, Wash Zip Code 98031

(Short Form) X 09

T06-1144

Phone No. [redacted]

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____ (River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: Portion of Govt Lot one - in Section nine Township 21 north - range six - block four - Lots 16-17-18-19 Lochaw's Lake Sawyer Tracts - Division No 2 - Unrecorded King County.

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____ (Give name of plat or addition)

In addition, please indicate Sec. 9 T. 21 N.R. 6E E/W.W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

Fee 074052322

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X [signature]

Date Dec. 31 1973

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☒ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

09-A 17

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

165319

Please print, sign and return to the Department of Ecology

21-6E-9C ✓

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W184867

Unique Ecology Well ID Tag No. AKF-934

Water Right Permit No.

Property Owner Name Jim Estep

Well Street Address 22308 SE 305th ST

City BL Diamond Area County King

Location NE 1/4-1/4 NW 1/4 Sec 9 Twn 21 R 6 EWM or WWM ☒ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 092106-9056

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened — *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 99 ft. Depth of completed well 98 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 98 ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by ___ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level CO ft. below top of well Date 1-26-05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 30 gal./min. with stem set at 93 ft. for 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Brown clay - gravel	3	12
Hardpan - Tan	12	85
Sand-gravel-brown-water	85	98
Hardpan - Tan	98	99

RECEIVED
JAN 31 2005
DEPT OF ECOLOGY

Start Date 1-25-05 Completed Date 1-26-05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature Brad Johnson

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co., Inc

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSOC207QM Date 1-26-05

IF TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-B-1

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy 7786

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent W127854
UNIQUE WELL I D # AFS-830
Water Right Permit No 98038

(1) OWNER Name Jon Burt Address 21230 SE 270th, Maple Valley, WA

(2) LOCATION OF WELL County King NE 1/4 NW 1/4 Sec 9 T 21 N R 6E WM

(2a) STREET ADDRESS OF WELL (or nearest address) 30501 LK Sawyer Rd SE

TAX PARCEL NO 092106-9030 21-6E-9C

(3) PROPOSED USE ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK Owner's number of well (if more than one)
☒ New Well Method ☐ Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☒ Rotary ☐ Jetted ☐ Decommission

(5) DIMENSIONS Diameter of well 6 inches
Drilled 98 feet Depth of completed well 98 ft

(6) CONSTRUCTION DETAILS
Casing Installed
☒ Welded 6" Diam from 0 ft to 98 ft
☐ Liner installed Diam from ft to ft
☐ Threaded Diam from ft to ft

Perforations ☐ Yes ☒ No
Type of perforator used
SIZE of perforations in by in
perforations from ft to ft

Screens ☐ Yes ☒ No ☐ K Pac Location
Manufacturer's Name
Type Model No
Diam Slot Size from ft to ft
Diam Slot Size from ft to ft

Gravel/Filter packed ☐ Yes ☒ No ☐ Size of gravel/sand
Material placed from ft to ft

Surface seal ☒ Yes ☐ No To what depth? 18 ft
Material used in seal bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP Manufacturer's Name
Type H P

(8) WATER LEVELS Land-surface elevation above mean sea level ft
Static level 80 ft below top of well Date 10-17-2000
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom?
Yield gal /min with ft drawdown after hrs
Yield gal /min with ft drawdown after hrs
Yield gal /min with ft drawdown after hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal /min with ft drawdown after hrs
Airtest 30 gal/min with 7 ft drawdown after 2 hrs
Artesian flow g p m Date
Temperature of water Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Surface	0	3
Sand-gravel-brown	3	7
Hardpan-brown	7	48
Hardpan-gray	48	90
Sand-gravel-brown	90	98
Water		
Hardpan-brown	98	—

RECEIVED
OCT 23 2000
DEPT OF ECOLOGY

Work Started 10-12-2000 Completed 10-17-2000

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name Brad Johnson License No 0233
(Licensed Driller/Engineer)

Trainee Name License No
Drilling Company Johnson Drilling Co., Inc
(Signed) License No 0233
(Licensed Driller/Engineer) 98055
Address 19415 108th Ave SE, Renton, WA
Contractor's Registration No JOHNSOC207QM Date 10-17-2000

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407-6600 The TDD number is (360) 407-6006

ECY 050-1-20 (11/98)

09-B

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent AW127863
UNIQUE WELL I.D. # AFJ-805
Water Right Permit No. 98042

(1) OWNER: Name Mike Hayes Address 24023 196th Ave SE, Covington

(2) LOCATION OF WELL: County King NE 1/4 NW 1/4 Sec 9 T 21 N.R. 6E WM.

(2a) STREET ADDRESS OF WELL: (or nearest address) 30510 223rd Pl SE, Bl Diamond
TAX PARCEL NO.: 092106-9060 21-6E-9C

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
☒ New Well Method: ☐ Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☒ Rotary ☐ Jetted ☐ Decommission

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 120 feet. Depth of completed well 120 ft.

(6) CONSTRUCTION DETAILS
Casing Installed:
☒ Welded 6" Diam. from 0 ft. to 120 ft.
☐ Liner installed ____ Diam. from ____ ft. to ____ ft.
☐ Threaded ____ Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand ____
Material placed from ____ ft. to ____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 75 ft. below top of well Date 8-15-2000
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 35 gal./min. with 25 ft. drawdown after 2 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	3
Sand-gravel-brown	3	7
Hardpan-brown	7	33
Hardpan-gray	33	89
Sand-gravel-water gray	89	120
Hardpan-gravel-gray	120	—

RECEIVED
AUG 29 2000
Department of Ecology

Work Started 8-8-2000 Completed 8-15-2000

WELL CONSTRUCTION CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson License No. 0233
(Licensed Driller/Engineer)
Trainee Name ____ License No. ____
Drilling Company Johnson Drilling Co., Inc
(Signed) [signature] License No. 0233
(Licensed Driller/Engineer)
Address 19415 108th Ave SE, Renton 98
Contractor's Registration No. JOHNSOC207** Date 8-15-2000

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

09-13-A

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy Driller's Copy 97154

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent W127880
UNIQUE WELL I D # AGA-167
Water Right Permit No 21-6E-9Q 98038

(1) OWNER Name Steve & Caroline Courforti Address 25609 243rd CT SE, Maple Valley, WA

(2) LOCATION OF WELL County King SW 1/4 SE 1/4 Sec 9 T 21 N R 6E WM

(2a) STREET ADDRESS OF WELL (or nearest address) 21295 SE 313th ST, Black Diamond

TAX PARCEL NO 092106-9029

(3) PROPOSED USE ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK Owner's number of well (if more than one) ____
☒ New Well Method ☐ Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☒ Rotary ☐ Jetted ☐ Decommission

(5) DIMENSIONS Diameter of well 6 inches
Drilled 97 feet Depth of completed well 97 ft

(6) CONSTRUCTION DETAILS
Casing Installed
☒ Welded 6" Diam from 0 ft to 97 ft
☐ Liner installed " Diam from ft to ft
☐ Threaded " Diam from ft to ft

Perforations ☐ Yes ☒ No
Type of perforator used
SIZE of perforations in by in
perforations from ft to ft

Screens ☐ Yes ☒ No ☐ K Pac Location
Manufacturer's Name
Type Model No
Diam Slot Size from ft to ft
Diam Slot Size from ft to ft

Gravel/Filter packed ☐ Yes ☒ No ☐ Size of gravel/sand
Material placed from ft to ft

Surface seal ☒ Yes ☐ No To what depth? 18 ft
Material used in seal bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP Manufacturer's Name
Type H P

(8) WATER LEVELS Land-surface elevation above mean sea level ft
Static level 60 ft below top of well Date 6-21-01
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom?
Yield gal /min with ft drawdown after hrs
Yield gal /min with ft drawdown after hrs
Yield gal /min with ft drawdown after hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal /min with ft drawdown after hrs
Airtest 30 gal /min with 15 ft drawdown after 2 Hrs
Artesian flow g p m Date
Temperature of water Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Surface	0	3
clay-gravel- brown	3	8
Hardpan- brown	8	53
Sand-gravel- brown	53	79
Sand-gravel- brown Water	79	97
Clay-gravel- brown	97	—

RECEIVED
JUN 25 2001
DEPT OF ECOLOGY

Work Started 6-15-01 Completed 6-21-01

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name Brad Johnson License No 0233
(Licensed Driller/Engineer)
Trainee Name License No
Drilling Company Johnson Drilling Co, Inc
(Signed) (Licensed Driller/Engineer) License No 0233
Address 19415 108th Ave SE, Renton, WA 98055
Contractor's Registration No JOHNSDC207QM Date 6-21-01

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407-6600 The TDD number is (360) 407-6006

ECY 050-1-20 (11/98) 97154

09-B-4

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

90363

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W128904

UNIQUE WELL I D # AFJ-827

Water Right Permit No 98042

(1) OWNER Name Steven Weier Address 20226 SE 290th Pl., Kent, WA

(2) LOCATION OF WELL County King SW 1/4 SE 1/4 Sec 9 T 21 N R 6E WM

(2a) STREET ADDRESS OF WELL (or nearest address) 30605 229th Ave SE (Covington Area)

TAX PARCEL NO 092106-9042 21-6E-9Q

(3) PROPOSED USE
- [X] Domestic
- [ ] Industrial
- [ ] Municipal
- [ ] Irrigation
- [ ] Test Well
- [ ] Other
- [ ] DeWater

(4) TYPE OF WORK Owner's number of well (if more than one)
- [X] New Well
- [ ] Deepened
- [ ] Reconditioned
- [ ] Decommission

Method
- [ ] Dug
- [ ] Bored
- [ ] Cable
- [ ] Driven
- [X] Rotary
- [ ] Jetted

(5) DIMENSIONS Diameter of well 6 inches
Drilled 92 feet Depth of completed well 92 ft

(6) CONSTRUCTION DETAILS
Casing Installed
- [X] Welded 6" Diam from 0 ft to 92 ft
- [ ] Liner installed ____" Diam from ____ ft to ____ ft
- [ ] Threaded ____" Diam from ____ ft to ____ ft

Perforations [ ] Yes [X] No
Type of perforator used
SIZE of perforations ____ in by ____ in
____ perforations from ____ ft to ____ ft

Screens [ ] Yes [X] No [ ] K-Pac Location
Manufacturer's Name
Type Model No
Diam ____ Slot Size ____ from ____ ft to ____ ft
Diam ____ Slot Size ____ from ____ ft to ____ ft

Gravel/Filter packed [ ] Yes [X] No [ ] Size of gravel/sand
Material placed from ____ ft to ____ ft

Surface seal [X] Yes [ ] No To what depth? 18 ft
Material used in seal bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP Manufacturer's Name
Type H P

(8) WATER LEVELS Land surface elevation above mean sea level ____ ft
Static level 60 ft below top of well Date 2-14-2001
Artesian pressure ____ lbs per square inch Date
Artesian water is controlled by
(Cap, valve, etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom?
Yield ____ gal /min with ____ ft drawdown after ____ hrs
Yield ____ gal /min with ____ ft drawdown after ____ hrs
Yield ____ gal /min with ____ ft drawdown after ____ hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test ____ gal./min with ____ ft drawdown after ____ hrs
Airtest 20 gal /min with 15 ft drawdown after 2 1/2 hrs
Artesian flow ____ g p m Date
Temperature of water ____ Was a chemical analysis made? [ ] Yes [X] No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Surface	0	3
Sand-gravel-brown	3	8
Hardpan-brown	8	29
Hardpan-tan	29	65
Sand-gravel-brown	65	70
Hardpan-brown	70	85
Sand-gravel-brown	85	92
Water		
Hardpan-brown	92	—

RECEIVED
FEB 20 2001
DEPT OF ECOLOGY

Work Started 2-10-2001 Completed 2-14-2001

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name Brad Johnson License No 0233
(Licensed Driller/Engineer)

Trainee Name License No

Drilling Company Johnson Drilling Co., Inc.

(Signed) License No 0233
(Licensed Driller/Engineer) 98055

Address 19415 108th Ave SE, Renton, WA

Contractor's Registration No JOHNSDC207QA Date 2-14-2001

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407-6600 The TDD number is (360) 407-6006

ECY 050-1-20 (11/98) 90363

69-6-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W127862 ✓
UNIQUE WELL I.D. # AFJ-804
Water Right Permit No. 98042

(1) OWNER: Name Dale Dykeman Address 19419 SE 299th Pl, Kent, WA

(2) LOCATION OF WELL: County King SW 1/4 NE 1/4 Sec 9 T 21 N.R. 6E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 21225 SE 315th St, Bl. Diamond
TAX PARCEL NO.: 092106-9032 21-6E-9G

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
☒ New Well Method: ☐ Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☒ Rotary ☐ Jetted ☐ Decommission

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 119 feet. Depth of completed well 119 ft.

(6) CONSTRUCTION DETAILS
Casing Installed:
☒ Welded 6" Diam. from 0 ft. to 119 ft.
☐ Liner installed ____ Diam. from ____ ft. to ____ ft.
☐ Threaded ____ Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand ____
Material placed from ____ ft. to ____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 40 ft. below top of well Date 8-8-2000
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 20 gal./min. with 30 ft. drawdown after 2 1/2 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	4
sand-gravel-brown	4	6
Hardpan-tan	6	27
Hardpan-gray	27	88
Sand-gravel-water-gray	88	119
Gravel-hardpacked-gray	119	—

RECEIVED
AUG 29 2000
Department of Ecology

Work Started 8-1-2000 Completed 8-8-2000

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson License No. 0233
(Licensed Driller/Engineer)
Trainee Name ____ License No. ____
Drilling Company Johnson Drilling Co, Inc
(Signed) Brad Johnson License No. 0233
(Licensed Driller/Engineer)
Address 8415 108th Ave SE, Renton, WA 98055
Contractor's Registration No JOHNSDC207GM Date 8-8-2000

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

09-6-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

271466

FILE: ORIG. & FIRST COPY - DEPT. OF ECOLOGY
SECOND COPY - OWNER; THIRD COPY - DRILLER

WATER WELL REPORT
STATE OF WASHINGTON

21/6E19C

START CARD NO. W252629
UNIQUE WELL ID BAC166
WATER RIGHT PERMIT NO

(1) OWNER NAME: SEAN DONOVAN ADDRESS: 4610 TACOMA AVE SUMNER 98390
(2) LOCATION OF WELL : County KING NE 1/4 NW 1/4 SEC 9 TWP 21N R 6E
(2a) STREET ADDRESS OF WELL (or nearest address): 30521 222ND WAY SE BLACK DIAMOND PARCEL#0921609030

(3) PROPOSED USE: DOMESTIC
(4) TYPE OF WORK: NEW WELL
METHOD: ROTARY

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 95'-5" feet. Depth of completed well 95'-5" ft.

(6) CONSTRUCTION DETAILS
Casing instld: 6 " Diam. From +1 ft. to 95'-5" ft.
Welded ☑ " Diam. From ft. to ft.
Liner ☐ " Diam. From ft. to ft.
Threaded ☐

Perforations: Yes ☐ No ☑
Type of perforator used
Size of perforations in. by in.
perforations from ft. to in.
perforations from ft. to in.
perforations from ft. to in.

Screens: Yes ☐ No ☑
Manufacturer's Name:
Type Model No.
Diam Slot size from ft. to ft.
Diam Slot size from ft. to ft.

Gravel packed Yes ☐ No ☑ Size of gravel?
Gravel packed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 18 ft.
Material used in seal BENTONITE CHIPS
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? Depth of Strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H. P.

(8) WATER LEVELS: Surface elev above mean sea level ft.
Static level 53 below top of well Date 07/06/07
Artesian pressure lbs. Per sq. in. Date
Artesian pressure is controlled by

(9) WELL TESTS: Pump test made? By Whom
Yield gal./min with ft. drawdown after hrs.
Yield gal./min with ft. drawdown after hrs.
Yield gal./min with ft. drawdown after hrs.
Recovery data:
Time Wtr Lvl. Time Wtr Lvl. Time Wtr Lvl.

Date of test: 7/6/2007
Bailer test gal./min with ft. drawdown after hrs.
Airtest 50 gal/min stem set at 93 ft. for 1 hrs.
Artesion flow gal/min Date
Temperature of water Was chemical analysis made? NO

.(10) WELL LOG OR DECOMMISSIONING PROCEDURE DESCRIPTION

MATERIAL	FROM	TO
BROWN SAND GRAVEL	0	49
BROWNSAND GRAVEL WATER	49	81
BOULDER	81	85
BROWN SAND GRAVEL COBBLES WATER	85	97
GREY CLAY GRAVEL	97	

RECEIVED
AUG 08 2007
Washington State
Department of Ecology

Work Started 07/05/07 Completed: 07/06/07

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Name: RICHARDSON WELL DRILLING COMPANY INC.
Address: P. O. BOX 44427 TACOMA WA 98444
(Signed) (Well Driller) Lic No. 2623
Contractor's Registration No. RICHAW*3210B DATE 7/24/07

09-G-3

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

ECOLOGY Original & 1st copy Ecology 2nd copy owner 3rd copy driller

Construction/Decommission (x in circle)
- ⊗ Construction
- ○ Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* _____

CURRENT Notice of Intent No W137583

Unique Ecology Well ID Tag No AGP 467

Water Right Permit No N/A

Property Owner Name William E Ruth

Well Street Address CRN OF 312TH ST & LAKE SAWYER RD SE

City MAPLE VALLEY County KING

Location SE 1/4 1/4 NE 1/4 Sec 9 Twn 21N R 6E (EWM) circle or one WWM

Lat/Long (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No 0921069033 ← doesn't exist

PROPOSED USE ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK Owner's number of well (if more than one) _____

☒ New Well ☐ Reconditioned *Method* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches drilled 103 ft

Depth of completed well 103 ft

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6 Diam from +3 ft to 0 ft

☐ Liner installed _____ Diam from 0 ft to 96 ft

☐ Threaded _____ Diam from _____ ft to _____ ft

Perforations ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in by _____ in and no of perfs _____ from _____ ft to _____ ft

Screens ☒ Yes ☐ No ☒ K Pac Location 92

Manufacturer's Name Johnson

Type Telescoping Model No _____

Diam 5 Slot Size 18 from 96 ft to 101 ft

Diam _____ Slot Size _____ from _____ ft to _____ ft

Gravel/Filter packed ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft to _____ ft

Surface Seal ☒ Yes ☐ No To what depth? 18 ft

Materials used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP Manufacturer's Name _____

Type _____ H P _____

WATER LEVELS Land surface elevation above mean sea level _____ ft

Static level 35 ft below top of well Date 5-13-02

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes by whom? _____

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal/min with _____ ft drawdown after _____ hrs

Airtest 50+ gal/min with stem set at 90 ft for 2 hrs

Artesian flow _____ g p m Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
DK Brn Topsoil	0	2
LT Brn silty sand gravel cobbles dry	2	22
LT Grey silty sand gravel V. Dense dry	22	50
Grey silty sand gravel moist	50	75
Grey silty course sand wet	75	90
Black sand Gravel Water Bearing	90	101
LT Brn silT Bnd gravel	101	103

RECEIVED
JUL 12 2002
DEPT OF ECOLOGY

Start Date 5-9-02 Completed Date 5-13-02

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Thomas Craney

Driller/Engineer/Trainee Signature Thomas W. Craney

Driller or Trainee License No 2409

Drilling Company Holt Drilling Inc

Address PO Box 1890

City State Zip Milton WA 98354

Contractor's Registration No HOLTDI*136OS Date 5-16-02

If trainee, licensed driller's Signature and License no _____

Ecology is an Equal Opportunity Employer ECY 050 1 20 (Rev 4/01)

09-4-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21-6E-9H

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

ECOLOGY

Construction/Decommission 191523

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. 230558

Unique Ecology Well ID Tag No. APR001

Water Right Permit No. _____

Property Owner Name Lloyd Eliason

Well Street Address 22541 SE Sawyer Ridge

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twp 21 R 6 EWM or WWM ☐ circle ☐ one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 729980-0010-06

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 100 ft.
Depth of completed well 100 ft.

CONSTRUCTION DETAILS
Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 100 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used _____
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 94'
Manufacturer's Name JOHNSON
Type STAINLESS Model No. _____
Diam. 6 Slot size 020 from 95 ft. to 100 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 35 ft. below top of well Date 2/21/06
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test 14 gal./min. with 4 ft. drawdown after 1 hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN HIP. COBBLES	0	78
GRAY SAND & SHALL	78	100
GRAVEL		

RECEIVED
MAR 14 2006
DEPT. OF ECOLOGY

Start Date 2/18/06 Completed Date 2/21/06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) L. JOHNSON
Driller/Engineer/Trainee Signature [signature]
Driller or trainee License No. 0220

Drilling Company STATEWIDE DRILLING
Address 1333 BEACON WAY S.
City, State, Zip RENTON, WA. 98055
Contractor's Registration No. STATEDC136RG Date 2/21/06

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-J-1

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-6E 9A ✓

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission 194010

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W241451

Unique Ecology Well ID Tag No. ALL 854

Water Right Permit No.

Property Owner Name Keith Krassin

Well Street Address 22468 SE Sawyer Ridge Way

City Black Diamond County King

Location NE 1/4-1/4 NE 1/4 Sec 9 Twn 21N R 6 ☒ EWM or ☐ WWM ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7299800270

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened — *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 100 ft. Depth of completed well 93 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6 " Diam. from 0 ft. to 92 ft.; ☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.; ☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 89

Manufacturer's Name _____

Type _____ Model No. _____

Diam. 5 Slot size 15 from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal Bennonite Chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 15 ft. below top of well Date 2-21-06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 300 gal./min. with stem set at 79 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown silty gravel	0	50
Brown fine sand	50	80
gravel + sand 30%	80	100

RECEIVED

APR 17 2006

DEPT. OF ECOLOGY

Start Date 2-7-06 Completed Date 2-21-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Charlie Smith

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2258

Drilling Company Holt Drilling/Board Longyear

Address P.O. Box 1890

City, State, Zip Milton, WA 98354

Contractor's Registration No. BOARHL6055PZ Date 3/1/06

If TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-5-2

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-6E-9R

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☒ Construction ☐ Decommission

179577

ORIGINAL INSTALLATION Notice of Intent Number _____

Current Notice of Intent No. W167170

Unique Ecology Well ID Tag No. AKF-970

Water Right Permit No.

Property Owner Name John & Jill Santhou

Well Street Address 22469 SE Sawyer Ridge Way

City Black Diamond County King

Location SE 1/4-1/4 SE 1/4 Sec 9 Twn 21 R 6 EWM or WWM ☒ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7299800100 7

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other Less than 1/2 Acre / 5,000 gal per day

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened

Method: ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 60 ft. Depth of completed well 56 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 56 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 40 ft. below top of well Date 8-31-05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL-TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 20 gal./min. with stem set at 53 ft. for 1 1/2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Hardpan-gravel-brown	3	11
Hardpan-brown	11	46
Sand/gravel-water-brown	46	56
Hardpan-gray	56	CO

RECEIVED
SEP 06 2005
DEPT OF ECOLOGY

Start Date 8-30-05 Completed Date 8-31-05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature Brad Johnson

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co, Inc

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSDC207QM Date 8-31-05

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-5-3

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-6E-9J

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission ("x" in circle) 26273D

- [X] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT
Notice of Intent No. W238921
Unique Ecology Well ID Tag No. AIN-166
Water Right Permit No. NA
Property Owner Name James + Mary Angelosante
Well Street Address 22529 SE 313th Place
City Black Diamond **County** King
Location NE 1/4-1/4 SE 1/4 Sec 9 Twn 21N R 6 (EWM or WWM) circle one
Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. 7299800090

PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [X] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
[X] New well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 97 ft.
Depth of completed well 96 ft.

CONSTRUCTION DETAILS
Casing Installed: [X] Welded 6" Diam. from 0 ft. to 97 ft.
[ ] Liner installed _____" Diam. from _____ ft. to _____ ft.
[ ] Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [ ] No
Type of perforator used _____
SIZE of perfs _____ in. by _____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: [X] Yes [ ] No [X] K-Pac Location 90
Manufacturer's Name Johnson
Type Telescopic Model No. _____
Diam. 5 Slot size 20 from 91 ft. to 96 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: [X] Yes [ ] No To what depth? 18 ft.
Material used in seal Bentonite chips
Did any strata contain unusable water? [ ] Yes [ ] No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 29 ft. below top of well Date 2-24-07
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [ ] No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 30 gal./min. with stem set at 90 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? [ ] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
brn sand + cobbles	0	28
brn silt + gravel	28	64
Sand gravel + silt	64	96
dk brn silt	96	97

RECEIVED
APR 13 2007
DEPT. OF ECOLOGY

Start Date 2-23-07 Completed Date 2-24-07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) John Artman
Driller/Engineer/Trainee Signature _____
Driller or trainee License No. 2673

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Drilling Company Boart Longyear
Address P.O. Box 1890
City, State, Zip Milton WA 98354
Contractor's Registration No. BOARTLL055PZ Date 2-26-07

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

09-J-4

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-6E-9K

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)* 213153

☒ Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W239361

Unique Ecology Well ID Tag No. ALL-885

Water Right Permit No. EXEMPT

Property Owner Name MATT PRICE

Well Street Address 22457 SE SAWYER RIDGE WY

City BLK. DIAMOND County KING

Location NW 1/4-1/4 SE 1/4 Sec 9 Twn 21N R 6E (E)WM or WWM (circle one)

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7299800110 05

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 117 ft. Depth of completed well 117 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6 " Diam. from 0 ft. to 117 ft. ☐ Liner installed _____ ". Diam. from _____ ft. to _____ ft. ☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 104 SE

Manufacturer's Name Johnson

Type Telescopic Model No. _____

Diam. 5 Slot size 30 from 110 ft. to 105 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☐ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal Bentonite chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 39 ft. below top of well Date 8-1-06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 30 gal./min. with stem set at 100 ft. for 1.5 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
brn sand + cobbles	0	32
silty sand + gravel	32	68
sand + gravel	68	110
boulder -	110	117

RECEIVED
OCT 09 2006
DEPT. OF ECOLOGY

RECEIVED
JAN 09 2007
DEPT. OF ECOLOGY

Start Date 8-1-06 Completed Date 8-1-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) John Antmann

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2673

Drilling Company Holt Drilling/Boart Longyear

Address PO Box 1890

City, State, Zip Milton WA 98354

Contractor's Registration No BOARTLC055P2 Date 8-9-06

If TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

The Department of Ecology does NOT warranty the Data and/or the Information on this Well Report.

B9-J-5

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_76455_01

General Location Details:

Name: Sawyer, Glen

Unique Well ID: GrpB_76455_01
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 09 QS: NE/SE
Local Number: 21N/06E-09J
City: King County Zipcode: 98042
Data Source: WA Health Who are these data sources?
Location Type: Well Well Depth: 0 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

09-J-6

WATER FACILITIES INVENTORY (WFI) FORM

Quarter 0
Updated: 05/14/2002
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

ONE FORM PER SYSTEM

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

TEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
455 0	SAWYER GLEN	KING	B	

MARY CONTACT NAME & MAILING ADDRESS

PRIMARY CONTACT WS# 76455 SAWYER
31022 228TH AVE SE
KENT, WA 98031

REET ADDRESS IF DIFFERENT FROM ABOVE

TN
DRESS STATE ZIP
TY

7. OWNER NAME & MAILING ADDRESS | **8. Owner Number** 005164

SAWYER GLEN
NEED PRIMARY CONTACT O TITLE: OWNER ORG - PRI
31022 228TH AVE SE
KENT, WA 98031

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS STATE ZIP
CITY

. 24 HOUR PRIMARY CONTACT INFORMATION

Primary Contact Daytime Phone:
Primary Contact Mobile/Cell Phone:
Primary Contact Evening Phone:
Fax: E-mail:

10. OWNER CONTACT INFORMATION

Owner Daytime Phone:
Owner Mobile/Cell Phone:
Owner Evening Phone:
Fax: E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

1. SATELLITE MANAGEMENT AGENCY - SMA (check only one) SMA Number: _____

- [X] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [ ] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [X] Other (church, fire station, etc.):

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [X] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15 Source Number	16 SOURCE NAME (LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456. IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE)	17 INTERTIE (INTERTIE SYSTEM ID NUMBER)	18 SOURCE CATEGORY: WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	19 USE: PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	20	21 TREATMENT: NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	22 DEPTH: DEPTH TO FIRST OPEN INTERVAL IN FEET	23 CAPACITY (GALLONS PER MINUTE)	24 SOURCE LOCATION: 1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	Well 01		X										X					X						54	65	SE NE	09	21N	06E

Page: 09-5-6

/Rev. 06/03

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
76455 0	SAWYER GLEN	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	8	Undetermined
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	8		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
28. TOTAL SERVICE CONNECTIONS		8	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 20

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	**ANNUALLY**	**ONCE EVERY 3 YEARS**
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

163528

21-6E 7H

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☐ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W167579

Unique Ecology Well ID Tag No. AHH 141

Water Right Permit No. _____

Property Owner Name TODD LARSON

Well Street Address 22411 SE 313th PL

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 (EWM or WWM) ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7299 800 320

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 82 ft. Depth of completed well 82 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 82 ft.; ☐ Liner installed _____" Diam. from _____ ft. to _____ ft.; ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used STAR

SIZE of perfs 1/4 in. by 1 in. and no. of perfs 250 from 60 ft. to 75 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☐ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 50 ft. below top of well Date 12/16/04

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test 14 gal./min. with 4 ft. drawdown after 1 hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN GRAVELLY H.P.	0	20
GRAY CLAYEY H.P.	20	35
BROWN H.P.	35	65
GRAY LOOSE GRAVEL	65	75
GRAY H.P.	75	82

RECEIVED JAN 11 2005 DEPT OF ECOLOGY

RECEIVED DEC 30 2004 DEPT OF ECOLOGY

Start Date 12/10/04 Completed Date 12/17/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) G. JOHNSON

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 0220

Drilling Company STATEWIDE DRILLING

Address 1733 RENTON AVE S

City, State, Zip RENTON WA.

Contractor's Registration No. STATEDC136RG Date 12/16/04

If TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

09-12-1

160921 Please print, sign and return to the Department of Ecology 21-6E-9H

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

ECOLOGY

Construction/Decommission

☐ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W167578

Unique Ecology Well ID Tag No. AHH 143

Water Right Permit No. _____

Property Owner Name RANDY MOLLENBERG

Well Street Address 22452 SE. SAWYER RIDGEWAY

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 EWM or WWM ☐ circle ☐ one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7299800260

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 78 ft.
Depth of completed well 78 ft.

CONSTRUCTION DETAILS
Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 78 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No
Type of perforator used STAR
SIZE of perfs 1/4 in. by 1 in. and no. of perfs 100 from 68 ft. to 78 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☐ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 50 ft. below top of well Date 12/6/04
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test 7½ gal./min. with 0 ft. drawdown after 1 hrs.
Airtest 30 gal./min. with stem set at 75 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN COBBLES H.P.	0	65
LARGE GRAVEL & COBBLES	65	78

RECEIVED
DEC 14 2004
DEPT OF ECOLOGY

Start Date 12/6/04 Completed Date 12/6/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) L. JOHNSON
Driller/Engineer/Trainee Signature [signature]
Driller or trainee License No. 0220

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Drilling Company STATEWIDE DRILLING
Address 1333 BEACON WAY S.
City, State, Zip RENTON, WA 98055
Contractor's Registration No. STATEDC136RG Date 12/6/04

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

09-K-2

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Please print, sign and return to the Department of Ecology

26E.9R

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission 190633

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current
Notice of Intent No. W188864
Unique Ecology Well ID Tag No. AKM-848
Water Right Permit No. Exempt
Property Owner Name BRAD JACOBSON
Well Street Address 22456-SE, SAWYER RIGE
City BLK. DIAMOND County KING
Location SE ¼-¼-¼ SE ¼ Sec 9 Twn 21N R 6E ☐ E or ☐ WWM (circle one)
Lat/Long (s, t, r still REQUIRED.) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. 7299800280

PROPOSED USE: ☐ ~~Domestic~~ ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 118 ft.
Depth of completed well 111 ft.

CONSTRUCTION DETAILS
Casing Installed: ☒ Welded 6 " Diam. from 0 ft. to 118 ft.
☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.
☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used _____
SIZE of perfs _____ in. by ____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 105
Manufacturer's Name Johnson
Type Telescopic Model No. _____
Diam. 5 Slot size 20 from 106 ft. to 111 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal 3/4 chips
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 49 ft. below top of well Date 10-21-05
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 25 gal./min. with stem set at 100 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation. Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
dry sand + cobbles	0	26
Sand + gravel	26	64
brn moist silt + sands	64	72
Sand + silt wb	72	84
Sand + gravel - seams of silt	84	113
fine Sand (active)	113	118

RECEIVED
FEB 14 2006
DEPT. OF ECOLOGY

Start Date 10-21-05 Completed Date 10-21-05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) John Artman
Driller/Engineer/Trainee Signature _____
Driller or trainee License No. 2673

Drilling Company HOLT DRILLING/BOART LONGYEAR
Address PO BOX 1890
City, State, Zip MILTON WA 98354
Contractor's Registration No. BOARTLCO55PZ Date 10-24-05

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

69-12-3

The Department of Ecology does NOT warranty the Data and/or the Information on this Well Report.

21-6E 9H

271350 Please print, sign and return to the Department of Ecology

RECEIVED

AUG 23 2007

DEPT. OF ECOLOGY

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Current Notice of Intent No. ~~189485~~ 189485

Unique Ecology Well ID Tag No. ALP 825

Water Right Permit No.

Property Owner Name BILL & LOUISE LA RUE

Well Street Address 22108 S.E. SAWYER Ridge LN

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 EWM or WWM circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 72 9981-0190-07

Construction/Decommission

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 120 ft. Depth of completed well 120 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 115 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used _____
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 114
Manufacturer's Name JOHNSON
Type STAINLESS Model No. _____
Diam. 6 Slot size .025 from 115 ft. to 120 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 60 ft. below top of well Date 4/4/07
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 25 gal./min. with stem set at 118 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN H.P. (BOULDERS)	0	63
GRAY H.P. (COBBLES)	63	110
BROWN H.P. (BOULDERS)	110	115
BROWN SAND & GRAVEL	115	120

RECEIVED
MAY 15 2007
DEPT. OF ECOLOGY

Start Date 4/13/07 Completed Date 4/14/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) L.S. JOHNSON
Driller/Engineer/Trainee Signature _____
Driller or trainee License No. 2220

Drilling Company STATEWIDE DRILLING
Address 1733 BERRON WAY S
City, State, Zip RENTON WA. 98057
Contractor's Registration No. STATEWI736RC Date 4/16/07

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-K-4

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-66-9h

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission 282072

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. 189487

Unique Ecology Well ID Tag No. _____

Water Right Permit No. _____

Property Owner Name PAUL CANTRELL

Well Street Address 22417 SE 313th PL

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 (EWM or WWM) circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax-Parcel No. 729980-0310

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 82 ft. Depth of completed well 82 ft.

CONSTRUCTION DETAILS

Casing ☒ Welded 6 " Diam. from 0 ft. to 77 ft.
Installed: ☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.
☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used _____
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 76
Manufacturer's Name JOHNSON
Type STAINLESS Model No. _____
Diam. 6 Slot size .025 from 77 ft. to 82 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 35 ft. below top of well Date 4/28/07
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test 15 gal./min. with 1 ft. drawdown after 1 hrs.
Airtest 35 gal./min. with stem set at 80 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN H.P. (BOULDERS)	0	24
BROWN SAND	24	65
GRAY SAND & GRAVEL	65	82

RECEIVED
NOV 27 2007
DEPT. OF ECOLOGY

Start Date 4/28/07 Completed Date 4/28/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) G JOHNSON
Driller/Engineer/Trainee Signature G JOHNSON
Driller or trainee License No. 0220

Drilling Company STATEWIDE DRILLING
Address 2723 BERGEN WAY S
City, State, Zip RENTON WA. 98057
Contractor's Registration No. STATEDC726RG Date 4/30/07

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-K-5

The Department of Ecology does NOT Warranty the Data and/or the information on this Well Report.

21-6E-9J

269091

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

- [x] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT
Notice of Intent No. WE07044

Unique Ecology Well ID Tag No. ALM-327

Water Right Permit No. _____

Property Owner Name Douglas & Sherri Luke

Well Street Address 22027 SE Sawyer Ridge Way

City Black Diamond County King

Location NE 1/4-1/4 SE 1/4 Sec 9 Twn 21 R 6 EWM or WWM [x] circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7299810140

PROPOSED USE: [x] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

[x] New well [ ] Reconditioned [ ] Deepened
Method: [ ] Dug [ ] Bored [ ] Driven [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 137 ft.
Depth of completed well 137 ft.

CONSTRUCTION DETAILS

Casing Installed: [x] Welded 6 " Diam. from +1.5 ft. to 135.5 ft.
[ ] Liner installed _____ " Diam. from _____ ft. to _____ ft.
[ ] Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [x] No
Type of perforator used _____
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: [ ] Yes [x] No [ ] K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [x] No [ ] Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: [x] Yes [ ] No *To what depth?* 18 ft.
Material used in seal Bentonite Chips
Did any strata contain unusable water? [ ] Yes [x] No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 69 ft. below top of well Date 08/09/07
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [x] No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 60+ gal./min. with stem set at 134 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? [ ] Yes [x] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown silty medium to coarse sand & gravel.	0	21
Gray silty coarse sand, gravel & cobbles.	21	57
Wet brown silty coarse sand & gravel.	57	137

RECEIVED
AUG 13 2007
DEPT. OF ECOLOGY

Job 07-1602-07

Start Date 08/09/2007 Completed Date 08/09/2007

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[x] Driller [ ] Engineer [ ] Trainee Name (Print) Matt Call
Driller/Engineer/Trainee Signature Matt Call
Driller or trainee License No. 2571

Drilling Company Tacoma Pump & Drilling Co., Inc.
Address 30316 Mountain Highway
City, State, Zip Graham, WA 98338
Contractor's Registration No. TACOMPD203PF Date 08/10/2007

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer.

 The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.

09-L-1

Folkner
21-6E-9Q

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Construction/Decommission *("x" in circle)* 212986

☒ Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT
Notice of Intent No. W 208164
Unique Ecology Well ID Tag No. ALK332
Water Right Permit No. EXEMPT
Property Owner Name VICKI FOLKNER
Well Street Address 22105 SE SAWYER BIDGE WAY
City BLK DIAMOND County KING
Location SW 1/4-1/4 SE 1/4 Sec 9 Twn 21N R 6E (EWM) or WWM circle one
Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. 7299810130

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches; drilled 114 ft.
Depth of completed well 117 ft.

CONSTRUCTION DETAILS
Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 112 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used _____
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 102
Manufacturer's Name _____
Type _____ Model No. _____
Diam. 5 Slot size 020 from 117 ft. to 112 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☐ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal Bennoite Chips
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 55 ft. below top of well Date 10-10-06
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 20 gal./min. with stem set at 100 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brownsilty gravels	0	50
greysilty gravel	50	101
gravel + sand 20gpm	101	112

RECEIVED
NOV 28 2006
DEPT. OF ECOLOGY

Start Date 10-8-06 Completed Date 10-10-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Charlie Smith
Driller/Engineer/Trainee Signature [signature]
Driller or trainee License No. 2354

Drilling Company HOLT DRILLING & BOARD LONG YEAR
Address PO BOX 1890
City, State, Zip MILTON WA 98354
Contractor's Registration No. BOARTLCO55PZ Date 10-20-06

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

09-L-2

Please print, sign and return to the Department of Ecology

21-6E-9W

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission 170569

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W186691

Unique Ecology Well ID Tag No. AK 6-809

Water Right Permit No. N/A

Property Owner Name WE RUTH REAL ESTATE

Well Street Address SE SAWYER RIDGE WAY LOT 10

City BLK. DIAMOND County KING

Location SW 1/4-1/4 SW 1/4 Sec 9 Twn 21N R 6E (WM or WWM) circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 0921069035

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 131 ft. Depth of completed well 127 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6 " Diam. from 0 ft. to 127 ft.
☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.
☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 119

Manufacturer's Name Johnson

Type Telescopic Model No. _____

Diam. 5 Slot size 18 from 120 ft. to 125 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☐ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal Bentonite chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 62 ft. below top of well Date 2-10-05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 30 gal./min. with stem set at 124 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
brn silt + gravels	0	12
dense grey silt w/angular gravels	12	78
Lg round silty gravels	78	92
Sand + lg gravels	92	128
brn silt small gravels	128	131

RECEIVED
APR 07 2005
DEPT OF ECOLOGY

Start Date 2-9-05 Completed Date 2-10-05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) John Artman

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2673

IF TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Drilling Company HOLT DRILLING/BOART LONGYEAR

Address PO Box 1890

City, State, Zip MILTON WA 98354

Contractor's Registration No. BOARTLO55PZ Date 2-16-05

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

04-N-1

Lot 12

21-6E-9Q

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission ("x" in circle) 214050

☒ Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W239360

Unique Ecology Well ID Tag No. ALK346

Water Right Permit No. EXEMPT

Property Owner Name CHERYL DAVIS

Well Street Address 22113 SE SAWYER RIDGE WAY

City BLK. DIAMOND County KING

Location SW 1/4-1/4 SE 1/4 Sec 9 Twn 21N R 6E (EWM or WWM) circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7299810120

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☐ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 120 ft. Depth of completed well 118 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6 " Diam. from 0 ft. to 114 ft.

☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.

☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 109

Manufacturer's Name _____

Type _____ Model No. _____

Diam. 5 Slot size .020 from 117 ft. to 112 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 19 ft.

Material used in seal Bentonite Chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 47 ft. below top of well Date 10-06-06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 200 gal./min. with stem set at 100 ft. for 1.5 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown silty gravel + sand	0	54
grey silty sand + gravel	55	102
gravel + sand 20gpm	102	120

RECEIVED

JAN 05 2007

DEPT. OF ECOLOGY

Start Date 10-05-06 Completed Date 10-06-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Charles O'Smith

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2352

Drilling Company HOLT DRILLING BOART LONGYEAR

Address PO BOX 1890 MILTON WA

City, State, Zip MILTON WA 98354

Contractor's Registration No. BOARTLC055P2 Date 10-19-06

If TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

09-P-1

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

264455

21-6E-9H

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. 189481

Unique Ecology Well ID Tag No. APR 054

Water Right Permit No. _____

Property Owner Name HAGGAI HOMES

Well Street Address 31708 222nd COURT SE

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 ☒ EWM ☐ WWM (circle one)

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 729981-0020

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 124 ft. Depth of completed well 124 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 119 ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 118

Manufacturer's Name JOHNSON

Type STAINLESS Model No. _____

Diam. 6 Slot size 030 from 119 ft. to 124 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 53 ft. below top of well Date 3/12/07

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test 20 gal./min. with 9 ft. drawdown after 1 hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. *(USE ADDITIONAL SHEETS IF NECESSARY.)*

MATERIAL	FROM	TO
BROWN H.P. (BOULDERS)	0	63
GRAY H.P. (COBBLES)	63	110
BROWN CLAYEY H.P.	110	115
BROWN SAND & GRAVEL	115	124

RECEIVED

MAY 15 2007

DEPT. OF ECOLOGY

Start Date 3/11/07 Completed Date 3/12/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) L. JOHNSON

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 0220

Drilling Company STATEWIDE DRILLING

Address 13223 HENRY RDAD S.E.

City, State, Zip RENTON WA. 98057

Contractor's Registration No. STATEDC136RG Date 3/12/07

If TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-02-0

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-6E.9H

1906626

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☐ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W 189453

Unique Ecology Well ID Tag No. AHH 113

Water Right Permit No. _____

Property Owner Name TOM OSTERMAN

Well Street Address 22124 SE SAWBRIDGE WAY

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 ☐ EWM ☐ WWM (circle one)

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7249810110

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 122 ft. Depth of completed well 122 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 122 ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____ Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 57 ft. below top of well Date 1/26/06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 25 gal./min. with stem set at 120 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN SAND H.P.	0	13
GRAY H.P. COBBLES	13	118
GRAY SAND & GRAVEL	118	122

RECEIVED
FEB 14 2006
DEPT. OF ECOLOGY

Start Date 1/24/06 Completed Date 1/26/06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) L.J. JOHNSON

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 0220

Drilling Company STATEWIDE DRILLING

Address 17333 BEACON AVE. S.

City, State, Zip RENTON WA 98055

Contractor's Registration No. STATEDI136RB Date 1/25/06

If TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-Q-02

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

271349

21·6E·9H

Please print, sign and return to the Department of Ecology

RECEIVED
AUG 23 2007
DEPT. OF ECOLOGY

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Current Notice of Intent No. 189486 189486

Unique Ecology Well ID Tag No. ACP 827

Water Right Permit No.

Property Owner Name SEAN CLAGGETT

Well Street Address 31725 222nd Ct

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 EWM or WWM circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. 729981-0080

Construction/Decommission

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* ____

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other ____

TYPE OF WORK: Owner's number of well (if more than one) ____
☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 122 ft.
Depth of completed well 122 ft.

CONSTRUCTION DETAILS
Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 122 ft.
☐ Liner installed ____" Diam. from ____ ft. to ____ ft.
☐ Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used ____
SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand ____
Materials placed from ____ ft. to ____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 60 ft. below top of well Date ____
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 25 gal./min. with stem set at 120 ft. for 1 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN H.P. (BOULDERS)	0	63
GRAY H.P. (COBBLES)	63	110
BROWN H.P. (BOULDERS)	110	115
BROWN SAND & GRAVELS	115	122

RECEIVED
MAY 15 2007
DEPT. OF ECOLOGY

Start Date 4/9/07 Completed Date 4/9/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) L. JOHNSON
Driller/Engineer/Trainee Signature [signature]
Driller or trainee License No. 0220

Drilling Company STATEWIDE DRILLING
Address 1333 BEACON WAY S
City, State, Zip RENTON WA. 98057
Contractor's Registration No. STATEWC136RG Date 4/16/07

If TRAINEE,
Driller's Licensed No. ____
Driller's Signature ____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-Q-03

21-6E-9H

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

Construction/Decommission 170571

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W 167587

Unique Ecology Well ID Tag No. AHH 135

Water Right Permit No.

Property Owner Name COUSINS CONST

Well Street Address 31733 - 224th PLSE

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 1 Twn 21 R 6 (E/W or WWM) ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7289800 2-2002

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 81 ft. Depth of completed well 81 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 81 ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used STAR

SIZE of perfs 1/4 in. by 1 in. and no. of perfs 160 from 60 ft. to 80 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 30 ft. below top of well Date 2/28/05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 35 gal./min. with stem set at 75 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN HP (COBBLES)	0	23
GRAY CLAYEY HP	23	35
GRAY HP (COBBLES)	35	81

RECEIVED
MAR 15 2005
DEPT OF ECOLOGY

Start Date 2/28/05 Completed Date 2/28/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) L JOHNSON

Driller/Engineer/Trainee Signature L R Johnson

Driller or trainee License No. 0220

Drilling Company STATEWIDE DRILLING

Address 1333 BEACON WAY S

City, State, Zip RENTON, WA. 98055

Contractor's Registration No STATEDC136RG Date 2/28/05

If TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

69-Q-04

21-6E-9H

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission 263487

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. 189482

Unique Ecology Well ID Tag No. APR055

Water Right Permit No. _____

Property Owner Name GUY LIBBY

Well Street Address 31720 222nd Ave S.E.

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 (EWM or WWM) ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 729981-0030

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 124 ft. Depth of completed well 124 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 119 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 118

Manufacturer's Name JOHNSON

Type STAINLESS Model No. _____

Diam. 6 Slot size .025 from 119 ft. to 124 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 71 ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No. If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test 15 gal./min. with 10 ft. drawdown after 1 hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN H.P. (BOULDERS)	0	63
GRAY H.P. (COBBLES)	63	110
BROWN CLAYEY H.P.	110	115
BROWN SAND & GRAVEL	115	124

RECEIVED
MAY 15 2007
DEPT. OF ECOLOGY

Start Date 3/7/07 Completed Date 3/8/07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) L JOHNSON

Driller/Engineer/Trainee Signature L Johnson

Driller or trainee License No. 0220

Drilling Company STATEWIDE

Address 1333 RENTON WAY S

City, State, Zip RENTON, WA 98057

Contractor's Registration No STATEDC122RG Date 3/8/07

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-Q-05

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-6E-9H

171995 Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W 167588

Unique Ecology Well ID Tag No. AHH 136

Water Right Permit No. _____

Property Owner Name PAT BALDI

Well Street Address 31735 224TH PL S.E.

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 (EWM or WWM) circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 72 9980-0210-00

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 81 ft. Depth of completed well 81 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 81 ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used SAR

SIZE of perfs 1/4 in. by 1 in. and no. of perfs 160 from 60 ft. to 80 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 30 ft. below top of well Date 2/25/05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 35 gal./min. with stem set at 75 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN H.P. (COBBLES)	0	23
GRAY CLAYEY H.P.	23	35
GRAY H.P. LOOSE COBBLES	35	81

RECEIVED
MAR 15 2006
DEPT OF ECOLOGY

Start Date 2/24/05 Completed Date 2/25/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) E. JOHNSON

Driller/Engineer/Trainee Signature E Johnson

Driller or trainee License No. 0220

Drilling Company STATEWIDE DRILLING

Address 1333 RONCON WAY S.

City, State, Zip RENTON WASH. 98055

Contractor's Registration No. STATEDC136RC Date 2/27/05

If TRAINEE: Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-Q-06

page 1 of 3

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

RECEIVED
FEB 2 3 2005
DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

NOTICE OF INTENT TO CONSTRUCT A WATER WELL

Notification Number

W 167586

100

WASHINGTON STATE DEPARTMENT OF ECOLOGY

This form and required fees MUST BE RECEIVED by the Department of Ecology 72 HOURS BEFORE you construct a well.

Submit one form and required fee (check or money order ONLY) for each job site. Instructions for filling out this form are printed on the back. **Mail this form to the Department of Ecology, P.O. Box 5128, Lacey, WA 98509-5128.**

NOTE: PLEASE PRINT ALL ANSWERS. PROCESSING YOUR NOTICE OF INTENT MAY BE DELAYED IF ALL FIELDS OUTLINED IN THE (BOXES) ARE NOT FILLED IN COMPLETELY.

1. Property Owner PAT BALDI Phone No. 1253-315-0155
Address (include city, state and zip) 739 S.W. 337th ST FEDERAL WAY 98023

2. Agent (if different from #1) STATEWIDE DRILLING Phone No. 206-772-5771
Address (include city, state and zip) 1333 BEACON WAY S. RENTON WA 98055

01-Adams, 02-Asotin, 03-Benton, 04-Chelan, 05-Clallam, 06-Clark, 07-Columbia, 08-Cowlitz, 09-Douglas, 10-Ferry; 11-Franklin; 12-Garfield, 13-Grant, 14-Grays Harbor, 15-Island, 16-Jefferson, 17-King, 18-Kitsap, 19-Kittitas, 20-Klickitat, 21-Lewis, 22-Lincoln, 23-Mason, 24-Okanogan, 25-Pacific, 26-Pend Oreille, 27-Pierce, 28-San Juan, 29-Skagit, 30-Skamania, 31-Snohomish, 32-Spokane, 33-Stevens, 34-Thurston, 35-Wahkiakum, 36-Walla Walla, 37-Whatcom, 38-Whitman, 39-Yakima

3. Print CODE NUMBER and COUNTY NAME (e.g. 01-Adams) of well location from list above (DO NOT ABBREVIATE) 17-KING

4. Well Location: SE 1/4 of the NE 1/4 Section 9 Township 21 Range 6 EWM or WWM (circle one)

5. Will the intended withdrawal exceed 5000 gallons per day or be used to irrigate more than 1/2 acre of non-commercial lawn or garden? (check one) ○ Yes (Copy of Water Right Permit attached) ☒ No

6. Type of well construction: ○ New ○ Deepened ○ Reconditioned ○ Other

7. Purpose of Use: ○ Domestic ○ Group Domestic ☒ Irrigation ○ Other

8. Approx construction start date 2/22/05 9. No. of homes to be served 0

Latitude and Longitude (if available) NOTE: 1/4, section, township and range are REQUIRED.

Lat Degrees _____ Lat Time _____ Horizontal collection method _____
Long Degrees _____ Long Time _____

10. Well Site Street Address 31735 224th PL. S.E. BLACK DIAMOND 98010

11. Tax parcel number 72 9980-0210-00

12. Contractor L & I Registration No. STATEDC136RG

13. Well Drilling Company Name STATEWIDE DRILLING Phone No. 206-772-5771

14. Well Driller Name L JOHNSON License No. 0220

15. SEND THE ENTIRE FORM. The bottom portion of this notice will be validated in our office and sent back to the name and address contained on the address label. This is the proof of notification. Please fill out the portion below CAREFULLY.

NOTE: Please copy the Notification Number (located in the upper and lower right corner) and keep in a safe place. Please reference this number when communicating with the Department of Ecology.

ology does NOT Warranty the Data and/or the Information on this Well Report.

09-Q-06
page 2 of 3

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WELL LOG CHANGE FORM

Instructions: Record any change made to the well log record on this form. Then always append this form to the well log image. File with the original.

WCL Log ID (Required) 171995 Well Log ID _____

Regional Office: ☐ CRO ☐ ERO ☒ NWRO ☐ SWRO

Type of Well: ☒ Water ☐ Resource
Notice of Intent: W167586 Ecology Well ID Tag No. _____
Property (Well) Owner's Name Baldi
Well Street Address _____
City _____ County _____ Zip Code _____
Location: ____1/4-1/4 ____1/4 Sec ____ Twn ____ R ____ E or W (Circle One)
Lat./Long: (Required) Lat. Deg. _____ Lat. Min/Sec _____
Long. Deg. _____ Long. Min/Sec _____
Horizontal Collection Method Code _____
Tax Parcel No _____
Type of Work: ☐ New Well ☐ Reconditioned ☐ Deepened
Well Log Received Date __/__/__
Well Diameter ___ (in inches) Well Depth _____ (in feet) Well Completed Date __/__/__
Driller's Ecology License No. _____
Trainee's Ecology License No. _____

Reason/Source of Change (Required)
Corrected Notice of Intent # to match notice submitted

Signature of Well Log Tracker (Required) Melissa Snoeberger Date 5/17/05

ECY-WR-WLCF Rev. 10/02/02

09-Q-06
page 3 of 3

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

- [x] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* 197840

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☑ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one)

☑ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 138 ft.
Depth of completed well 138 ft.

CONSTRUCTION DETAILS

Casing Installed: ☑ Welded 6 " Diam. from +1.5 ft. to 136.5 ft.
☐ Liner installed " Diam. from ft. to ft.
☐ Threaded " Diam. from ft. to ft.

Perforations: ☐ Yes ☑ No
Type of perforator used
SIZE of perfs in. by in. and no. of perfs from ft. to ft.

Screens: ☐ Yes ☑ No ☐ K-Pac Location
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand
Materials placed from ft. to ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18 ft.
Material used in seal Bentonite Chips
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? Depth of strata
Method of sealing strata off

PUMP: Manufacturer's Name
Type: H.P.

WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 59 ft. below top of well Date 5/3/06
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
Yield: gal./min. with ft. drawdown after hrs.
Yield: gal./min. with ft. drawdown after hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 50 gal./min. with stem set at 135 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? ☐ Yes ☐ No

CURRENT
Notice of Intent No. WE04946
Unique Ecology Well ID Tag No. APP-654
Water Right Permit No.
Property Owner Name Hoskins
Well Street Address 31732 222nd Ct. E.
City Black Diamond County Pierce
Location SE 1/4-1/4 SW 1/4 Sec 9 Twn 21 R 6 EWM or WWM ☑ circle ☐ one
Lat/Long (s, t, r Still **REQUIRED**) Lat Deg Lat Min/Sec Long Deg Long Min/Sec
Tax Parcel No. 7299810040

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown silty medium to course gravel and cobbles, boulders.	0	35
Grayish brown silty medium to course gravel and cobbles.	35	70
Wet, brown, silty course sand and gravel, water increasing in flow to depth.	70	138

RECEIVED
JUN 13 2006
Washington State Department of Ecology

Job #06-1479-04

Start Date 5/3/06 Completed Date 5/3/06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☐ Trainee Name (Print) Matt Call
Driller/Engineer/Trainee Signature Matt Call
Driller or trainee License No. 2571

If TRAINEE,
Driller's Licensed No.
Driller's Signature

Drilling Company Tacoma Pump & Drilling Co., Inc.
Address 30316 Mountain Highway
City, State, Zip Graham, WA 98338
Contractor's Registration No. TACOMPD203PF Date 5/31/06

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.

09-Q-07

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21·6E·9Q

191499

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(•) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

PROPOSED USE: [☑] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

[☑] New well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [☑] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 98 ft.

Depth of completed well 98 ft.

CONSTRUCTION DETAILS

Casing Installed: [☑] Welded 6" Diam. from +1.5 ft. to 96.5 ft.

[ ] Liner installed _____" Diam. from _____ ft. to _____ ft.

[ ] Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [☑] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft to _____ ft.

Screens: [ ] Yes [☑] No [ ] K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [☑] No [ ] Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: [☑] Yes [ ] No To what depth? 18 ft.

Material used in seal Bentonite Chips

Did any strata contain unusable water? [ ] Yes [☑] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft

Static level 23 ft. below top of well Date 2/27/06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [☑] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield _____ gal./min with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs

Airtest 35 gal./min. with stem set at 93 ft. for 1 hrs

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [☑] No

CURRENT

Notice of Intent No. WE04551

Unique Ecology Well ID Tag No. AKT 300

Water Right Permit No. _____

Property Owner Name Kelly Snodgrass

Well Street Address 31742 222nd Court SE

City Black Diamond County King

Location SW 1/4-1/4 SE 1/4 Sec. 9 Twn. 21 R. 6 EWM or WWM [☑] circle [ ] one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7299810050

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Reddish brown fine to medium sand and gravel.	0	6
Tan medium - coarse silty sand with gravel.	6	21
Tan moist clayey - fine to medium sand and gravel	21	35
Wet brown silty medium to coarse sand with gravel	35	
gradually producting more water as drilled to depth.		98
05-1419-11		

RECEIVED

MAR 02 2006

DEPT. OF ECOLOGY

Start Date 2/27/06 Completed Date 2/27/06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[ ] Driller [ ] Engineer [ ] Trainee Name (Print) Matthew Call

Driller/Engineer/Trainee Signature Matthew R Call

Driller or trainee License No. 2571

IF TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Drilling Company Tacoma Pump & Drilling Co., Inc.

Address 30316 Mountain Highway

City, State, Zip Graham, WA 98338

Contractor's Registration No. TACOMPD203PF Date 2/27/06

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.

09-Q-08

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent W108024
UNIQUE WELL I.D. # ACG-833
Water Right Permit No. 98042

(1) OWNER: Name Ken Simon Address 30836 202nd Ave SE, Kent

(2) LOCATION OF WELL: County King SW 1/4 SE 1/4 Sec 9 T 21 N,R 6 E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 30800 220TH Ave SE Covington

TAX PARCEL NO.: 092106-9031 21-6E-9Q

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
[X] New Well Method: [ ] Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [X] Rotary [ ] Jetted [ ] Decommission

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 89 feet Depth of completed well 89 ft.

(6) CONSTRUCTION DETAILS
Casing installed:
[X] Welded 6" Diam. from 0 ft. to 89 ft.
[ ] Liner installed ____" Diam. from ____ ft. to ____ ft.
[ ] Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: [ ] Yes [X] No
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.

Screens: [ ] Yes [X] No [ ] K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand ____
Material placed from ____ ft. to ____ ft.

Surface seal: [X] Yes [ ] No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 35 ft. below top of well Date 5-5-99
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 10 gal./min. with 45 ft. drawdown after 2 hrs
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? [ ] Yes [X] No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and ~~the kind and nature of the material in each stratum penetrated,~~ with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	3
Tan hardpan	3	60
Tan sand-gravel	60	89
seepage		
Tan hardpan	89	—

RECEIVED
MAY 19 1999
DEPT OF ECOLOGY

Work Started 5-3-99 Completed 5-5-99

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson License No. 0233
(Licensed Driller/Engineer)

Trainee Name ____ License No. ____
Drilling Company Johnson Drilling Co. Inc
(Signed) [signature] License No. 0233
(Licensed Driller/Engineer) 98055
Address 19415 108th Ave SE, Renton, Wa
Contractor's Registration No JOHNSDC207AM Date 5-5-99

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (350) 407-6006

ECY 050-1-20 (11/98)

09-2-09

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

118844

21-6E.9Q

WATER WELL REPORT

ECOLOGY Original & 1st copy Ecology 2nd copy owner 3rd copy driller

Construction/Decommission (x in circle)
- (X) Construction
- ( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* _____

CURRENT Notice of Intent No W137595

Unique Ecology Well ID Tag No AGP 454

Water Right Permit No N/A

Property Owner Name WILLIAM E RUTH

Well Street Address 1200'S & 1200' WEST OF CEN OF 224TH AVE SE & SE 312TH

City MAPLE VALLEY County KING

Location SW 1/4 1/4 SE 1/4 Sec 9 Twn 21N R 6E (E/W/M) circle one or WWM

Lat/Long (s t r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No 0921069034

PROPOSED USE ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK Owner's number of well (if more than one) LOT 14

☒ New Well ☐ Reconditioned Method ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches drilled 78 ft. Depth of completed well 76 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6 Diam from +3 ft to 0 ft

☐ Liner installed _____ Diam from 0 ft to 76 ft

☐ Threaded _____ Diam from _____ ft to _____ ft

Perforations ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in by _____ in and no of perfs _____ from _____ ft to _____ ft

Screens ☐ Yes ☒ No ☐ K Pac Location _____

Manufacturer's Name _____

Type _____ Model No _____

Diam _____ Slot Size _____ from _____ ft to _____ ft

Diam _____ Slot Size _____ from _____ ft to _____ ft

Gravel/Filter packed ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft to _____ ft

Surface Seal ☒ Yes ☐ No To what depth? 18 ft

Materials used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP Manufacturer's Name _____

Type _____ H P _____

WATER LEVELS Land surface elevation above mean sea level _____ ft

Static level 31 ft below top of well Date 7-24

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes by whom? _____

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal/min with _____ ft drawdown after _____ hrs

Airtest 30+ gal/min with stem set at 70 ft for 1 hrs

Artesian flow _____ g p m Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
BRN SAND GRVL LOOSE DRY	0	23
DK BRN SAND GRVL WET	23	50
GREY SILTY GRVL	50	70
LT BRN SAND GRVL WATER BEARING	70	78

RECEIVED
AUG 28 2002
DEPT OF ECOLOGY

Start Date 7-24-02 Completed Date 7-24-02

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Thomas Craney

Driller/Engineer/Trainee Signature Thomas A. Craney

Driller or Trainee License No 2409

Drilling Company Holt Drilling

Address 10621 Todd Rd E

City State Zip Puyallup WA 98372

Contractor's Registration No HOLTDI*360G Date 7-29-02

If trainee, licensed driller's Signature and License no _____

09-Q-10

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W127756

UNIQUE WELL I.D. # AFJ-117

Water Right Permit No. Covington, WA 98042

(1) OWNER: Name Doug Brown Address 17051 SE 272nd ST, Suite 43, Box 202

(2) LOCATION OF WELL: County King SW 1/4 SE 1/4 Sec 9 T 21 N.R. 6E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 30559 229th Ave SE

TAX PARCEL NO.: KCBLA 149L0170 21-6E-9Q

(3) PROPOSED USE: X Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____

X New Well Method: ☐ Deepened ☐ Dug ☐ Bored ☐ Reconditioned ☐ Cable ☐ Driven ☐ Decommission X Rotary ☐ Jetted

(5) DIMENSIONS: Diameter of well 6 inches

Drilled 93 feet. Depth of completed well 93 ft.

(6) CONSTRUCTION DETAILS

Casing installed: X Welded 6" Diam. from 0 ft. to 93 ft.

☐ Liner installed ____" Diam. from ____ ft. to ____ ft.

☐ Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes X No

Type of perforator used ____

SIZE of perforations ____ in. by ____ in.

____ perforations from ____ ft. to ____ ft.

Screens: ☐ Yes X No ☐ K-Pac Location ____

Manufacturer's Name ____

Type ____ Model No. ____

Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes X No ☐ Size of gravel/sand ____

Material placed from ____ ft. to ____ ft.

Surface seal: X Yes ☐ No To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? ☐ Yes X No

Type of water? ____ Depth of strata ____

Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____

Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.

Static level 55 ft. below top of well Date 5-30-2000

Artesian pressure ____ lbs. per square inch Date ____

Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes X No If yes, by whom? ____

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____

Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.

Airtest 20 gal./min. with 20 ft. drawdown after 2 1/2 hrs.

Artesian flow ____ g.p.m. Date ____

Temperature of water ____ Was a chemical analysis made? ☐ Yes X No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	3
Sand-clay- brown	3	C
Hardpan-tan	C	23
Hardpan-gray	23	70
Sand-gravel-brown	70	76
Clay-gray	76	88
Sand-gravel-fair water	88	93
Hardpan-brown	93	—

RECEIVED
JUN 1 2000
DEPT OF ECOLOGY

Work Started 5-24-2000 Completed 5-30-2000

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson Scene No. 0233
(Licensed Driller/Engineer)

Trainee Name ____ License No. ____

Drilling Company Johnson Drilling Co, Inc

(Signed) ____ License No. 0233
(Licensed Driller/Engineer)

Address 19415 108th Ave SE, Renton, WA 98055

Contractor's Registration No JOHNSOC207QM Date 5-30-2000

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

09-Q-91

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-6E 1Q

WATER WELL REPORT

ECOLOGY Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle) 164503
- ○ Construction
- ○ Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT
Notice of Intent No. W184317
Unique Ecology Well ID Tag No. AKG580
Water Right Permit No. N/A
Property Owner Name GARY SPARKS
Well Street Address 22443 SE SAWYER RIDGE WAY
City BLK. DIAMOND County: KING
Location SW 1/4 - 1/4 SE 1/4 Sec 2 Twn 21N R 6E (EWM) or WWM (circle one)
Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. 7299800120

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK: Owner's number of well (if more than one)
New Well ☒ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 77 ft.
Depth of completed well 77 ft.

CONSTRUCTION DETAILS
Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 77 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used
SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location
Manufacturer's Name
Type Model No.
Diam. Slot Size from ft. to ft.
Diam. Slot Size from ft. to ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand
Materials placed from ft. to ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft
Materials used in seal Bentonite Chips
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? Depth of strata
Method of sealing strata off

PUMP: Manufacturer's Name
Type: H.P.

WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 35 ft. below top of well Date 7-27-04
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? ☐ Yes ☐ No If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
Yield: gal./min. with ft. drawdown after hrs.
Yield: gal./min. with ft. drawdown after hrs.
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 19 gal./min. with stem set at 70 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
brn sand + cobbles	0	10
silty gravels -	10	41
brn washed gravels + sand	41	77

RECEIVED
JAN 12 2005
DEPT OF ECOLOGY

Start Date 7-27-04 Completed Date 7-27-04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☒ Trainee Name (Print) John Artman
Driller/Engineer/Trainee Signature
Driller or Trainee License No. 2673T
If trainee, licensed driller's Signature and License no. 1897

Drilling Company HOLT DRILLING INC
Address PO Box 1890
City, State, Zip MILTON WA 98354
Contractor's Registration No. HOLTOI*136 OC Date 7-28-04

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)

09-1-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21-6E9H

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

ECOLOGY

Construction/Decommission 193436

☐ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W 189464

Unique Ecology Well ID Tag No. AHH 111

Water Right Permit No. _____

Property Owner Name PAUL PETITA

Well Street Address 22437 SE. SAWYER RIDGE

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 ☐ circle ☐ one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 729980-0130-01

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 60 ft.

Depth of completed well 60 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from +1 ft. to 60 ft.

☐ Liner installed _____" Diam. from _____ ft. to _____ ft.

☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☐ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 20 ft. below top of well Date 2/6/06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 30 gal./min. with stem set at 58 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN CLAYEY H.P.	0	22
BROWN SAND &		
GRAVEL	22	60

RECEIVED
MAR 14 2006
DEPT OF ECOLOGY

Start Date 2/4/06 Completed Date 2/6/06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) L. JOHNSON

Driller/Engineer/Trainee Signature L. JOHNSON

Driller or trainee License No. 0220

IF TRAINEE.
Driller's Licensed No. _____
Driller's Signature _____

Drilling Company STATEWIDE DRILLING

Address 1333 BEACON WAY S

City, State, Zip RENTON WA. 98055

Contractor's Registration No. STATEWIDE 36RE Date 2/10/06

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-R-2

page 1 of 3

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

artment of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

NOTICE OF INTENT TO CONSTRUCT A WATER WELL

RECEIVED FEB 02 2006 DEPARTMENT OF ECOLOGY WELL DRILLING UNIT

Notification Number W 189463

This form and required fees *MUST BE RECEIVED by the Department of Ecology 72 HOURS BEFORE you construct a well.*

200

Submit one form and required fee (check or money order ONLY) for each job site. Instructions for filling out this form are printed on the back. ***Mail this form to the Department of Ecology, P.O. Box 5128, Lacey, WA 98509-5128***

NOTE: PLEASE PRINT ALL ANSWERS. PROCESSING YOUR NOTICE OF INTENT MAY BE DELAYED IF ALL FIELDS OUTLINED IN THE BOXES ARE NOT FILLED IN COMPLETELY.

1. Property Owner PAUL PETITA Phone No. 425-738-1367
   Address (include city, state, zip) 22437 SE SAWYER Ridge WAY Black Diamond 98010
2. Agent (if different from #1): STATEWIDE Phone No. 206-772-5771
   Address (include city, state, zip) 1333 MEACON WAY S. RENTON WA 98055

01-Adams, 02-Asotin, 03-Benton, 04-Chelan, 05-Clallam Count, 06-Clark, 07-Columbia, 08-Cowlitz, 09-Douglas, 10-Ferry, 11-Franklin, 12-Garfield, 13-Grant, 14-Grays Harbor, 15-Island, 16-Jefferson, 17-King, 18-Kitsap, 19-Kittitas, 20-Klickitat, 21-Lewis, 22-Lincoln, 23-Mason, 24-Okanogan, 25-Pacific, 26-Pend Oreille, 27-Pierce, 28-San Juan, 29-Skagit, 30-Skamania, 31-Snohomish, 32-Spokane, 33-Stevens, 34-Thurston, 35-Wahkiakum Count, 36-Walla Walla Count, 37-Whatcom, 38-Whitman, 39-Yakima

3. Print CODE NUMBER and COUNTY NAME (e.g. 01-Adams) of well location from list above (**DO NOT ABBREVIATE**) KING - 017
4. Well Location: SE 1/4-1/4 of the NE 1/4 Section 9 Township 21 Range 6 EWM or WWM (circle one)
5. Will the intended withdrawal from this well exceed 5000 gallons per day or be used to irrigate more than 1/2 acre of non-commercial lawn or garden? Check one) ○ Yes (Copy of Water Right permit attached) ☒ No
6. Type of well construction: ☒ New ○ Deepened ○ Reconditioned ○ Other _____
7. Purpose of use: ○ Domestic ○ Group Domestic ☒ Irrigation ○ Other
8. Approx construction start date 2/3/06 9. No. of homes to be served 1

Latitude and longitude (if available) NOTE: 1/4, 1/4, section, township and range are REQUIRED.

Lat Degrees _____ Lat Time _____

Long Degrees _____ Long Time _____ Horizontal Collection Method _____

10. Well Site Street Address 22437 SE SAWYER Ridge WAY Black Diamond
11. Tax parcel number 729980-0130-01
12. Contractor L & I Registration No. STATEDC136RG
13. Well Drilling Company Name STATEWIDE DRILLING Phone No. 206-772-5771
14. Well Driller Name L JOHNSON License No. 0220
15. SEND THE ENTIRE FORM. The bottom portion of this notice will be validated in our office and sent back to the name and address contained on the address label. This is the proof of notification. Please fill out the portion below CAREFULLY.
    NOTE: Please copy the Notification Number (located in the upper and lower right corner) and keep in a safe place. Please reference this number when communicating with the Department of Ecology.

09-12-2

page 2 of 3

The Department of Ecology does NOT Warranty the Data and/or the Information on the Well Report.

WELL LOG CHANGE FORM

Instructions: Record any change made to the well log record on this form.
Then always append this form to the well log image. File with the original.

WCL Log ID (Required) 193436 Well Log ID _____

Regional Office: ☐CRO ☐ERO ☒NWRO ☐SWRO

Type of Well: ☒ Water ☐ Resource
Notice of Intent: W189463 Ecology Well ID Tag No. _____
Property (Well) Owner's Name Paul Petita
Well Street Address _____
City _____ County _____ Zip Code _____
Location: ____1/4-1/4 ____1/4 Sec ____ Twn ____ R ____ E or W (Circle One)
Lat./Long: (Required) Lat. Deg. _____ Lat. Min/Sec _____
Long. Deg. _____ Long. Min/Sec _____
Horizontal Collection Method Code _____
Tax Parcel No _____
Type of Work: ☐New Well ☐ Reconditioned ☐ Deepened
Well Log Received Date __/__/__
Well Diameter ___ (in inches) Well Depth _____ (in feet) Well Completed Date __/__/__
Driller's Ecology License No. _____
Trainee's Ecology License No. _____

Reason/Source of Change (Required)
Corrected Notice of Intent # to match Notice Submitted

Signature of Well Log Tracker (Required) Melissa Smethers Date 4/14/06

ECY-WR-WLCF Rev. 10/02/02

09-R-2
page 3 of 3

WATER WELL REPORT

ECOLOGY Original & 1st copy Ecology 2nd copy owner, 3rd copy driller

Construction/Decommission (x in circle) 149342

(X) Construction

( ) Decommission ORIGINAL CONSTRUCTION Notice of Intent Number

CURRENT Notice of Intent No W172330

Unique Ecology Well ID Tag No AKR 884

Water Right Permit No N/A

OWNER:

Property Owner Name SCOTT PAUST

Well Street Address 22431 SE SAWYER RIDGE WY

City COVINGTON County KING

Location SW 1/4 1/4 SE 1/4 Sec 9 Twn 21N R 6E (EWM) or WWM circle one

Lat/Long (s,t,r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No 7299800140

PROPOSED USE ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other

TYPE OF WORK Owner's number of well (if more than one)

☒ New Well ☐ Reconditioned Method ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS Diameter of well 6 inches drilled 100 ft Depth of completed well 98 ft

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam from 0 ft to 98 ft

☐ Liner installed ____ Diam from ____ ft to ____ ft

☐ Threaded ____ Diam from ____ ft to ____ ft

Perforations ☐ Yes ☒ No

Type of perforator used

SIZE of perfs ____ in by ____ in and no of perfs ____ from ____ ft to ____ ft

Screens ☐ Yes ☒ No ☐ K-Pac Location

Manufacturer's Name

Type Model No

Diam ____ Slot Size ____ from ____ ft to ____ ft

Diam ____ Slot Size ____ from ____ ft to ____ ft

Gravel/Filter packed ☐ Yes ☒ No ☐ Size of gravel/sand

Materials placed from ____ ft to ____ ft

Surface Seal ☒ Yes ☐ No To what depth? 18 ft

Materials used in seal Bentonite Chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? Depth of strata

Method of sealing strata off

PUMP Manufacturer's Name

Type HP

WATER LEVELS Land surface elevation above mean sea level ____ ft

Static level 27 ft below top of well Date 5-03-04

Artesian pressure ____ lbs per square inch Date

Artesian water is controlled by (cap, valve, etc)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes by whom?

Yield ____ gal/min with ____ ft drawdown after ____ hrs

Yield ____ gal/min with ____ ft drawdown after ____ hrs

Yield ____ gal/min with ____ ft drawdown after ____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test ____ gal/min with ____ ft drawdown after ____ hrs

Airtest 25+ gal/min with stem set at ____ ft for ____ hrs

Artesian flow ____ g p m Date

Temperature of water ____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color, character size of material and structure, and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Brown silty gravels	0	10
gravels + sand some silt	10	30
grey silty gravel	30	40
gravels + sand 25+ gpm	40	100

RECEIVED
MAY 20 2004
DEPT OF ECOLOGY

Start Date 4-30-04 Completed Date 5-03-04

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Charles Smith

Driller/Engineer/Trainee Signature

Driller or Trainee License No 2359

Drilling Company HOLT DRILLING INC

Address PO Box 1890

City, State, Zip MILTON WA 98354

Contractor's Registration No HOLTDI*136 Date 5-4-04

If trainee, licensed driller's Signature and License no

Ecology is an Equal Opportunity Employer ECY 050 1-20 (Rev 4/01)

09-R-3

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Please print, sign and return to the Department of Ecology

21-6E-9R

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission 181720

☑ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current
Notice of Intent No. WE03756

Unique Ecology Well ID Tag No. AKT 017

Water Right Permit No. _____

Property Owner Name Tim Lombardo

Well Street Address 31740 224th Place SE

City Black Diamond **County** King

Location SE 1/4-1/4 SE 1/4 Sec 9 Twn 21 R 6 EWM or WWM ☑ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 7299800170

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☑ New well ☐ Reconditioned ☐ Deepened — *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 156 ft. Depth of completed well 156 ft.

CONSTRUCTION DETAILS

Casing Installed: ☑ Welded 6" Diam. from +2 ft. to 156 ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☑ No

Type of perforator used _____

SIZE of perfs _____ in. by ___ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☑ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☑ No ☐ Size of gravel/sand _____ Materials placed from _____ ft. to _____ ft.

Surface Seal: ☑ Yes ☐ No To what depth? 18 ft.

Material used in seal Bentonite Chips

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 81 ft. below top of well Date 8/17/05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 60 gal./min. with stem set at 145 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Silty gravel.	0	14
Sandy gravel.	14	73
Silty gravel.	73	80
Wet silty gravel.	80	97
Loose silty gravel.	97	108
Big gravel, less silty.	108	130
Gravel and cobbles, little silty.	130	156

RECEIVED
SEP 01 2005
DEPT OF ECOLOGY

05-1329-06

Start Date 8/16/05 Completed Date 8/17/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Clint Sumerall

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2797

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Drilling Company Tacoma Pump & Drilling Co., Inc.

Address 30316 Mountain Highway

City, State, Zip Graham, WA 98338

Contractor's Registration No. TACOMPD203PF Date 8/23/05

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-R-4

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-6E-9H

Please print, sign and return to the Department of Ecology

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

ECOLOGY

Construction/Decommission 170570

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W-167588

Unique Ecology Well ID Tag No. AHH-134

Water Right Permit No. _____

Property Owner Name TOM HARGREAVES

Well Street Address 31751 224th PLSE KC

City BLACK DIAMOND County KING

Location SE 1/4-1/4 NE 1/4 Sec 9 Twn 21 R 6 ☐ EWM ☐ WWM (circle one)

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 729980-0200

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☒ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened

Method: ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 81 ft.

Depth of completed well 81 ft.

CONSTRUCTION DETAILS

Casing ☒ Welded 6 " Diam. from 0 ft. to 81 ft.

Installed: ☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.

☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used STAR

SIZE of perfs 1/4 in. by 1 in. and no. of perfs 200 from 60 ft. to 80 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 20 ft.

Material used in seal BENTONITE

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 30' ft. below top of well Date 3/3/05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 40 gal./min. with stem set at 75 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
BROWN A.P. (CABLES)	0	23
GRAY CLAYEY H.P.	23	35
GRAY H.P. LOOSE (CABLES)	35	81

RECEIVED
MAR 15 2005
DEPT OF ECOLOGY

Start Date 3/3/05 Completed Date 3/3/05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) L. JOHNSON

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 6220

Drilling Company STATEWIDE DRILLING

Address 1333 BEACON WAY S

City, State, Zip RENTON WA 98055

Contractor's Registration No. STATEDC136RG Date 3/6/05

IF TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

09-R-5

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

Start Card No. [redacted]

788-6236

STATE OF WASHINGTON

Water Right Permit No. R

(1) OWNER: Name Sam Antim Address 19520 - 305th Ave SE

(2) LOCATION OF WELL: County King ¼ ¼ Sec T. 21 N., R. 6E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 19520 - 305th SE SE 21 · 6E · 9

(3) PROPOSED USE: ☑ Domestic ☑ Irrigation ☑ DeWater Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☑ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☑ Rotary ☐ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 57' feet. Depth of completed well 57 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6¼" Diam. from +6 ft. to 20 ft.
Welded ☑ 4" Diam. from 20 ft. to 57 ft.
Liner installed ☑
Threaded ☐ Diam. from ft. to ft.

Perforations: Yes ☑ No ☐
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☑
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 20' ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 12 gal./min. with 15 ft. drawdown after 1 hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Clay	0	14
Rock	14	58

RECEIVED
MAR 23 1992
DEPT. OF ECOLOGY

Work started 3-13 92 Completed 3-14, 1992

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME JKA Enterprises + Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 21203-195-00 SE Monroe

(Signed) [signature] (WELL DRILLER) License No. 1806

Contractor's Registration No. JKA End 101 Ld Date 3-14, 1992

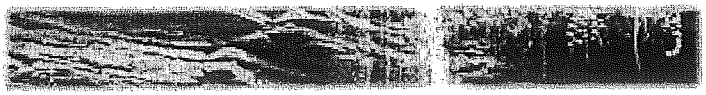
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329

09-12-6

The Department of Ecology does NOT Warr[illegible]y the Data and/or the Information on this Well R[illegible]ort.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_56185_01

General Location Details:

Unique Well ID: GrpB_56185_01
Parcel ID Number: 1021069078
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 10 QS: NE/NW
Local Number: 21N/06E-10C
City: Black Diamond
Zipcode: 98010
Data Source: Seattle - KC Health
Who are these data sources?
Location Type: Well
Well Depth: 50 Feet
Surface Elevation: 0 Feet
What is surface elevation?
Location Accuracy: Parcel
What are these location accuracies?

Name: Morris Bros.

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

10-C-1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 05/14/2002
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
56185 A	MORRIS BROTHERS	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

PRIMARY CONTACT WS# 56185 MORRIS B
30435 232 PL SE
KENT, WA 98031

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 003893

MORRIS BROTHERS
NEED PRIMARY CONTACT O TITLE: OWNER ORG - PRI
30435 232 PL SE
KENT, WA 98031

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone:		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [x] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	Well 01		X										X				X						50		SE SW	03	21N	06E

10-C-1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
56185 A	MORRIS BROTHERS	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	5	Undetermined
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	5		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
28. TOTAL SERVICE CONNECTIONS		5	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 13

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 26 74 140254
CASH__ OTHER__ NONE__

Water Right Claims Registration

Water Right Claim

Name Carl G. Falk

Address 18415 102 SE

Renton, Wash. Zip Code 98055

Phone No. 255-7033

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: In Section 10 - T21N - R6EWM. Portion of NE/4 of NW/4; Govt Lot 1 - Beginning at a point 659.18 ft West & 217.11 ft South of NE corner of subdivision, thence S-89°24'40"W, 467.35 ft. to East shore of Lake Sawyer; thence northerly along said East shore 80.27 ft, thence N 89°06'50" E 429.08 ft, thence South 72.37 feet to point of beginning less C/M rights.

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 10 T. 21 N. R. 6 (E)/W. W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

EBC 075 132654

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Carl G. Falk

Date June 25, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☒ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

10-C-2

2.18.75
125 187.5 250

500

625.25
625 687.5 750

656.75

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
APR 29 74 094495
CASH ___ OTHER ___ NONE ✓

1. NAME W M Parsons

ADDRESS 4714-45th South

Seattle Wash ZIP CODE 98118

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Surface (SURFACE OR GROUND WATER)

W.R.I.A. 69 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS [redacted]

B. IF SURFACE WATER, THE SOURCE IS From: Lake Sawyer King County-Irrigation (2 different locations)

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED one acre feet PRESENTLY USED ___
(CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED one acre feet PRESENTLY USED ___
(ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED ___ PRESENTLY IRRIGATED 1-acre feet

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continuous

4. DATE OF FIRST PUTTING WATER TO USE: MONTH all Year YEAR 1925

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 50 FEET from Lake Shore In Center of Island AND

FEET 50 FROM THE Lake Shore NO CORNER OF SECTION Round Island

BEING WITHIN Section OF SECTION 10 T. 21 N., R. 06 (E.OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT Govt Lot 5 BLOCK County 9040 OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Govt Lot 5 County Block 9040 Section 10 Twp 21- Rng 06 a one half acre Island in Lake Sawyer King County

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic Supply & Irrigation

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

MAY 16 75 160625

DIRECTOR - DEPARTMENT OF ECOLOGY John Biggs

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X W M Parsons

DATE April 16th 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

10-C-3

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

1. NAME Peter Edgar and-or Edna Grace Olson

ADDRESS 30733 229th Place S. E.

Kent, Washington ZIP CODE 98031

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground Water (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS Well

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 10gpm PRESENTLY USED 10gpm (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED PRESENTLY USED (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: year around

4. DATE OF FIRST PUTTING WATER TO USE: MONTH Aug. YEAR 1944

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 1287 FEET North AND 54 FEET East FROM THE S. W. CORNER OF SECTION 10

BEING WITHIN OF SECTION 10 T. 21 N. R. 6 E. W. M. ~~(E or W.)~~ W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 8&9 BLOCK 2 OF

Lochows Lake Sawyer Tracts, an unrecorded plat
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: That certain portion of Government Lot 3, Section 10, Township 21 North, Range 6 E.W. M. , described as follows: Beginning at the West ¼ Section corner of said Section 10; thence North along the West Line of said Section 1474.33 feet to the southerly line of a 40 foot roadway; thence South 45°11' East along said roadway 57.89 feet to true point of beginning; thence continuing along said roadway south 45° -0' East115.78 feet; South 179.16 feet; thence North 45°0' West 115.78feet; thence North179.16 Feet to the true point of beginning (Being known as Lots 8 and 9, Block 2, Lochow's Lake Sawyer Tracts, according to the unrecorded plat thereof).

COUNTY

7. PURPOSE(S) FOR WHICH WATER IS USED: home and irrigation for two lots

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED:

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED REGISTRY NUMBER

THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

SAR 14 15 14 19 04

ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT-DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Peter E. Olson Edna G. Olson

DATE 6-29-74

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

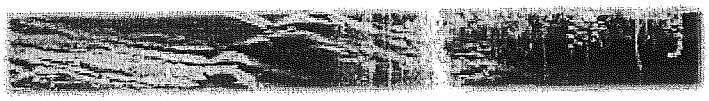
A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE. BUILDING-OLYMPIA, WASHINGTON 98501

ORIGINAL
DWR

10-D-1

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471933122021401

General Location Details:

Name: Olson Peter E

Unique Well ID: S_471933122021401
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 09 QS: SE/NE
Local Number: 21N/06E-09H01
City: Black Diamond Zipcode: 98042
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 48 Feet
Surface Elevation: 515 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

10-D-1

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

1. NAME Peter Edgar and-or Edna Grace Olson

ADDRESS 30733 229th Place S. E.

Kent, Washington ZIP CODE 98031

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground Water (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS Well

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 12 gpm (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 12 gpm

B. ANNUAL QUANTITY CLAIMED (ACRE FEET PER YEAR) PRESENTLY USED

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: year around

4. DATE OF FIRST PUTTING WATER TO USE: MONTH Aug. YEAR 1944

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 1402 FEET North AND 6 FEET East FROM THE S. W. CORNER OF SECTION 10

BEING WITHIN OF SECTION 10 T. 21 N. R. 6E.W.M. (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 6 &7 BLOCK 2 OF Lochows Lake Sawyer Tracts, an unrecorded plat (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Portion of gov. Lot 1 in Section 9 Township 21 N. Range 6 E.W. M., described as follows of Gov. Lot 3 in Section 10, Township 21 N. Range 6 E.W. M. described as follows: Beginning on the West line of said Gov. Lot 3 at a point 1474.33 feet N. from the S. W. corner there of; Thence N. 45°-0' West 57.89 Feet,; thence S. 179.16 feet; thence S. 45° E. 114.46 feet, thence N.179.16 feet thence N. 45°-0' West 57.89 Feet to beginning. Being known as Lots 6 and 7 in Block 2 of Lochow's Lake Sawyer Tracts and unrecorded Plat, less coal and mineral rights. Located in the County of King, State of Washington

COUNTY

7. PURPOSE(S) FOR WHICH WATER IS USED: home and irrigation for two lots

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED:

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED REGISTRY NUMBER

THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

MAR 1 5 1992

ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT-DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Peter E. Olson, Edna G. Olson

DATE 6-29-74

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/ OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL
DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE. BUILDING-OLYMPIA, WASHINGTON 98501

10-D-2

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

DAVID G. FINLEY

S 30730-229 PL SE

KENT, WA ZIP CODE 98031 PHONE NO. 206-432-0307

CE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: SURFACE (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

IF GROUND WATER, THE SOURCE IS N/A

IF SURFACE WATER, THE SOURCE IS LAKE SAWYER

THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 10 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 10 GPM

B. ANNUAL QUANTITY CLAIMED 1 ACRE-FOOT (ACRE FEET PER YEAR) PRESENTLY USED 1 ACRE-FOOT

C. IF FOR IRRIGATION, ACRES CLAIMED N/A PRESENTLY IRRIGATED N/A

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: MONTH N/A CONTINUOUSLY

2. DATE OF FIRST PUTTING WATER TO USE: MONTH — AND — YEAR 1915

3. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 75 FEET — FEET FROM THE NORTHEAST CORNER OF THE PROPERTY CORNER OF SECTION

— FEET — FROM THE — OF SECTION 10 T. 21 N. R. 6 E. (E.~~W.~~) W.M.

BEING WITHIN — OF

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT — BLOCK —

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: COMMENCING AT QUARTER SECTION CORNER OF SECTIONS 9 & 10, TWNSHP 21 NORTH, RANGE 6 E.W.M., IN KING COUNTY, WASH; THENCE NORTH ALONG ESTABLISHED LINE BETWEEN SAID SECTIONS 9 & 10 1530.40 FEET; THENCE SOUTH 45° EAST 106" WHICH IS THE TRUE POINT OF BEGINNING; THENCE NORTH 45°61' EAST 142.64 FEET, MORE OR LESS TO THE SHORE OF LAKE SAWYER; THENCE SOUTH 37° 28' EAST 42.69 FEET; THENCE SOUTH 45° WEST 136.67 FEET; THENCE NORTH 45° WEST 145 FEET TO THE TRUE POINT OF BEGINNING;

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC SUPPLY

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPROPRIATION AND/OR RIPARIAN

COUNTY KING

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED — THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO. 149828

INITIALS

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X David G. Finley

DATE 7 JUNE 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/ OR WELL CONSTRUCTION IS AVAILABLE.

MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

10-0-3

Joe Zumek 30812 22 ad Pl S.E.
Kent. Wn 98031

Parcel (A)

Beginning at the quarter section corner of sections 9 and 10, township 21 north, range 6 east, W.M., in King County, Washington; thence north along the established line between said sections 9 and 10, 1530.9 feet; thence south 45° east 326 feet; thence south 54°50'30" east 170 feet, which is the true point of beginning; thence north 35°09'30" east 133.22 feet to the shore of Lake Sawyer; thence south 75°04'30" east 42.63 feet; thence south 35°09'30" west 147.96 feet; thence north 54°50'30" west 40 feet to the true point of beginning; (Being known as lot 15, block 1, Lochow's Lake Sawyer Tracts, according to the unrecorded plat).

Parcel (B)

Beginning at the quarter section corner of sections 9 and 10, township 21 north, range 6 east, W.M., in King County, Washington; running thence north along the established line between said sections 9 and 10, 1530.9 feet; thence south 45° east 326 feet; thence south 54°50'30" east 210 feet, which is the true point of beginning; thence north 35°09'30" east 147.96 feet to the shore of Lake Sawyer; thence south 78°01'30" east 78.24 feet; thence south 34°09'30" west 178.76 feet; thence north 54°50'30" west 75 feet to the true point of beginning; (Being known as lot 16, block 1, Lochow's Lake Sawyer Tracts, according to the unrecorded plat).

end

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 6 74097251
CASH OTHER NONE

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

RECEIVED
DEPARTMENT OF ECOLOGY
FEB 19 74075051
CASH OTHER NONE

(Short Form) Ø9

Name Grayson Connor

Address 30738 229th pl S. E.

Kent, Wa. Zip Code 98031

Phone No. GE 2-0052

1) Source from which the right to take and make use of water is claimed: ☒ Surface Water ☐ Ground Water

If surface water, please indicate source; give name if known:

Lake Saywer
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: That portion of Government Lot 3 of section 10 township 21 North Range 6 East W.M. in King Co. Wash, Described as follows: Beginning at the West quarter corner of said section, a distance of 1539.90 feet; thence south 45°00'00'' east 241.00 feet to the true point of beginning; thence north 45°00'00'' west 45 feet; thence north 45°00'00' east 130.74 feet more or less to the shore of lake Sawyer; thence south 37°28'00'' east alongsaid shore 45.39 feet, more or less to a point where the true point of beginning bears south 45°00'00''west; thence south 45° 00'00'' west 124.79 feet, more or less to the true point of beginning.

If located within the limits of a recorded platted property:

Lot 9 Block 1 of Lochow's Lake Sawyer Tracts
(Give name of plat or addition)

In addition, please indicate Sec. 10 T. 21 N., R. 6 E ~~E/W~~ W.M.

County in which lands are located king

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

OCT 10 74086435

Director, Department of Ecology John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Grayson B Connor

Date February 16, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to: Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

10-04

Legal discription

Beginning at the West Quarter Corner of Sect 10. Township 21 N, Range 6E, W.M., in King County, Wash, thence North along the established West line of said Section, 1530.9 feet; thence South 45° East 326 feet; thence South 34° 50' 30" E 285 feet to the true point of Beginning; thence North 34° 09' 30" East 178.76 feet to the shore of Lake Sawyer; Thence South 40° 50' 30" East 44.6 feet; thence South 35° 09' 30" West 167.20 feet; thence North 54° 50' 30" West 40 feet to the true point of the beginning

" Being known as Tract 17, Block 1, Lockwood Lake Sawyer Tracts, according to the unrecorded plat thereof."

COMMONLY KNOWN AS 30820 229TH PLSE
LAKE SAWYER - MR & MRS RW HARE TU-6-2859

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
[illegible] 153142
[illegible] NONE

Water Right Claims Registration

Water Right Claim

Name Elmer A. Thiele

09

Address 30851-229 pl SE
Kent Wn. Zip Code 98031

Phone No 886-2784

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☑ Ground Water

If surface water, please indicate source: give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☑ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used:

Lot 102106 Block 9080 Code 5130 Sec 10
Twp 21 R 4 06 — W 190 FT of E 802 ft of E
105.97 FT of W 289.72 FT of SL 3 in NW
¼ Less E/M R 4 TS.

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____ (Give name of plat or addition)

In addition, please indicate Sec. 10 T. 621 N., R. 6 E W. W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

FEB 03 75 129883

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Elmer A Thiele

Date 6/28/74

If claim filed by designated representative print or type full name and mailing address of agent below.

☑ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

10-E-10
1

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_26601_01

General Location Details:

Name: Hoffman

Unique Well ID: GrpB_26601_01
Parcel ID Number: 1021069080
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 10 QS: SW/NW
Local Number: 21N/06E-10
City: Black Diamond Zipcode: 98042
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Well Well Depth: 43 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
7/1/1996	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.1 mg/L MDL:	

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

10 - E - [redacted] 1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 08/08/2006
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Annual Update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
26601 Q	HOFMANN WATER SYSTEM	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

GARY HOFMANN [WS - PRIMARY CONTAC
30851 - 229TH PLACE SE
KENT, WA 98042

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 011260

THIELE, ELMER
30851 - 229TH PLACE, SE
KENT, WA 98042

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360) 886-1515		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [x] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL		X										X				X						43	22		10	21N	06E

10-E-01

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
26601 Q	HOFMANN WATER SYSTEM	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	2	2
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	2		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		2	2

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 5

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	**ANNUALLY**	**ONCE EVERY 3 YEARS**
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
JAN 29 74 070410
CASH ___ OTHER / NONE ___

Water Right Claims Registration

Water Right Claim

Name C. B. MAYER

Address 30815 229th PL. SE.
KENT, WASH. Zip Code 98031

(Short Form) Ø9

Phone No. ___

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water
If surface water, please indicate source; give name if known:
GROUND WATER
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:
☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) ___

3) Legal description of lands on which water is used: THAT PORTION OF GOV LOT 3, SEC 10, TWP 21 N, R 6 E, W.M. DESCRIBED AS FOLLOWS: BEGINNING AT THE W QTR. CORNER OF SEC 10; TN NORTH ALONG THE W LINE THEREOF 1474.33 FT, TN S 45°00'00" E 289.45 FT, TN S 54°50'30" E 156 FT. TO TPOB. TN S 54°50'30" E 156 FT, TN S 190.1 FT, TN N 34°34'30" W 82.95 FT, TN N 54°50'30" W 98.42 FT, TN N 154.96 F TO TPOB.

If located within the limits of a recorded platted property:

Lot ___ Block ___ of ___
(Give name of plat or addition)

In addition, please indicate Sec. 10 T. 21 N. R. 6 (E) W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned
Water Right Claim Registry No.

MAR 28 74 057836

Director, Department of Ecology [signature]

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X [signature]

Date 1/28/74

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

10-E-02

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471924122020301

General Location Details:

Unique Well ID: S_471924122020301
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 10 QS: SW/NW
Local Number: 21N/06E-10E03
City: Black Diamond
Zipcode: 98010
Data Source: Historic - unknown source
Who are these data sources?
Location Type: Well
Well Depth: 42 Feet
Surface Elevation: 510 Feet
What is surface elevation?
Location Accuracy: QTRQTRSEC
What are these location accuracies?

Name: Mayer

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

10-E-02

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

1. NAME OWNER (WILLIAM D. LOFTIS & MARGARET J. LOFTIS) FROM DEVELOPMENT DATE 7-20-67 TO DATE) OF SAWYER GLEN LOT #1, PLAT OF SAWYER GLEN, RECORDED IN VOL #84 OF PLATS, PG 62 IN KING CO. WN. WATER RIGHT IS VALID TO CURRENT OWNER OR TRANSFERRABLE TO ANY FUTURE OWNER/S OF LOT #1 OF SAID PLAT

ADDRESS 30739-229TH PL. S.E.

KENT, WN. ZIP CODE 98031

RECEIVED
DEPARTMENT OF ECOLOGY
MAR 30 73 035909

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND CASH OTHER NONE (SURFACE OR GROUND WATER)

W.R.I.A. (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS DEVELOPED WELL.

B. IF SURFACE WATER, THE SOURCE IS —

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 100 GALS./MIN. PRESENTLY USED 100 GALS/MIN (INTERMITTANTLY) (~~CUBIC FEET PER SECOND~~ OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 1,206 ACRE-FT/YR PRESENTLY USED NOT METERED JULY 1 THRU AUG 30 (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED 9 ACRES PRESENTLY IRRIGATED 9 ACRES (INTERMITTANTLY) (HOUSEHOLD SUMMER GARDENS)

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: YEAR AROUND (SUPPLIES 12 RESIDENCES)

4. DATE OF FIRST PUTTING WATER TO USE — MONTH JULY YEAR 1967

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL — FEET — AND — FEET — FROM THE — CORNER OF SECTION —

BEING WITHIN — OF SECTION 10 T. 21 N. — R. 6E (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 1 ~~BLOCK~~ PLAT OF SAWYER GLEN PLAT RECORDED, VOL #84 OF PLATS, PG 62, KING CO. WN. (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: RESIDENTIAL LOTS #1 THRU #13 OF SAWYER GLEN, PLAT RECORDED, VOL #84 OF PLATS, PG 62, KING CO. WN.

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED (12) HOMES SERVED YEAR AROUND PLUS IRRIGATION OF SUMMER GARDENS AS DESIRED BY EACH

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: KING CO. WATER FRANCISE #606 DATED JAN 27, 1969

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED REGISTRY NUMBER

APR 11 73 0 [illegible] THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

[signature] Ecology

ASSISTANT DIRECTOR ~~DIVISION OF WATER MANAGEMENT~~ DEPARTMENT OF ~~WATER RESOURCES~~

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X William D. Loftis

DATE 3/28/73

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☒ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL
DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE. BUILDING OLYMPIA WASHINGTON 98501

King County Group B or ODW info not available =

10-E-03

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

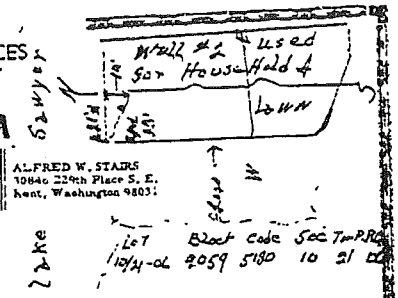
WATER RIGHT CLAIM

Well #2 used for House Hold & Lawn

Lake Sawyer

ALFRED W. STAIRS
30846 229th Place S. E.
Kent, Washington 98031

Lot	Block	Code	Sec	Twp	RG
10/21-06	9059	5130	10	21	06



1. NAME Alfred W Stairs
ADDRESS 30846 229th Pl SE
Kent, Washington ZIP CODE 98031

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground (SURFACE OR GROUND WATER)
Well #2 Dug W.R.I.A. 09 (LEAVE BLANK)
DEPARTMENT OF ECOLOGY
SEP 27 71 007887

A. IF GROUND WATER, THE SOURCE IS Dug Well from Lake Sawyer
CASH ___ OTHER ✓ NONE ___

B. IF SURFACE WATER, THE SOURCE IS ___

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:
A. QUANTITY OF WATER CLAIMED Apry 600 Gal per hr 10 G.P.M. PRESENTLY USED Apry if Well #1 went Dry 5 hrs per Day (Jan. 1 to Dec 31) 3,000 Gal per Day (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)
B. ANNUAL QUANTITY CLAIMED 1,080,000 Gals (3 1/3) (ACRE FEET PER YEAR) PRESENTLY USED 1 1/3 acre feet Apry 432,000 Gal (Dry Day)
C. IF FOR IRRIGATION, ACRES CLAIMED Apry 2 water Acres Lawn PRESENTLY IRRIGATED Only day 4500 Gal
D. TIME(S) DURING EACH YEAR WHEN WATER IS USED. Jan 1 to Dec 31 House & Lawn

4. DATE OF FIRST PUTTING WATER TO USE ~~[illegible]~~ 1 MONTH April YEAR 1958 Bought the House Then

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 21' ~~[illegible]~~ FEET ~~[illegible]~~ E AND 12' ~~[illegible]~~ FEET South East FROM THE North West CORNER OF PROPERTY IN SECTION 10
BEING WITHIN South OF SECTION 10 T. 21 N. orth R. 6 East (E. OR W.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY LOT 3 BLOCK 9059 OF
Code 5130 Sec 10 twp 21 RG 06 (Lake Sawyer Wm
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED. 10-21-06 - 9059 - 5130 - 10 - 21 - 06
Beg 725 Ft E & 835' N of SW Cor of GL 3 - th W 40' thn 34-34-30 W 303.95 Ft thn 35-09-30 E to Shore of Lake Sawyer Th Sely Alg Sd Shore Ln to a pt N of Beg Th S To Beg & Sh LDs Adj Less C/M RGTs Less Por NWly of A Ln Beg on Shore Ln At A pt 49.65' Sely from Most NLy cor of Above Desc Tract Th Sely To A pt 34-34-30 E 65' from Most WLy Cor Th of COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: House Hold & Lawn (fire protection)

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Owner of Said property
In Witness of Wn Title ins Co. No other Source of Water

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED REGISTRY NUMBER
SEP 27 71 005913 < THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
Glen H. Fiedler
ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT-DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF
X Alfred W. Stairs
DATE Aug. 17/1971
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☒ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE. BU. DING OLYMPIA, WASHINGTON 98504

ORIGINAL

10-E-04

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 29 74 173671
CASH ~~OTHER~~ NONE

1. NAME William G TYSON
ADDRESS 6315 12 st East
Tacoma, Wa ZIP CODE 98424

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)
A. IF GROUND WATER, THE SOURCE IS Well
B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:
A. QUANTITY OF WATER CLAIMED _____ PRESENTLY USED 0 (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)
B. ANNUAL QUANTITY CLAIMED _____ PRESENTLY USED 0 (ACRE FEET PER YEAR)
C. IF FOR IRRIGATION, ACRES CLAIMED _____ PRESENTLY IRRIGATED _____
D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: _____

4. DATE OF FIRST PUTTING WATER TO USE: MONTH _____ YEAR _____

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: _____ FEET _____ AND _____
FEET _____ FROM THE _____ CORNER OF SECTION _____
BEING WITHIN _____ OF SECTION 10 T. 21 N., R. 6E (E.OR W.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 1 BLOCK _____ OF Sawyer Glen (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Lot 7, Sawyer Glen, according to the Plat recorded in Volume 84 of Plats, page 62 and 63, in King County, Wa.
COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic Supply ?

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: _____

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
MAR 31 75 155694
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
X W G Tyson
DATE 5/25/74
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM
ORIGINAL DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P.O. BOX 829 OLYMPIA, WASHINGTON 98504

10-E-05

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

NOV 22 72 022074

OTHER

1. NAME Donald F. Miller and Zola C. Miller

ADDRESS 1519 Cole St.

Enumclaw, Wash. ZIP CODE 98022

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS Well

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED .05 cubic feet per min. PRESENTLY USED .05 cubic feet per min. (CUBIC FEET PER SECOND OR ~~GALLONS PER MINUTE~~)

B. ANNUAL QUANTITY CLAIMED .10 acre feet PRESENTLY USED .10 acre feet (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED --- PRESENTLY IRRIGATED ---

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: entire year will be used.

4. DATE OF FIRST PUTTING WATER TO USE: MONTH --- YEAR before 1950

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 3 FEET west AND 4 FEET north FROM THE southeast CORNER OF ~~SECTION~~ Parcel B

BEING WITHIN northwest quarter OF SECTION 10 T. 21 N., R. 6 E. (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Those portions of the NW¼ of Sec. 10, Twn. 21 N, R 6, EWM, desc. as follows: Parcel A: The W 60.5' of Govt. Lot 2, Except the S 30' thereof for road AND Parcel B: The E 12.50' of N 16.44' of S 201.37' of Govt. Lot 3 in sd. Sec. 10 and a tract of land desc. as follows: Beg. at a pt. on the W line of Govt. Lot 2 N 00°01'45" W 311.39' ~~from the SW cor. of Govt. Lot 2; thn. N 00°01'45" W 51.43'; thn.~~ S 11°10'30" W 52.42'; thn. N 89°58'14" E 10.16' to the true pt. of beginning.

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: domestic

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: appropriation for in excess of twenty-five years

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

Nov 24 72 019811

DIRECTOR - DEPARTMENT OF ECOLOGY John Biggs

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Donald F. Miller

DATE November 21, 1972

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $7.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO: DEPARTMENT OF ECOLOGY WATER RIGHT CLAIMS REGISTRATION P.O. BOX 829 OLYMPIA, WASHINGTON 98504

Locate to QTR-QTR

10-E-06

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
NOV 28 7306093
CASH ___ OTHER ___ MONEY ___

Water Right Claims Registration

Water Right Claim

Name ROBERT W. McQUEEN (Short Form) 09

Address 31042 - 228 AVE. S.E.

KENT, WA. Zip Code 98031 Phone No. 886-2927

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: LOTS 2, 3, 4, 5, 8, 9, & 10 OF SAWYER GLEN, ACCORDING TO THE PLAT RECORDED IN VOLUME # 84 OF PLATS, PAGE 62, IN KING COUNTY, WASHINGTON.

If located within the limits of a recorded platted property:

Lot 1 Block — of SAWYER GLEN AS DESCRIBED ABOVE
(Give name of plat or addition)

In addition, please indicate Sec 9 T. 21 N., R. 6E E./W.W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered: JAN 15 74

This has been assigned Water Right Claim Registry No. 048418

Director, Department of Ecology: Bigg

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Robert W. McQueen

Date 27 November, 1973

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☒ Additional information relating to water quality and/or well construction is available.

A FEE OF $20.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

Property owner listed in IMap property history at this address

10-E-6

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 27 74 10659
CASH OTHER NONE

Water Right Claims Registration

Water Right Claim

09

Name PAUL J FRIDDELL JR.

Address 31024 230TH PL SE.

KENT WASH. Zip Code 98031 Phone No. 886-2547

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: SEE ATTACHMENTS:

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 10 T. 21 N., R. 6E E/W, W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

DEC 074091720

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Paul J Friddell Jr

Date May 24, 1974

If claim filed by designated representative print or type full name and mailing address of agent below:

_____

_____

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

10-E-[illegible]
08

DESCRIPTION:

PARCEL A:

Commencing at the Southeast corner of Government Lot 3, Section 10, Township 21 North, Range 6 East, W.M., records of King County, Washington; thence North 0°01'45" West 30 feet on the established East boundary line of said Government Lot 3; thence North 44°25'10" West 576.66 feet to the true point of beginning; thence South 44°25' 10" West 576.66 feet to the true point of beginning; thence South 44°25'10" East 8 feet; thence North 51°22'26" East 70 feet; thence North 37°50'00" East 192.01 feet; thence North 4°07'00" West 7.91 feet; thence South 41°28'20" West 261.17 feet to the true point of beginning.

PARCEL B:

Commencing at the Southeast corner of Government Lot 3, Section 10, Township 21 North, Range 6 East, W.M., records of King County, Washington; thence North 0°01'45" West 30 feet on the established East boundary line of said Government Lot 3; thence North 44°25' 10" West 576.66 feet to the true point of beginning; thence North 41°28'20" East 261.17 feet; thence North 26°02'00" West 61 feet; thence South 45°15'20" West 279.74 feet; thence South 44°25'10" East 75 feet to the true point of beginning.

PARCEL C:

Commencing at the Southeast corner of Government Lot 3, Section 10, Township 21 North, Range 6 East, W.M., records of King County, Washington; thence North 0°01'45" West 30.00 feet on the established East boundary line of said Government Lot 3; thence North 44°25'10" West 651.66 feet to the true point of beginning; thence North 45°15' 20" East 142.664 feet; thence South 89°45'30" West 101.75 feet; thence South 0°14'30" East 100.00 feet to the true point of beginning.

State of Washington
Department of Ecology

REC. DEPARTMENT OF ECOLOGY
MAY 27 74 10658
CASH OTHER NONE

Water Right Claims Registration

Water Right Claim

Name PAUL J FRIDDELL JR. 09

Address 31024 230th Pl SE

KENT, WASH. Zip Code 98031 Phone No. 886-2547

1) Source from which the right to take and make use of water is claimed: [X] Surface Water [ ] Ground Water

If surface water, please indicate source; give name if known:

LAKE SAWYER

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

[ ] Domestic [ ] Stockwatering [X] Irrigation (lawn and garden) [ ] Other Use (specify) _____

3) Legal description of lands on which water is used: SEE ATTACHMENT. - PARCEL "B" ONLY.

PARCEL B:

Commencing at the Southeast corner of Government Lot 3, Section 10, Township 21 North, Range 6 East, W.M., records of King County, Washington; thence North 0°01'45" West 30 feet on the established East boundary line of said Government Lot 3; thence North 44°25'10" West 576.66 feet to the true point of beginning; thence North 41°28'20" East 261.17 feet; thence North 26°02'00" West 61 feet; thence South 45°15'20" West 279.74 feet; thence South 44°25'10" East 75 feet to the true point of beginning.

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 10 T. 21 N., R. 6E E/W, W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

DEC 5 74091219

Director, Department of Ecology: John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Paul J Friddell Jr

Date May 24 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

[ ] Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

10-E-WR 09

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

1. NAME Joseph Zumek

ADDRESS 30812 224th Pl. S.E

Kent, Washington ZIP CODE 98031 PHONE NO. 886-2632

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: ~~Well~~ Surface (SURFACE OR GROUND WATER)

Lake Sawyer W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS ~~Well~~ Lake Sawyer

B. IF SURFACE WATER, THE SOURCE IS —

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 5 GPM PRESENTLY USED 5 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 3/4 acre ft. PRESENTLY USED 3/4 acre ft. (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED 1/3 acre PRESENTLY IRRIGATED 1/3 acre

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continously

4. DATE OF FIRST PUTTING WATER TO USE: MONTH 5/3/71 YEAR 1971

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: ~~660~~ 1320 FEET North AND 500 FEET East FROM THE West quarter CORNER OF SECTION 10

BEING WITHIN S.W.¼ N.W.¼ OF SECTION 10 T. 21 N., R. 6E (E.OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 15 & 16 BLOCK ____ OF Lake Sawyer Tracts (Loc Homes)
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:

Legal Description attached

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic Supply & Irrigation

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: appropriation

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED ____ THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

MAR 17 1975 49829

DIRECTOR, DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Joseph Zumek

DATE 6/27/74

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☒ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

10-E-16

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 874088503
CASH OTHER NONE

Water Right Claims Registration

Water Right Claim

Name Ralph W. Hare (Short Form) 09

Address 30820 229 Pl. S.E

Kent, WA Zip Code 98031 Phone No. Tu-6-2859

1) Source from which the right to take and make use of water is claimed: ☒ Surface Water ☐ Ground Water

If surface water, please indicate source; give name if known:

Lake Sawyer

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used:

THAT
LOT 17 Block 1 — Being Known as Lochows Lake Sawyer Trs. unrec. less all C&M The RGT To explore for & mine The same

If located within the limits of a recorded platted property:

Lot 17 Block 1 of Lochows Lake Sawyer Trs. unrec.
(Give name of plat or addition)

In addition, please indicate Sec. 10 T. 21 N., R. 6E ~~W~~, W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered — This has been assigned Water Right Claim Registry No.

NOV 1 0 74088424

Director, Department of Ecology John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Ralph W. Hare

Date 5-6-74

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

10-E-17

11

State of Washington
Department of Ecology

RECEIVED
JUL 20 73 043870

Water Right Claims Registration

Water Right Claim

WH ___ OTHER ___ NONE ___

Name Alfred H. Masar (Short Form) 09

Address 4002 24th Place South

Seattle, Washington Zip Code 98108 Phone No. 725-0129

1) Source from which the right to take and make use of water is claimed X Surface Water ___ Ground Water

If surface water, please indicate source, give name if known

Lake Sawyer

(River, stream, lake, pond, spring etc.)

2) Purpose(s) for which water is used

X Domestic ___ Stockwatering X Irrigation (lawn and garden) ___ Other Use (specify) ___

3) Legal description of lands on which water is used Lot 18 Block 1 5130 Lochow's Lake Sawyer Tracts Unrecorded, Less all C.I.M. & The Right to Explore For & Mine the Same.

If located within the limits of a recorded platted property

Lot ___ Block ___ of ___ (Give name of plat or addition)

In addition, please indicate Sec 10 T 21 N.R 6 E (E.W.) (W.M)

County in which lands are located King County

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date returned ___ This has been assigned Water Right Claim Registry No. Aug 1 a 13 033498

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief

X Alfred H. Masar

Date 7 July 1973

If claim filed by designated representative print or type full name and mailing address of agent below

Additional information relating to water quality and or well construction is available

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact along with your fee to: Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

King County IMAP property history lists this property owner ... at 30824 229th PL SE Black Diamond, WA 98010 : PARCEL #: 4391600090

10-E-12

12

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 17 74 124603
CASH OTHER None

1. NAME Robert B Eaton

ADDRESS 23232 SE 31st

Kent, Washington ZIP CODE 98031

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Lake Sawyer (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS

B. IF SURFACE WATER, THE SOURCE IS Lake Sawyer

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 120 gal per min. (~~CUBIC FEET PER SECOND OR~~ GALLONS PER MINUTE) PRESENTLY USED 4 hr. per day - 3 days per wk

B. ANNUAL QUANTITY CLAIMED 15 acre ft. (ACRE FEET PER YEAR) PRESENTLY USED Approx 14 acre ft

C. IF FOR IRRIGATION, ACRES CLAIMED 1 Acre w/Green house PRESENTLY IRRIGATED 1 Acre w/Greenhouse

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: High use May - Oct. Min use Nov. - April

4. DATE OF FIRST PUTTING WATER TO USE: ____ MONTH April YEAR 1958

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: Approx. 318' FEET West AND Approx 147 FEET North of ~~FROM~~ THE Center ~~CORNER~~ OF SECTION 10

BEING WITHIN ____ OF SECTION 10 T. 21 N. 6 E R. ____ (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ____ BLOCK ____ OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:

The East 140' of The West 397' of Government Lot 2, Section 10 TWP 21 R 6 E Willamette Meridian in King County except The South 30' There of For Road

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Irrigation

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Chapter 284, Laws of 1969

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED REGISTRY NUMBER

JAN 30 75 1 1 HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

John Biggs

ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT-DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Robert B. Eaton

DATE June 14, 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/ OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL
DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE. BUILDING-OLYMPIA, WASHINGTON 98501

10-F-1

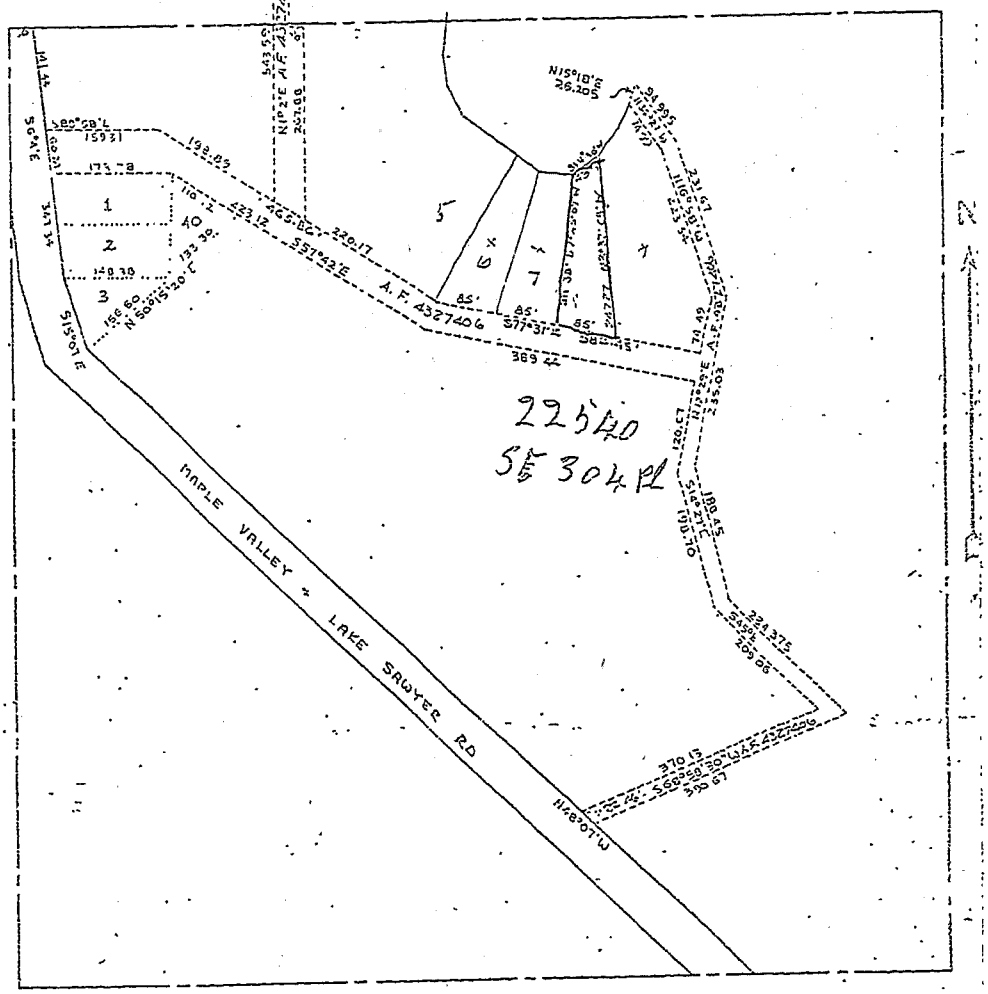
1

27149

This sketch is not based upon a survey of the property described in Order No. ____. It is furnished without charge solely for the purpose of assisting in locating the said premises. It does not purport to show all roads or easements. The Company assumes no liability for inaccuracies therein.

Security Title Insurance Company of Washington

Govt Lot 1
Sec. 9 Twp 21N R6E, W.M.



225'±20
SE 304 Pl

344-4141

STI LEGAL DESCRIPTION

That portion of Government Lot 1, in Section 9, Township 21 North, Range 6 East, W.M, in King County, Washington, described as follows:

Beginning at the northwest corner of said Government Lot 1;
thence south 88°58'00" east, along the northerly line thereof, a distance of 30 feet to a point on the easterly margin of the established County Road;
thence south 6°04' east, along said easterly margin 141.44 feet;
thence south 88°58' east, 159.31 feet;
thence south 57°42' east, 465.86 feet;
thence south 77°31' east, 170 feet to the true point of beginning of the tract herein described;
thence continuing south 77°31' east, 85 feet;
thence north 3°37'08" west, 247.27 feet;
thence south 64°30' west, 43 feet to a point which bears north 7°45'07" east from the true point of beginning;
thence south 7 °45'07" west, 211.83 feet to the true point of beginning.
(Also known as Lot 8, in Block 2 of Lochow's Lake Sawyer Tracts, Division 2, an unrecorded plat);
TOGETHER WITH an easement for roadway purposes over the undedicated road as described in that certain declaration of easement recorded March 26, 1953, under Auditor's file No. 4327406, records of King County.

State of Washington
Department of Ecology

JAN 2 1 74 068785

CASH ___ OTHER ___ NONE

Water Right Claims Registration

Water Right Claim

Name [illegible] Ø9

Address 23222 S.E. [illegible]

[illegible] Zip Code [illegible] Phone No 88[illegible]-1246

1) Source from which the right to take and make use of water is claimed ☐ Surface Water ☒ Ground Water

If surface water, please indicate source, give name if known

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: THE EAST 68 FEET OF THE WEST 267 FEET OF GOVT. LOT 2, SEC. 10, TOWNSHIP 21 NORTH, RANGE 6 E, W.M., IN [illegible] AND THE EAST 68 FEET OF THE WEST 189 FEET OF GOVT. LOT 2, SECTION [illegible] TOWNSHIP 21 NORTH, RANGE 6 E, W.M., [illegible] COUNTY, WASHINGTON

If located within the limits of a recorded platted property:

Lot ___ Block ___ (Give name of plat or addition)

In addition, please indicate Sec. 10 T. 21 N.R. 6 E. W.M.

County in which lands are located KING COUNTY

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered ___ This has been assigned Water Right Claim Registry No. MAR 11 74 055651

Director, Department of Ecology [signature]

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X [signature]

Date 1-20-74

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

10-F-2

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

OTHER / INSIDE

Name Rodney K. Lion

Address 23222 SE 312TH

Kent Zip Code 98031

Phone No 886-1246

09

1) Source from which the right to take and make use of water is claimed: X Surface Water ☐ Ground Water

If surface water, please indicate source; give name if known.

Lake Sawyer
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used.

☐ Domestic ☐ Stock watering X Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used THE EAST 68 FEET OF THE WEST 252 FEET OF GOVERNMENT LOT 2, SECTION 10, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M. IN KING County, WASHINGTON AND THE EAST 68 FEET OF THE WEST 189 FEET OF GOVERNMENT LOT 2, SECTION 10, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M. IN KING COUNTY, WASHINGTON.

If located within the limits of a recorded platted property:

Lot Block of
(Give name of plat or addition)

In addition, please indicate Sec. 10 T. 21 N.R. 6 E W.M

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

WRIN005652

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief

X Rodney K. Lion

Date 1-20-76

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $5.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

10-F-3

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471916122010701

General Location Details:

Unique Well ID: N_471916122010701
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 10 QS: NE/SE
Local Number: 21N/06E-10J01
City: Black Diamond Zipcode: 98010
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Well Well Depth:
Surface Elevation: 573 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: "not given"

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

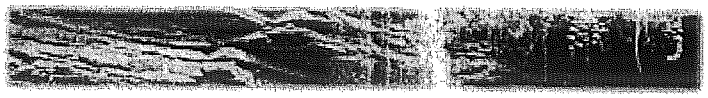
Related Information:

Water and Land Resources Topics

Groundwater Management

10-J-1

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471910122012401

General Location Details:

Unique Well ID: N_471910122012401
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 10 QS: NW/SE
Local Number: 21N/06E-10K01
City: Black Diamond Zipcode: 98042
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Well Well Depth:
Surface Elevation: 556 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: "not given"

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

10-K-1

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471400122020401

General Location Details:

Unique Well ID: S_471400122020401
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 10 QS: SW/NW
Local Number: 21N/06E-10E01
City: Black Diamond Zipcode: 98042
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 45 Feet
Surface Elevation: 500 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: Schmml

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

10-N-1

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

1. NAME Palmer Coking Coal Co
ADDRESS Box A
Black Diamond Wash ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Surface (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS _____

B. IF SURFACE WATER, THE SOURCE IS Ginder Lake

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 180,000 gal per day (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 180,000 gal per day

B. ANNUAL QUANTITY CLAIMED 135 (ACRE FEET PER YEAR) PRESENTLY USED 135

C. IF FOR IRRIGATION, ACRES CLAIMED _____ PRESENTLY IRRIGATED _____

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continuously

4. DATE OF FIRST PUTTING WATER TO USE: MONTH _____ YEAR 1914

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 850 FEET S AND 620 FEET W FROM THE N E CORNER OF SECTION 11

BEING WITHIN — OF SECTION 11 T. 21 N., R. 6 (E. or W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT _____ BLOCK _____ OF _____
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
NE 1/4 of SW 1/4 Sec 11-21-6 E WM

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: INDUSTRIAL

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPROPRIATION

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

MAR 13 75 14 7 53

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Palmer Coking Coal Co VP

DATE 24 June 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $ 5.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

1-A1

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy Cheatham

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Roy Cheatham Address 25521 SE 310th, Black Diamond

(2) LOCATION OF WELL: County King SW ¼ NE ¼ Sec. 11 T. 21 N., R. 06 W.M.

Bearing and distance from section or subdivision corner Tract 2 Short Plat # 976056

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6&4 inches.
Drilled 127 ft. Depth of completed well 127 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 40 ft.
Threaded ☐ 4 " Diam. from ..... ft. to 127 ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☒ No ☐
Type of perforator used Torch
SIZE of perforations 1/8 in. by 3 in.
80 perforations from 80 ft. to 120 ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 50 ft. below top of well Date 3/11/81
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 10 gal./min. with 50 ft. drawdown after 2 1/2 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water .... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	4
Brown decayed rock	4	12
Gray sandstone	12	70
Gray sandstone - water	70	127
Coal	127	—

Work started 3/9 19 81 Completed 3/11 19 81

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)

Address 19415 108TH Ave SE Renton 98055

[Signed] Brad Johnson
(Well Driller)

License No. 0233 Date 3/11, 19 81

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050 1-20

G-1

The Department of Ecology does NOT Warr ty the Data and/or the Information on this Well P ort.

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

ENTERED

Notice of Intent W117820
UNIQUE WELL I.D. # AFA-730
Water Right Permit No. 9868

(1) OWNER: Name B&M Investments Address 3311 NW 116th way, Vancouver, C

(2) LOCATION OF WELL: County King SW 1/4 NE 1/4 Sec. 11 T. 21 N.R. 6E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 31064 157th Ave SE, Kent Auburn

TAX PARCEL NO.: KCBLA-L96M0080 21-6E-11G

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
☒ New Well Method:
☐ Deepened ☐ Dug ☐ Bored
☐ Reconditioned ☐ Cable ☐ Driven
☐ Decommission ☒ Rotary ☐ Jetted

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 100 feet. Depth of completed well 106 ft.

(6) CONSTRUCTION DETAILS
Casing Installed:
☒ Welded 6" Diam. from 0 ft. to 100 ft.
☐ Liner installed ____" Diam. from ____ ft. to ____ ft.
☐ Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand ____
Material placed from ____ ft. to ____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level ____ ft. below top of well Date ____
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest ____ gal./min. with ____ ft. drawdown after ____ hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☐ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	3
Brown hardpan gravel	3	9
Brown silty clay	9	39
Brown sandy silt	39	65
Gray clay	65	100
Well waiting for decision on possible deepening - no water		

RECEIVED
AUG 31 1999
DEPT OF ECOLOGY

Work Started 8-23-99 Completed 8-24-99

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson License No. 0233
(Licensed Driller/Engineer)

Trainee Name ____ License No. ____

Drilling Company Johnson Drilling Co., Inc

(Signed) [signature] License No. 0233
(Licensed Driller/Engineer) 98055

Address 19415 108th Ave SE Renton, WA

Contractor's Registration No. JOHNSDC020M Date 8-24-99

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

11-6-2

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No 6

Permit No

(1) OWNER: Name Lee Ruckert Address [illegible]

(2) LOCATION OF WELL: County King SW ¼ SE ¼ Sec. 4 T. 21 N., R. [illegible] W.M.

Bearing and distance from section or subdivision corner Tract 3 - Plat # 970038

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)...
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 & 4 inches.
Drilled 240 ft. Depth of completed well 240 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 60 ft.
Threaded ☐ 4 " Diam. from 0 ft. to 240 ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used Torch
SIZE of perforations 1/8 in. by 3 in.
32 perforations from 190 ft. to 240 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 40 ft. below top of well Date 2/4/80
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 30 gal./min. with 100 ft. drawdown after 4 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown decayed rock	3	12
Black coal	12	48
White solid rock	48	215
White solid rock - water bearing	215	240

FEB 28 1980

Work started 1/31, 1980 Completed 2/4, 1980

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 2/4, 1980

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

11-4-1

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

King County Home News Services Comments Search

Natural Resources and Parks
Water and Land Resources Division

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_02389_01

General Location Details:

Name: Diamond Ridge

Unique Well ID: GrpB_02389_01
Parcel ID Number: 1121069077
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 11 QS: SE/NE
Local Number: 21N/06E-11
City: King County
Zipcode: 98010
Data Source: Seattle - KC Health
Who are these data sources?
Location Type: Well
Well Depth: 240 Feet
Surface Elevation: 0 Feet
What is surface elevation?
Location Accuracy: Parcel
What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
8/6/1997	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

11-H-1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 02/26/2002
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
02389 7	DIAMOND RIDGE	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

MATTHEW REICHERT [WS - PRIMARY CO
PO BOX 353
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 008174

DIAMOND RIDGE
NEED PRIMARY CONTACT O TITLE: OWNER ORG - PRI
25824 SE 310TH ST
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone:		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [x] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	Well 01		X										X				X						240	30		11	21N	06E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
02389 7	DIAMOND RIDGE	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	5	Undetermined
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	5		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
28. TOTAL SERVICE CONNECTIONS		5	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 13

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. AH5807

Water Right Permit No. 21611Q

(1) OWNER: Name Ken Marshall Address 22231 SE 268th, Maple Valley 98038

(2) LOCATION OF WELL: County King SW¼ SE¼ Sec. 11 T. 21 N., R. 6 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 25GXX 310th SE Black Diamond

(3) PROPOSED USE: ☐ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☒ Municipal ☐ Other

(4) TYPE OF WORK: Owner's number of well (if more than one)

Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 300 feet. Depth of completed well 300 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 28 ft.
Welded ☐ Liner installed ☒ Threaded ☐ PVC 4" Diam. from -1 ft. to 300 ft.
" Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used saw
SIZE of perforations 1/8 in. by 3 in.
60 perforations from 120 ft. to 160 ft.
60 perforations from 220 ft. to 300 ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay, cement
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 80 ft. below top of well Date 4-13-92
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 7 gal./min. with stem set at 250 ft. for 2 1/2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	3
Brown clay	3	12
Brown hardpan	12	15
Gray sandstone	15	140
Gray sandstone water	140	160
Gray solid rock	160	190
Gray sandstone coal	190	205
Gray sandstone	205	300

RECEIVED
APR 21 1992
DEPT. OF ECOLOGY

Work started 4-8 19 Completed 4-13 19 92

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 19415 108th Ave SE Renton 98055

(Signed) Bruce Johnson (WELL DRILLER) License No. 0233

Contractor's Registration No. JOHNSDC207DM Date 4-13 19 92

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

4-14-92

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21/06/11 H

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. ...

Permit No. ...

(1) OWNER: Name Don Fisher Address 25527 SE 310th, Black Diamond

(2) LOCATION OF WELL: County King S½ of SE¼ NE¼ Sec. 11 T. 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ...
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 240 ft. Depth of completed well 240 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 23 ft.
Threaded ☐ PVC 4" Diam. from +2 ft. to 246 ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☒ No ☐
Type of perforator used saw
SIZE of perforations 1/8 in. by 3 in.
70 perforations from 85 ft. to 240 ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ...
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft
Static level 65 ft. below top of well Date 11-19-86
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ...
Yield: 8 gal./min. with 120 ft drawdown after 2½ hrs.
" " " " AIR JET "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown surface	0	2
Brown decayed rock	2	11
Tan rock (sandstone)	11	56
Gray rock	56	56
Brown rock	56	58
Black rock -	58	63
Gray rock - seepage	63	135
Dark gray rock	135	143
Gray rock - seepage	143	184
Dark gray rock	184	188
Gray rock	188	215
Gray rock - water	215	220
Gray rock	220	240

Work started 11-14 19 86 Completed 11-20 19 86

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print) 98055

Address 19415 108th Ave SE Renton

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 11-20, 19 86

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

11-H-3

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

1. NAME Palmer Coking Coal Co

ADDRESS Box A

Black Diamond Wash ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Surface (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS

B. IF SURFACE WATER, THE SOURCE IS Mud Lake

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 180,000 gal per day PRESENTLY USED 180,000 gal per day (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 135 PRESENTLY USED 135 (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continuously

4. DATE OF FIRST PUTTING WATER TO USE: MONTH YEAR 1910

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 1030 FEET N. AND 275 FEET W FROM THE SE CORNER OF SECTION 11

BEING WITHIN — OF SECTION 11 T. 21 N., R. 6 (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:

NE 1/4 of SW 1/4 of SEC 11 21-6 EWM

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: INDUSTRIAL

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPROPRIATION

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

MAR 13 75 14 17 91

[signature]

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Palmer Coking Coal Co [signature] V.P.

DATE 24 June 1974

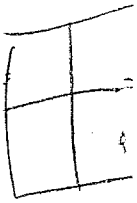
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR



H-P-1

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 064788
Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name BOOTH, DAVE Address 38105 272 AVE SE ENUMCLAW, WA 98022- 21/6/13 Q

(2) LOCATION OF WELL: County KING - SW 1/4 SE 1/4 Sec 13 T 21 N., R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) 38105 272 AVE SE, ENUMCLAW

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 86 ft. Depth of completed well 86 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 86 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 25 ft. below top of well Date 03/26/96
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 12 gal/min. w/ stem set at 86 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	3
BROWN CEMENTED SAND & GRAVEL	3	32
GRAY SAND & GRAVEL	32	49
BLUE GLACIAL TILL	49	78
BLUE CEMENTED SAND & GRAVEL	78	82
WATER BEARING SAND & GRAVEL	82	86
	86	

RECEIVED
JUN 27 1996
DEPT. OF ECOLOGY

Work started 03/28/96 Completed 03/28/96

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] [signature] License No. 0097

Contractor's Registration No. NORTHPD137PO Date 03/22/96

13-Q-1

The Department of Ecology does NOT warrant by the Data and/or the information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Robert Lencho Address 23303 244th ave SE Maple Valley Wa

(2) LOCATION OF WELL: County King — SW ¼ NW ¼ Sec. 14 T. 22 N., R 6E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic XX Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well XX Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary X Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 128 ft. Depth of completed well 128 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 128 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name Model No.
Type
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 88 ft. below top of well Date 3-5-85
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 9
Baller test 35 gal./min. with 9 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
brown sand & gravel	0	3'
gray till large rock	3'	48'
gray clay	48'	79'
brown sand & gravel	79'	81'
brown clay & gravel	81'	118'
gravel water 30 plus gpm	118'	126'
brown red clay	126'	128'

Work started 3-5 19 85 Completed 3-5 19 85

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

RECEIVED
APR 18 1985
DEPARTMENT OF ECOLOGY

NAME Stoican Drilling Inc (Person, firm, or corporation) (Type or print)

Address Rt I Box 175 Eatonville Wa 98328

[Signed] Thomas J. Stoican (Well Driller)

License No. 0240 Date 3/21 19 85

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

14-6-1

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

State of Washington
Department of Ecology

X3

Water Right Claims Registration

Water Right Claim

09 (Short Form)

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 31 74 11 8492
CASH ___ OTHER ✓ NONE

Name JOHN BANCHERO

Address BLACK DIAMOND, WASH.

BOX 26 Zip Code ___

Phone No. 624 8155

1) Source from which the right to take and make use of water is claimed: ☒ Surface Water ☐ Ground Water

If surface water, please indicate source; give name if known:

JONES LAKE & TRIBUTARIES.
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☐ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) ___

3) Legal description of lands on which water is used: BEG. @ INTSN OF S LN OF PACIFIC COAST RY ~~& N & S CENTER LINE OF SE 1/4 OF GOV. LOT 1~~ THENCE S. 1424.33 FT TO PT 20 FT N OF S LINE OF SEC; TH W TO W LINE OF CO. RD, TH S 20 FT; TH W TO SHORE LINE OF LAKE JONES; TH NLY & WLY ALONG SD LINE TO A/PT 1476 FT S & 1574.6 FT. W OF E 1/4 COR; TH N 535.87 FT TO S. LINE OF PACIFIC COAST RWY; THEN ELY ALONG SAME 1290 FT TO BEG., LESS CO. RDS; LESS C/M RTS; LESS STATE HWY=5. (TAX LOT 9026)

ALSO: BEG AT PT ON JONES LAKE 1476 FT S & 1574.6 FT W. OF E 1/4 CORNER OF SEC TH. N 215 FT M/L TO S LINE OF JONE LAKE RD, TH. N WLY ALG SD RD 815 FT. M/L TO PT. 716.61 FT S & 2106.9 FT W OF E 1/4 COR OF SEC., TH S 32°-37'-00" W 709 FT M/L TO BROOK & N. BANK OF JONES LK; TH 1040 FT/M/L TO BEG.; LESS C/M RTS. TAX LOT (9041)

ALSO: FOR GOVT LOT 2+3 BEG ON WLY MEN JONES LK RD 716.61 FT S & 2106.90 FT W OF E 1/4 COR TH NLY ALONG SD ROAD 1412.32 FT, TH S 60°-32'-00" W 1075.76 FT; TH S 29°-28-00" E 242 FT M/L TO S. LINE GOVT LOT 3, TH ALONG S LINE LOTS 2&3 522 FT M/L TO PT BEARING S32°-37'-00" W FROM BEG.; TH N 32°-37'-00" E 720 FT M/L TO BEG.; LESS C+M RGTS. (TAX LOT 9088)

~~If located within the limits of a recorded platted property:~~

Lot ___ Block ___ of ___ (Give name of plat or addition)

In addition, please indicate Sec. 14 T. 21 N., R. 6 E/W. W.M.

County in which lands are located KING

14-R-1

14-Q-2

14-~~Q~~ Q1

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date returned

This has been assigned Water Right Claim Registry No.

152091

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Edward Banchero Admin

Date 4-1-74

If claim filed by designated representative print or type full name and mailing address of agent below.

GEORGE W. LUCKER
~~[illegible]~~
~~[illegible]~~
7915 RAINIER AVE S 98118

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

14-Q-1
14-Q-2
14-R-1

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

1. NAME Estate of John Banchero

ADDRESS 33118 Black Diamond – Enumclaw Highway

Black Diamond, Washington ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Surface (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS ~~Jones Lake and unnamed tributaries~~

B. IF SURFACE WATER, THE SOURCE IS Jones Lake and unnamed tributaries

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 200 gpm PRESENTLY USED 200 gpm (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 80 acre-feet PRESENTLY USED 80 acre-feet (ACRE FEET PER YEAR)

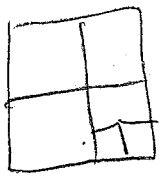
C. IF FOR IRRIGATION, ACRES CLAIMED 40 acres PRESENTLY IRRIGATED 40 acres

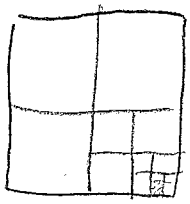
D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: continuously

4. DATE OF FIRST PUTTING WATER TO USE: MONTH Jan. 1, YEAR 1912

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 1476 FEET South AND 1574 FEET West FROM THE East ¼ CORNER OF SECTION 14
Also: 800 ft. West and 400 ft. North of SE corner of Section 14
BEING WITHIN ~~SW¼ of SE¼, & SE¼ of SE¼~~ OF SECTION 14 T. 21 N., R. 6 East ~~(Ewwm.)~~ W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT _____ BLOCK _____ OF _____
(GIVE NAME OF PLAT OR ADDITION)





6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Beg at intersn of S line of Pacific CoastRy and N & S ctr ln of SE¼ of Govt. Lot 1, Thence S 1424.33 ft to point 20 ft N of S line of Sec, Thence W to W Line of Co Rd, thence S 20 ft, thence W to shore line of Lake Jones, Thence Nly & Wly along said line to a point 1476 ft S & 1574.6 ft. W of E¼ cornerof sec, thence N 535.87 ft. to S line of Pacific CoastRy, thence Ely along same 1290 ft. to beg, less County rds, less Coal and Mineral Rts, Less State Hwy #5. ALSO: Beg at pt on Jones Lake 1476 ft. S & 1574.6 ft. W of E¼ cor of section, thence N 215 ft M/L to pt 716.61 ft S & 2106.9 ft W of E¼ cor of section, thence S 32-37-00"W 709 ft M/L to brook, thence Sely along brook & N bank of Jones Lake 1040 ft M/L to beg, less C/M rts. ALSO: Por of Govt. Lots 2 & 3, beg on Wly Margin Jones Lake Rd 716.61 ft S & 2106.90 ft W of E¼ corner of sec., thence Nly along said rd 141.32 ft, thence S 60-32-00"W 1075.76 ft, then S 29-28-00"W 242 ft M/L to S line Govt Lot 3, then East along S line Gov Lots 2&3 522 ft M/L to a point bearing S 32-37-00"W from beg, then N 32-37-00"E 720 ft M/L to beg. Less C/M rts.

7. PURPOSE(S) FOR WHICH WATER IS USED: Irrigation and stock watering King County

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Riparian and appropriation

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED FEB 27 1975 THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO. 131450

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Edward Q. Banchero ADMIN.

DATE 5 JUNE 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

EDWARD BANCHERO, ADMIN.

1007 – OLIVE WAY SEATTLE 98101

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM.

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

14-Q-3
14-R-2

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
FEB 17 1975
CASH OTHER
Rec 4-17-74

1. NAME Jack E Hulsey
ADDRESS 32324 Morgan Drive
Black Diamond ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground (SURFACE OR GROUND WATER)
W.R.I.A. 08 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS Well

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 1200 gal day (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 1200 GAL / DAY

B. ANNUAL QUANTITY CLAIMED 1 acre ft (ACRE FEET PER YEAR) PRESENTLY USED 1 acre ft

C. IF FOR IRRIGATION, ACRES CLAIMED 1 acre PRESENTLY IRRIGATED 1 acre

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: April 1 — Oct 1

4. DATE OF FIRST PUTTING WATER TO USE: MONTH April YEAR 1974

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: _____ FEET _____ AND _____ FEET _____ FROM THE _____ CORNER OF SECTION _____ BEING WITHIN _____ OF SECTION 15 T. 21 N., R. 6E (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY LOT _____ BLOCK _____ OF _____ (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: _____

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Irrigation of Garden

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Town The property Free & Clear.

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED _____ THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

APR 17 1974 0605 18

DIRECTOR DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Jack E Hulsey
DATE Dec 4, 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

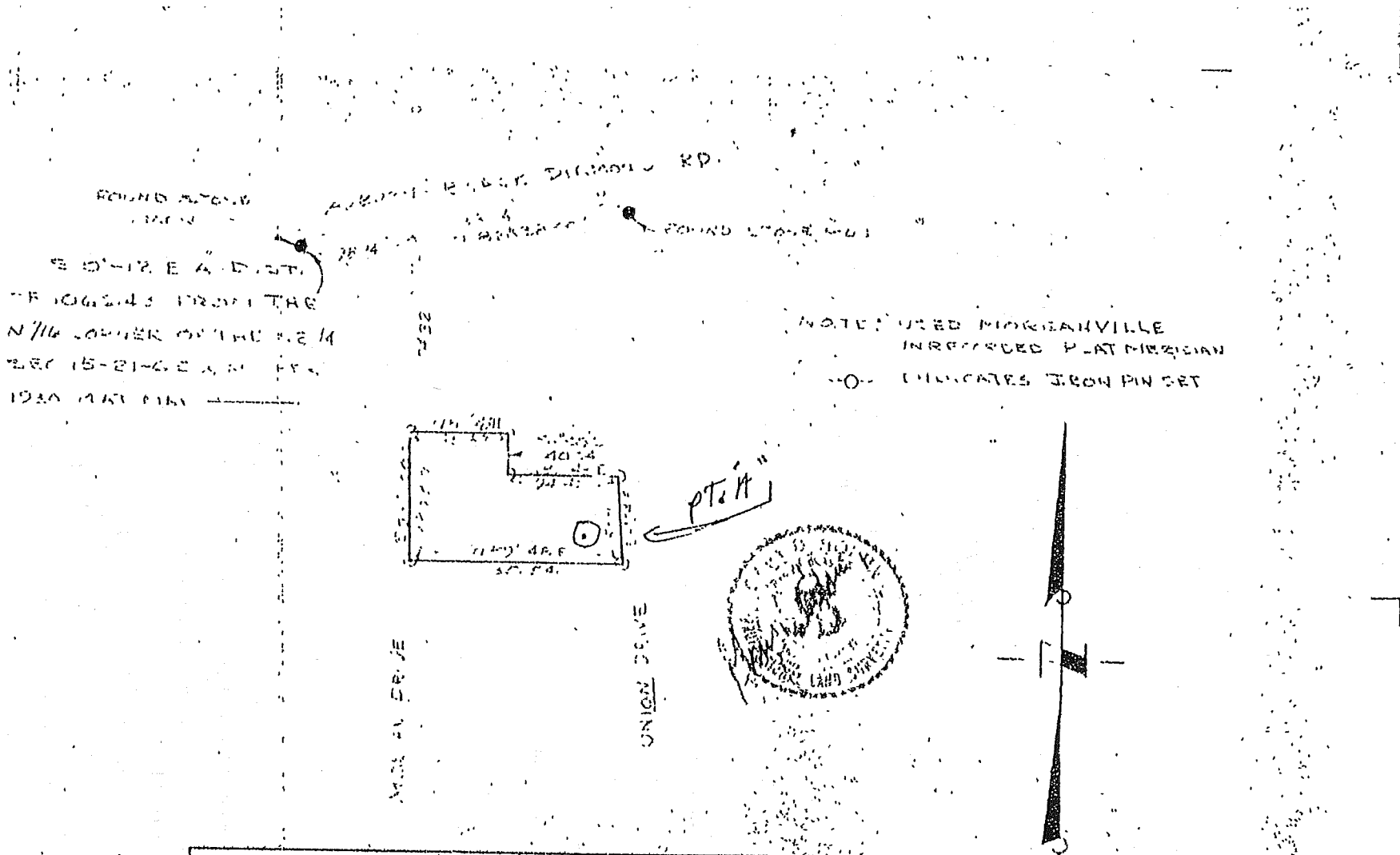
☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $3.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P.O. BOX 829 OLYMPIA, WASHINGTON 98504

15-A-1



G. H. Gary D. Holmvig, Professional Land Surveyor	SURVEY WITHIN THE N.E. 1/4, SECTION 15, TOWNSHIP 21N., RANGE 6 E.N.M.P.M. FOR JACK HOLSEY	Job No.: 72-100-22 Date: 2/23/72 Scale: 1" = 100' Approved: SHEET 1 OF 1

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
MAR 18 1974 083184
CASH OTHER NONE

Water Right Claims Registration

Water Right Claim

$8

Name Lee L. and Dolores Wilkening

Address 24124 Roberts Drive

Black Diamond, Wn. Zip Code 98010 Phone No. 886-2354

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used

☒ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: N WLY 535Ft. of FOLG - BEG 971.8 Ft. S. & 789.3 Ft. W of NE COR of SEC TH S 85-52-00 E 100 Ft TH N 14-35-00 W 871.2 Ft TH N 85-52-00 W 100 Ft TH S 14-35-00 E 871.2 Ft. To BEG LESS C/M RGTS

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 15 T. 21 N. R. 6E (E) W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

G 7M072339

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X J. L. Wilkening Lolores Wilkening

Date Mar 16, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

15-A-2

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
JUL 29 74 176677
CASH / OTHER / NONE

1. NAME Allen Lynch
ADDRESS 24201 Roberts Drive
Black Diamond Wn. ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground Water (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)
A. IF GROUND WATER, THE SOURCE IS Well
B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:
A. QUANTITY OF WATER CLAIMED 10 GPM PRESENTLY USED None (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)
B. ANNUAL QUANTITY CLAIMED 1 Acre Foot PRESENTLY USED None (ACRE FEET PER YEAR)
C. IF FOR IRRIGATION, ACRES CLAIMED ½ Acre PRESENTLY IRRIGATED Less ¼ acre
D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Garden Season -plus Water 3 Houses)

4. DATE OF FIRST PUTTING WATER TO USE: MONTH Future Use YEAR

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 200 FEET South AND 20 FEET East FROM THE Property lines CORNER OF SECTION
BEING WITHIN OF SECTION 15, T. 21 N., R. 6E (E.OR W.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 15-21-06 BLOCK 9020 OF ¾ Acre Plot in Black Diamond Wn.
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: N 350.00 FT Meas ALG W LIN of FOLG BAAP 1339.30 FT W & S00-12-00 E 2310.60 FT FR NE COR of NE ¼ Th N 82-38-00 E 548.89 FT TH N 06-56-00 W 340.00 FT TO TPOB TH S 87-49-00 E 302.71 FT TH S 88-29-22 E 188.97 FT TH N 03-49-33 W 14.76 FT TH N 87-49-00 W 110.00 FT TH N 87-55-00 W 100.00 FT TH N 03-40-00 W 871.20 FT TH N 87-24-00 W 107.20 FT TH S 03-40-00 E 871.20 FT TH N 87-55-00 W TAP N 06-56-00 W of TPOB TH S 06-56-E TPOB Less S/M RGTS

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED THIS HAS BEEN ASSIGNED
WATER RIGHT CLAIM REGISTRY NO.
FEB 20 1974 129741
[signature]
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
X Allen Lynch
DATE 6-6-74
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

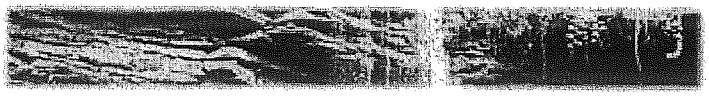
☑ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM
ORIGINAL DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P.O. BOX 829 OLYMPIA, WASHINGTON 98504

19-A-3

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_52214_01

General Location Details:

Name: Valley Sand & Gravel

Unique Well ID: GrpB_52214_01
Parcel ID Number: 1621069033
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 16 QS: SE/NW
Local Number: 21N/06E-16
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Well Well Depth: 103 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
7/23/1991	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
12/16/1996	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
4/18/2000	23:59	WA_DoH_WQ_testing	Normal Environmental	1

16-F-1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land Resources Web site, please contact Fred Bentler, webmaster.

Department of Natural Resources and Parks
Water and Land Resources Division

Updated: 03/13/2008 11:43:43

Related Information:

Water and Land Resources Topics

Groundwater Management

Links to external sites do not constitute endorsements by King County.
By visiting this and other King County web pages,
you expressly agree to be bound by terms and conditions of the site.
The details.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 08/26/2004
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
52214 V	VALLEY SAND & GRAVEL	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

OLGA MEADE [WS - PRIMARY CONTACT]
406 - 12TH SE
AUBURN, WA 98002

7. OWNER NAME & MAILING ADDRESS — **8. Owner Number** 013376

OLGA MEADE
NEED PRIMARY CONTACT O TITLE: OWNER ORG - PRI
406 - 12TH SE
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (000) 833-1529		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [x] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

500

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL		X										X				X						103	25	SW NW	16	21N	06E

16-F-1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
52214 V	VALLEY SAND & GRAVEL	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	3	3
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	3		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		3	3

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 8

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE: Take one sample every 12 months

34. NITRATE SCHEDULE (One Sample per source by time period)	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

Group C Parcel 1055

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. . . . .

Permit No. . . . . .

(1) OWNER: Name VALLEY SAND & GRAVEL Address 406 12th S.E., Auburn, WA 98002

(2) LOCATION OF WELL: County KING SE¼ NW¼ Sec. 16 T. 21 N., R. 6 E. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) . . . .
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 103 ft. Depth of completed well 103 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 103 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal. bentanite & cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level . . . . ft.
Static level 43 ft. below top of well Date 6/24/80
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 10 gal./min. with 52 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
topsoil, brown	0	2
sand & gravel, brown	2	28
silty sand & gravel, blue	28	57
glacial till, blue, small amount of water, 100'	57	98
water bearing sand & gravel	98	103

~G.S. 530
SW 43
W. elev 487
poss. lower S+G

1980

Work started 6/23/80 19 Completed 6/24/80 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NORTHWEST PUMP & DRILLING COMPANY
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn, WA 98002

[Signed] R. B. DeLong Jr.
(Well Driller)

License No. 0097 Date 6/25/80, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

16-F-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Report

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 27 PM 1 44384
CASH ___ CHECK ___ NONE ___

WATER RIGHT CLAIM

VALLEY SAND AND GRAVEL, INC.

1. NAME OLGA L. MEADE, Individually and as Executrix

ADDRESS 406 12th Street S. E.

Auburn, Washington ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground Water (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS Well

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 20 g.p.m. (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED None

B. ANNUAL QUANTITY CLAIMED 6 A. F. (ACRE FEET PER YEAR) PRESENTLY USED None

C. IF FOR IRRIGATION, ACRES CLAIMED 73 PRESENTLY IRRIGATED None

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Past: All year. Future: All year.

4. DATE OF FIRST PUTTING WATER TO USE: MONTH ___ YEAR pre-1945

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 735 FEET West AND 735 FEET South FROM THE Northeast CORNER OF SECTION 16

BEING WITHIN the SW 1/4 of NW 1/4 OF SECTION 16 T. 21 N., R. 6E (E.OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF ___
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: The Southeast Quarter of the Northwest Quarter of Section 16, Township 21 North, Range 6 East W. M., and the Southwest Quarter of the Northeast Quarter of said Section 16, lying Northwesterly of the Auburn-Black Diamond Highway in King -------

COUNTY ~~Washington~~ King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic use and irrigation

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED ___ THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

FEB 14 75 124344

John Biggs
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Olga Meade

DATE June 26, 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P.O. BOX 829 OLYMPIA, WASHINGTON 98504

16-F-1

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

193906

Parcel 9054 21.6E.16.L

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(•) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W237864

Unique Ecology Well ID Tag No. APR-477

Water Right Permit No. _____

Property Owner Name Jim Hurlock

Well Street Address 32518 223rd Ave SE

City BL Diamond County King

Location NE 1/4-1/4 SW 1/4 Sec 16 Twn 21 R 6 (EWM or WWM) circle one

Lat/Long (s, t, r) Lat Deg _____ Lat Min/Sec _____

Still **REQUIRED**) Long Deg. _____ Long Min/Sec _____

Tax Parcel No. 162106-9054

PROPOSED USE: [x] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

[x] New well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 110 ft. Depth of completed well 108 ft.

CONSTRUCTION DETAILS

Casing Installed: [x] Welded 6 " Diam. from 0 ft. to 108 ft.; [ ] Liner installed _____ " Diam. from _____ ft. to _____ ft.; [ ] Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [x] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: [ ] Yes [x] No [ ] K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [ ] Yes [x] No [ ] Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: [x] Yes [ ] No To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? [ ] Yes [x] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 55 ft. below top of well Date 3-27-06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [x] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 25 gal./min. with stem set at 103 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [x] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Hardpan-brown	3	27
Hardpan-gray	27	96
Sand-gravel-water-gray	96	108
Hardpacked-gravel-gray	108	110

RECEIVED
APR 03 2006
DEPT. OF ECOLOGY

G.S. elev 540
SW 55
485

Start Date 3-24-06 Completed Date 3-27-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[x] Driller [ ] Engineer [ ] Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature Brad Johnson

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co., Inc.

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSOC207QM Date 3-27-06

If TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

Parcel 9054

16-6-1

21-6E-16B

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission ("x" in circle) 260683

● Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT
Notice of Intent No. W244663
Unique Ecology Well ID Tag No. APR-498
Water Right Permit No. _____
Property Owner Name Tom Barrett
Well Street Address 32525 223rd Ave SE
City Black Diamond County King
Location NW/4-1/4 NE1/4 Sec 16 Twn 21 R 6 (RWM or WWM) circle one
Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. 162106-9032-04

PROPOSED USE: ■ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
■ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ■ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 98 ft.
Depth of completed well 98 ft.

CONSTRUCTION DETAILS
Casing Installed: ■ Welded 6" Diam. from 0 ft. to 98 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ■ No
Type of perforator used _____
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ■ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ■ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ■ Yes ☐ No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? ☐ Yes ■ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 40 ft. below top of well Date 4-18-07
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ■ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 50 gal./min. with stem set at 94 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ■ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Hardpan-gravel-brown	3	27
Hardpan-gravel-gray	27	49
Sand-gravel-gray	49	87
Sand-gravel-water-gray	87	98
Hardpan-gray	98	—

RECEIVED
APR 23 2007
DEPT. OF ECOLOGY

Start Date 4-16-07 Completed Date 4-18-07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

● Driller ☐ Engineer ☐ Trainee Name (Print) Brad Johnson
Driller/Engineer/Trainee Signature [signature]
Driller or trainee License No. [redacted] 0233

Drilling Company Johnson Drilling Co., Inc
Address 19415 108th Ave SE
City, State, Zip Renton, WA 98055
Contractor's Registration No. JOHNSOC207QM Date 4-18-07

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

16-6-2

The Department of Ecology does NOT warranty the Data and/or the Information on this Well Report.

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 974098909
CASH ___ OTHER / NONE

Water Right Claims Registration

Water Right Claim

Name HARRJ PATTISON

Address 22405 S.E 331 ST.

AUBURN. WASH Zip Code 98002

Phone No. 886-1177

Ø9

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water
If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: Tract 6 Diamond Acres According to Plat recorded in Vol. 72 of Plats, Page 100 in King County Wash Except the East 434 Feet thereof + excepting coal + minerals Rights

If located within the limits of a recorded platted property:

Lot 6 Block ___ of DIAMOND ACRES
(Give name of plat or addition)

In addition, please indicate Sec. 16 T. 21 N.; R. 6E ~~E/W~~ W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered — This has been assigned Water Right Claim Registry No.

NOV 474086917

Director, Department of Ecology

John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Harry J Pattison

Date MAY 7-1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

64
63
2025500060
2025500065

16-J-1

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 10 1974 099606
CASH OTHER / NONE

Water Right Claims Registration

Water Right Claim

Name Jim Evans.

Address 22650 331 St. S.E

Auburn, Wash. Zip Code 98002

Ø9 ~~May 9 1974~~

Phone No. 631-0996

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: The easterly 150 ft. of Tract 4 of Diamond Acres as per plat recorded in Volume 72 of Plats, page 100 Records of King County. Less all coal and minerals and the right to explore and mine the same. Situate in the County of King - State of Washington.

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 16 T. 21 N. R. 6E ~~E~~ W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered NOV 474087261

This has been assigned Water Right Claim Registry No.

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Jim Evans

Date May 9, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

16-J-2

File Original and First Copy with Department of Ecology
Copy — Owner's Copy
Third Copy — Driller's Copy

Between Parcel 00-40, 0045

WATER WELL REPORT

STATE OF WASHINGTON

21/06-16 J

Application No.

Permit No. ....

(1) OWNER: Name Dean Markus Address 331 st SE, Auburn

(2) LOCATION OF WELL: County King NE ¼ SE ¼ Sec. 16 T 21 N. R 06 W.M.

Bearing and distance from section or subdivision corner Tract 4 of Diamond Acres - Dec. of Covenant 7505 2603 93

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well ☐ Method: Dug ☐ Bored ☐
Deepened ☒ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well ... 6 inches.
Drilled 36 ft. Depth of completed well 99 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 99 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☒
Type of perforator used ...
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ...
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 65 ft. below top of well Date 12/20/76
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ...
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test 25 gal./min. with 15 ft. drawdown after 3 hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown hardpan gravel	63	79
Brown gravel (water)	79	99

Had to deepen
Well drilled in
June of 1976
See that "Water Well Report"
for further information

G.S. INV 545
SW 65
480

Work started 12/20, 19 76 Completed 12/20, 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc
(Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson
(Well Driller)

License No. 0233 Date 12/20, 1976

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

16-5-36

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

Original and First Copy with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

937-1174

WATER WELL REPORT

(MARKUS) STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name Dean Markus Address 22626 SE 331st, Auburn

(2) LOCATION OF WELL: County KING - Vol. 72 of Plats, on page 100 NE ¼ SE ¼ Sec. 16 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner Tract 4 of Diamond Acres - Dec. of Covenant 7505260393

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 63 ft. Depth of completed well 63 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 63 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☒ ." Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Puddling Clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level ..... ft.
Static level 43 ft. below top of well Date 6/9/76
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 4 gal./min. with 10 ft. drawdown after 3 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown hardpan gravel	3	6
Gray brown gravel	6	30
Gray brown hardpacked gravel	30	46
Water gravel (2 gpm)	46	47
Brown hardpacked gravel,	47	63
water seepage		

Work started 6/7 19 76 Completed 6/9 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co Inc
(Person, firm, or corporation) (Type or print)

Address 19415 104th Ave SE Renton

[Signed] Brad Johnson
(Well Driller)

License No. 0233 Date 6/9 19 76

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

16-5-3a

Well location from Herrera 1996 & Robinson & Noble

22202 SE 331st St

Approx elev 520 feet

No well log or depth information available

16K2

Empty B well Parcel 4039 21/16 -16 K

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy (Carl Pozzi)

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Diamond Acres Address 32950 Auburn-Black Diamond Rd Black Diamond

(2) LOCATION OF WELL: County King NW¼-NE¼-SE¼ Sec. 16 T. 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 117 ft. Depth of completed well 117 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 117 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ... Model No ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ... Depth of strata ...
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 93 ft. below top of well Date 11/10/84
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: gal./min. with ... ft. drawdown after ... hrs.
" AIR JET " "
" 10 " 8 " 3 "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown sandy clay	0	6
Gray hardpan gravel	6	27
Brown hardpan gravel	27	90
Gray gravel	90	103
Brown water sand & gravel	103	115
Gray gravel - clay binder	115	117

~G.S. elev 580
SW 93
487
poss. [illegible] 5/6

RECEIVED
JAN 17 1984
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 11/6 19 84 Completed 11/10 19 84

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 11/10, 19 84

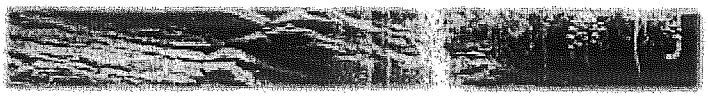
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

16-K-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Report.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_42240_01

General Location Details:

Name: Diamond Acres

Unique Well ID: GrpB_42240_01
Parcel ID Number: 1621069039
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 16 QS: NW/SE
Local Number: 21N/06E-16
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Well Well Depth: 117 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
4/13/1993	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.1 mg/L MDL:	

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
10/1/2001	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.3 mg/L MDL:	

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
12/2/2003	23:59	WA_DoH_WQ_testing	Normal Environmental	3

16-1C-1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
ARSENIC	Metal	No	0.002 mg/L MDL:	<
NITRATE + NITRITE AS N	Conv		0.98 mg/L MDL:	
NITRATE-N	Conv		0.98 mg/L MDL:	

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land Resources Web site, please contact Fred Bentler, webmaster.

Department of Natural Resources and Parks
Water and Land Resources Division

Updated: 03/13/2008 13:07:11

Related Information:

Water and Land Resources Topics

Groundwater Management

King County | Natural Resources and Parks | Water and Land Resources | News | Services | Comments | Search

Links to external sites do not constitute endorsements by King County.
By visiting this and other King County web pages,
you expressly agree to be bound by terms and conditions of the site.
The details.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 08/25/2004
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
42240 J	DIAMOND ACRES	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

JEANETTE RIKANSRUD [PURVEYOR]
PO BOX 626
BLACK DIAMOND, WA 98010

7. OWNER NAME & MAILING ADDRESS — **8. Owner Number** 012399

POZZI, CARL
22133 SE 328TH PL
KENT, WA 98031

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360) 886-2799		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed — SMA NAME: _____ SMA Number: _____
- [ ] Managed Only
- [ ] Owned Only

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [x] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL #1		X										X				X						117	12	NW SE	16	21N	06E

16-K-1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
42240 J	DIAMOND ACRES	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	4	6
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	4		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		4	6

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 10

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	**ANNUALLY**	**ONCE EVERY 3 YEARS**
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____ **TITLE:** _____

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

V Parcel 9015

WATER WELL REPORT

STATE OF WASHINGTON

21/06-16Q

Application No. .....

Permit No. .....

(1) OWNER: Name JOE ANDERSON Address 22011 Auburn Black Diamond Rd., Auburn, WA

(2) LOCATION OF WELL: County KING — SW ¼ SE ¼ Sec. 16 T. 21 N., R. 6 E. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 60 ft. Depth of completed well 60 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 60 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 42 ft. below top of well Date 4/15/81
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 12 gal./min. with 6 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
topsoil, dry, brown, soft	0	3
glacial till, dry, brown, med hard	3	55
water bearing sand & gravel	55	60

G.S. either
530 or 580
42 42
488 538

Work started 4-15-81 19 Completed 4-15-81 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NORTHWEST PUMP & DRILLING COMPANY
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn, WA 98002

[Signed] R.B. DeRemer
(Well Driller)

License No. 0097 Date 4/21/81, 19

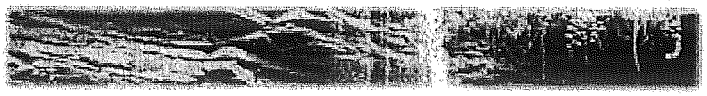
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050 1 20

16-Q-1

The Department of Ecology does NOT Warr y the Data and/or the Information on this We ort.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471814122024701

General Location Details:

Unique Well ID: S_471814122024701
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 16 QS: SW/SE
Local Number: 21N/06E-16Q01
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 79 Feet
Surface Elevation: 525 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: Anderson

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
5/29/1986	10:30	45.27	479.73	Steel tape
4/7/1987	13:15	43.26	481.74	Steel tape

Water Quality Data:

Water quality data is not available.

- I Maps indicates there should be a well log but none in DOE well log database or WSB-28.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton,

Related Information:

16-Q-2

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W116914
UNIQUE WELL I.D. # AEJ 481
Water Right Permit No. 21-6E-17H

(1) OWNER: Name Malby Cliff Address 20815-96th Pl S. Kent WA 98031

(2) LOCATION OF WELL: County King SE 1/4 NE 1/4 Sec 17 T 21 N., R 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) Elk Ridge Estates Lot H Purcell 172106-9071

(3) PROPOSED USE: ☑ Domestic ☐ Irrigation ☐ DeWater Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (If more than one) _____
Abandoned ☐ New well ☑ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☑ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 160 feet. Depth of completed well 157 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from 0 ft. to 157 ft.
Welded ☐ _____" Diam. from _____ ft. to _____ ft.
Liner Installed ☐ _____" Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☐ No ☑
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☑
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☑ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☑ No ☐ To what depth? 18 ft.
Material used in seal Bentonite Chips
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 100 ft. below top of well Date 4-22-99
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 8 gal./min. with stem set at 150 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top Soil	0	2
Brown silty gravels	2	30
Gray greyish silts (+ill)	30	140
8gpm gravels + sands	140	160

RECEIVED
MAY 27 1999
DEPT OF ECOLOGY

Work Started 4-22-99, 19__ Completed 4-22, 1999

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Holt Drilling INC. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address P.O. Box 1890 Milton WA. 98354
(Signed) [signature] (WELL DRILLER) License No. 2259
Contractor's Registration No. HOLTDI*13606 Date 4-26-99, 19__

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

17-A-1

The Department of Ecology does NOT Warr[illegible]y the Data and/or the Information on this Well R[illegible]ort.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. U094370

UNIQUE WELL I.D. # AEJ 113

Water Right Permit No. 21-6-17H

(1) OWNER: Name Hong Im Address 12804 120th St. Ct. E. Puy. WA. 98374

(2) LOCATION OF WELL: County KING SE 1/4 NE 1/4 Sec 17 T 21 N., R 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) Parcell # 172106-9072 Lot 1

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 138.10" feet. Depth of completed well 138.10" ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +2' ft. to 138.10" ft.
Welded [X]
Liner installed [ ] ____ Diam. from ____ ft. to ____ ft.
Threaded [ ] ____ Diam. from ____ ft. to ____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes [X] No [ ] To what depth? 19' ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____
Static level 111' ft. below top of well Date Nov 25 1998
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 9-10 gal./min. with stem set at 133' ft. for 1.0 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top Soil	0	3
Silt Boul & Gravels & Cobles	3	31
Sands & Gravels some silt/clay	31	78
Silt Boul Gravels some clay	78	125
Water bearing Sands & Gravels	125	138.10

RECEIVED
DEC 24 1998
DEPT OF ECOLOGY

Work Started Nov 20 19 Completed Nov 25 19 98

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Hok Drilling Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 1064 Todd Rd.
(Signed) ____ (WELL DRILLER) License No. 2198
Contractor's Registration No. HOLDI*13606 Date Nov 25 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

17-A-2

The Department of Ecology does NOT Warr[illegible]ty the Data and/or the Information on this Well R[illegible]ort.

ENTERED

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W098952
UNIQUE WELL I.D. # AGG810
Water Right Permit No. 21-6E-17A98027

(1) OWNER: Name Terry Potter Address 9909 182nd Ave SE, Issaquah

(2) LOCATION OF WELL: County King NE 1/4 NE 1/4 Sec 17 T. 21 N. R. 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 21620 SE 304th, Auburn, Wa

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) Lot D
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 235 feet. Depth of completed well 232 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from 0 ft. to 232 ft.
Welded [X] _____" Diam. from _____ ft. to _____ ft.
Liner installed [ ]
Threaded [ ] _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 100 ft. below top of well Date 8-28-97
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 20 gal./min. with stem set at 228 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Brown sand-gravel	0	12
Tan gravel-clay	12	35
Gray gravel-clay	35	100
Gray clay-gravel	100	160
Gray sand-gravel	160	165
Gray clay	165	172
Gray gravel	172	175
Gray sandstone	175	230
Gray water gravel	230	233
Gray sandstone	233	235

RECEIVED
SEP 16 1997
DEPT. OF ECOLOGY

Work Started 8-21 19. Completed 8-28 19 97

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co, Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) 9805
Address 19415 108th Ave SE, Renton
(Signed) _____ (WELL DRILLER) License No. 0233
Contractor's Registration No. JOHNSDC207AV Date 8-28 19 97

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/83) * * *

19-A-3.

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warr[illegible]ty the Data and/or the Information on this Well R[illegible]ort.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

ENTERED

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W094369
UNIQUE WELL I.D. # AFJ 117
Water Right Permit No. 21-6-17H

(1) OWNER: Name Hong Im Address 12804 120th St Ct. E Puy WA 98374

(2) LOCATION OF WELL: County ~~[illegible]~~ King SE 1/4 NE 1/4 Sec 17 T. 21 N., R. 6 E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) Parcell # 172106-9065 Lot B

(3) PROPOSED USE: ☑ Domestic ☐ Irrigation ☐ DeWater Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (If more than one) 1
Abandoned ☐ New well ☑ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☑ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well _____ inches.
Drilled _____ feet. Depth of completed well _____ ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +2 ft. to 118.5 ft.
Welded ☒ _____" Diam. from _____ ft. to _____ ft.
Liner installed ☐
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 19' ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 78' ft. below top of well Date Nov. 20, 1998
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 15 gal./min. with stem set at 110 ft. for 1.0 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top Soil	0	3
Cobbles, Gravels, Sands	3	10
Silt Brown, Cobbles Boulders gravels	10	30
Cobbles, Gravels, Sands	30	50
Boulders Tight	50	65
Silt Brown Gravels Sands	55	85
Dry Gravels & Sandy gray silt	85	98
Silty Clays w/Gravels Sands	98	110
Water Bearing Sands & Gravels	110	118

RECEIVED
DEC 24 1998
DEPT OF ECOLOGY

Work Started Nov 19, 19. Completed Nov 20, 1998

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Holt Drilling INC (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 10624 Todd Rd. E Puy WA 98372
(Signed) [signature] (WELL DRILLER) License No. 2198
Contractor's Registration No. HOHDI*B60G Date Nov 20, 1998

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

17-B-1

File Original with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

ENTERED

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent W108038
UNIQUE WELL I.D. # ABZ-162
Water Right Permit No. 98092

(1) OWNER: Name Mike Shaw Address 22123 SE 331 st, Auburn, WA

(2) LOCATION OF WELL: County King SW 1/4 NE 1/4 Sec 17 T 21 N.R. 6E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 20560 SE 324th, Auburn

TAX PARCEL NO.: 172106-9073 21-6E-17G

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
[X] New Well Method: [ ] Dug [ ] Bored
[ ] Deepened [ ] Cable [ ] Driven
[ ] Reconditioned [X] Rotary [ ] Jetted
[ ] Decommission

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 91 feet. Depth of completed well 91 ft.

(6) CONSTRUCTION DETAILS
Casing Installed:
[X] Welded 6 " Diam. from 0 ft. to 91 ft.
[ ] Liner installed " Diam. from ft. to ft.
[ ] Threaded " Diam. from ft. to ft.

Perforations: [ ] Yes [X] No
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.

Screens: [ ] Yes [X] No [ ] K-Pac Location
Manufacturer's Name
Type Model No.
Diam. Slot Size from ft. to ft.
Diam. Slot Size from ft. to ft.

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand
Material placed from ft. to ft.

Surface seal: [X] Yes [ ] No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 65 ft. below top of well Date 6-16-99
Artesian pressure lbs. per square inch Date
Artesian water is controlled by
(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
Yield: gal./min. with ft. drawdown after hrs.
Yield: gal./min. with ft. drawdown after hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 15 gal./min. with 11 ft. drawdown after 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? [ ] Yes [X] No

ECY 050-1-20 (11/93)

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	3
Brown sand-gravel	3	9
Brown clay-gravel	9	36
Gray hardpan-clay	36	83
Gray water sand-gravel	83	91
Gray hardpan-clay	91	—

RECEIVED
JUN 21 1999
DEPT OF ECOLOGY

Work Started 6-15-99 Completed 6-16-99

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson License No. 0233
(Licensed Driller/Engineer)

Trainee Name License No.

Drilling Company Johnson Drilling Co., Inc.

(Signed) (Licensed Driller/Engineer) License No. 0233

Address 19415 108th Ave SE, Renton, WA

Contractor's Registration No JOHNSDC207QM Date 6-16-99

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

9 pcs

17-B-2

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W116933
UNIQUE WELL I.D. AE 5492
Water Right Permit No. 21-6E-17F

(1) OWNER: Name McPhee DANIEL Address 20856 Auburn Blk Dmd Rd

(2) LOCATION OF WELL: County King SE 1/4 NW 1/4 Sec 17 T 21 N, R 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 20909 SE 322nd St. Parcell 172106-9069

(3) PROPOSED USE: ☑ Domestic ☐ Irrigation ☐ DeWater Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☑ Deepened ☐ Reconditioned ☐
Method: Dug ☐ Cable ☐ Rotary ☑ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 242 feet. Depth of completed well 242 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 214 ft.
Welded ☐ " Diam. from ft. to ft.
Liner installed ☐ " Diam. from ft. to ft.
Threaded ☐

Perforations: Yes ☐ No ☐
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☑
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 18 ft.
Material used in seal Bennett Chips
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 90 ft. below top of well Date 6-9
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 10+ gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Top Soil	0	2
Brown silty gravels	2	25
Grey silty gravels	25	110
Brown clay	110	120
grey silty gravels	120	168
Soft white sandstone	168	214
Casing stop moving 214		
Sandstone with Fractures	214	242

RECEIVED
SEP 13 1999
DEPT OF ECOLOGY

Work Started 6-2-99, 19. Completed 6-9, 1999

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Holt Drilling INC. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address P.O. 1890 Milton WA 98354
(Signed) [signature] (WELL DRILLER) License No. 2359
Contractor's Registration No. HOLTDI*13606 Date 6-15-99, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

17-B-3

(104597) 21-6E-17K

WATER WELL REPORT

ECOLOGY Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle)
- ○ Construction
- ○ Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* _____

CURRENT Notice of Intent No. AJ 128865

Unique Ecology Well ID Tag No. AEJ 638

Water Right Permit No. _____

Property Owner Name JON SCHULDT

Well Street Address 20688 SE 323 Way

City Kent WA County: KING

Location NW 1/4- 1/4 SE 1/4 Sec 17 Twn 21 R 6 (EWM) or WWM circle one

Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 9067

PROPOSED USE: ☑ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☑ New Well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☑ Driven ☐ Deepened ☐ Cable ☑ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 180 ft. Depth of completed well 180 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded 6" Diam from +1.5 ft to 18.5 ft. ☑ Liner installed 4" Diam. from -15 ft to 170 ft. ☐ Threaded _____" Diam from _____ ft to _____ ft.

Perforations: ☐ Yes ☑ No

Type of perforator used _____

SIZE of perfs _____ in by _____ in and no of perfs _____ from _____ ft to _____ ft

Screens: ☑ Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name Western

Type PVC Model No _____

Diam 4 Slot Size 15 from 170 ft to 180 ft

Diam _____ Slot Size _____ from _____ ft to _____ ft

Gravel/Filter packed: ☑ Yes ☐ No ☐ Size of gravel/sand 8-12 Silica

Materials placed from 18 ft to 180 ft

Surface Seal: ☑ Yes ☐ No To what depth? 18.5 ft

Materials used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☑ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name Goulds

Type Submersible H.P 1/2

WATER LEVELS: Land-surface elevation above mean sea level _____ ft

Static level 125 ft below top of well Date Nov 5/01

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☑ No If yes, by whom? _____

Yield _____ gal/min with _____ ft drawdown after _____ hrs.

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test 20 gal/min with 5 ft drawdown after 2 hrs

Airtest _____ gal/min with stem set at _____ ft for _____ hrs

Artesian flow _____ g p m Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☑ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Top soil	0	1
Brown clay cobbles	1	10
Brown till	10	67
Blue till + blue clay	67	177
coarse gravel (water)	177	180

RECEIVED
DEC 10 2001
DEPT OF ECOLOGY

Start Date Nov 4/01 Completed Date Nov 5/01

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☑ Driller ☐ Engineer ☐ Trainee Name (Print) L. GOSLING

Driller/Engineer/Trainee Signature _____

Driller or Trainee License No. 1539

Drilling Company CASCADE DRILLING

Address 7411 30 ST NE

City, State, Zip MARYSVILLE WA. 98270

Contractor's Registration No. CASCADO91PS Date Nov 6/01

If trainee, licensed driller's Signature and License no. _____

Ecology is an Equal Opportunity Employer ECY_050-1-20 (Rev 4/01)

17-3-4

The Department of Ecology does NOT Warra the Data and/or the Information on this Well Re rt.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W116916
UNIQUE WELL I.D. # AEH 995
Water Right Permit No. 21-6E-17J

(1) OWNER: Name ~~[illegible]~~ Ron Scheadel Address 12725 SE 312th #T-105 Auburn WA 98092

(2) LOCATION OF WELL: County King. SE 1/4 NE 1/4 Sec 17 T. 21 N., R. 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 20703 SE. 323rd

(3) PROPOSED USE: ☒ Domestic ☐ Irrigation ☐ DeWater Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (If more than one) ____
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches.
Drilled 120 feet. Depth of completed well 119 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +2 ft. to Ø ft.
Welded ☒ 6" Diam. from Ø ft. to 119 ft.
Liner installed ☐ ____" Diam. from ____ ft. to ____ ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 49 ft. below top of well Date 5-7-99
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 15+ gal./min. with stem set at 110 ft. for 1 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Forest Topsoil	0	4
Med Brn Dense Till moist	4	15
Grey clay with silt Gravel dry	15	70
Coal mixed w gravel moist	70	81
DK Grey dense Clay dry	81	97
Grey silt sand Gravel wet	97	120

RECEIVED
OCT 29 1999
DEPT OF ECOLOGY

Work Started 5-7-99, 19. Completed 5-7-99, 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Holt Drilling (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 10621 Todd Rd E Puyallup
(Signed) Thomas W. [illegible] (WELL DRILLER) License No. 2409
Contractor's Registration No. HOLTDI*13606 Date 5-10-99, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

17-B-5

ECY 050-1-20 (9/93)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

ECOLOGY Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle) 144234
- (●) Construction
- ( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* _____

CURRENT Notice of Intent No. W159079

Unique Ecology Well ID Tag No. ABO-596

Water Right Permit No. _____

Property Owner Name HHB Homes (Giglio)

Well Street Address 20011 SE 320th ST

City Auburn Area County: King

Location NE 1/4 - 1/4 NW 1/4 Sec 17 Twn 21 R 6 (EWM) or (WWM) circle one

Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 1721069051

PROPOSED USE: [■] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
[■] New Well [ ] Reconditioned Method [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [■] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 107 ft
Depth of completed well 107 ft

CONSTRUCTION DETAILS
Casing Installed: [■] Welded 6" Diam from 0 ft to ~~95~~ ft
[ ] Liner installed _____" Diam from _____ ft to _____ ft
[ ] Threaded _____" Diam from _____ ft to _____ ft

Perforations: [ ] Yes [■] No
Type of perforator used _____
SIZE of perfs _____ in by _____ in and no of perfs _____ from _____ ft to _____ ft

Screens: [■] Yes [ ] No [■] K-Pac Location 93-94
Manufacturer's Name COOK
Type Telescopic Model No 55
Diam 5" Slot Size .060 from 94 ft to 104 ft
Diam 5" ~~Slot Size~~ Blank from 104 ft to 107 ft

Gravel/Filter packed: [ ] Yes [■] No [ ] Size of gravel/sand _____
Materials placed from _____ ft to _____ ft

Surface Seal: [■] Yes [ ] No To what depth? 18 ft
Materials used in seal bentolite
Did any strata contain unusable water? [ ] Yes [■] No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type _____ H P _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft
Static level 45 ft below top of well Date 1-19-04
Artesian pressure _____ lbs per square inch Date _____
Artesian water is controlled by _____ (cap,valve, etc)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [■] No If yes, by whom? _____
Yield _____ gal /min with _____ ft drawdown after _____ hrs
Yield _____ gal /min with _____ ft drawdown after _____ hrs
Yield _____ gal /min with _____ ft drawdown after _____ hrs
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal /min with _____ ft drawdown after _____ hrs
Airtest 10-11 gal /min with stem set at 91 ft for 2 hrs
Artesian flow _____ g p m Date _____
Temperature of water _____ Was a chemical analysis made? [ ] Yes [■] No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Surface	0	3
Hardpan-gravel-brown	3	8
Hardpan-tan	8	14
clay-gray	14	92
Sand-fine-gray water	92	105
Hardpan-gray	105	107

RECEIVED
FEB 02 2004
DEPT OF ECOLOGY

Start Date 1-15-04 Completed Date 1-19-04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[■] Driller [ ] Engineer [ ] Trainee Name (Print) Brad Johnson
Drilling Company Johnson Drilling Co, LLC
Driller/Engineer/Trainee Signature Brad Johnson
Address 19415 108th Ave SE
Driller or Trainee License No. 0233
City, State, Zip Renton, WA 98055
If trainee, licensed driller's Signature and License no. _____
Contractor's Registration No. JOHNSDC207QM Date 1-19-04

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

17-C1

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 21/06-17C
Permit No

(1) OWNER: Name Arthur & Jan Bissell Address 20121 SE 320th Kent Washington

(2) LOCATION OF WELL: County King NE ¼ NW ¼ Sec 17 T 21 N, R 6 E W.M.
Bearing and distance from section or subdivision corner E½ of W½ of

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 220 ft. Depth of completed well 220 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 220 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	4
Gray hardpacked gravel	4	23
Gray clay shacked with gravel	23	55
Gray silty clay	55	92
Gray clay silty	92	115
Gray clay shacked with gravel	115	122
Gray silt	122	240
Dry hole		

Work started 3/14 19 76 Completed 3/17 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)

Address 19415 103rd Ave SE Renton 98055

[Signed] Brad Johnson
(Well Driller)

License No. 0233 Date 3/17 19 76

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev 4-71)
FCY-070-28

17-C-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

ENTERED

WATER WELL REPORT

Start Card No. W 075613
Unique Well I.D. #
STATE OF WASHINGTON — Water Right Permit No.

(1) OWNER: Name ANONSON, JEFF Address 20323 SE 320 KENT, WA 98042 216/17C

(2) LOCATION OF WELL: County KING - NE 1/4 NW 1/4 Sec 17 T 21 N., R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) 20323 SE 320, KENT

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 110 ft. Depth of completed well 110 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 108 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 54 ft. below top of well Date 10/09/97
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 15 gal/min. w/ stem set at 108 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
BROWN CEMENTED SAND & GRAVEL	0	15
BLUE GLACIAL TILL	15	24
BLUE CLAY W/OCC GRAVEL	24	96
WATER BEARING SAND & GRAVEL	96	110

RECEIVED
OCT 13 1997
DEPT. OF ECOLOGY

Work started 10/08/97 Completed 10/09/97

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3265 AUBURN WAY SOUTH

[SIGNED] K B DeGraw License No. 0097

Contractor's
Registration No. NORTHPD137PO Date 10/10/97

17-6-3

The Department of Ecology does NOT Warr y the Data and/or the Information on this Well F ort.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. N. ...
Permit No. 21/06-17 C

21/6/17/DOC

(1) OWNER: Name Roger Morrison Address 19124 S.E. Covington Sawyer Rd

(2) LOCATION OF WELL: County King — NE¼ NE¼ Sec. 17 T. 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 54 ft. Depth of completed well 54 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 54 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 400 ft.
Static level ft. below top of well Date
Artesian pressure 3 lbs. per square inch Date 2-13-76
Artesian water is controlled by CAP (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 9 gal./min. with 40 ft. drawdown after 2 hrs.
Artesian flow ONE g.p.m. Date 2-13-76
Temperature of water Was a chemical analysis made? Yes ☒ No ☒
for Iron only

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top soil	0	3'
Brown Hard pan	3'	22'
grey " "	22	50'
dirty sand & gravel in water	50	52
Clean sand & gravel	52	54'
getting dirty again	54'	

Work started Feb 1976 Completed Feb 13 1976

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Evergreen Drilling (Person, firm, or corporation) (Type or print)

Address 25627-SE 192 Maple Valley Wa

[Signed] Roland Fuhring (Well Driller)

License No. 0139 Date Feb 14 1976

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71)
ECY-070-28

The Department of Ecology does NOT Warr[illegible]y the Data and/or the Information on this Well R[illegible]ort.

17-C-4

File Original and First Copy with the Division of Water Resources
Second Copy — Owner's Copy
Third Copy — Driller's Copy

631-65 -D
21-6E-17 MacDonald

WATER WELL REPORT
STATE OF WASHINGTON

Application No. NONE
21/06-17D
Permit No.

(1) OWNER: Name Thomas McDonald Address 19717 S.E. 320th St., Kent 98031

(2) LOCATION OF WELL: County King — NW ¼ NW ¼ Sec. 17 T. 21 N., R. 6E W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 124 ft. Depth of completed well 124 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 124 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☒ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used.....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name.....
Type..... Model No.....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☒ No ☐ Size of gravel: 3/8
Gravel placed from 122 ft. to 124 ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay Bored
Did any strata contain unusable water? Yes ☐ No ☒
Type of water?..... Depth of strata.....
Method of sealing strata off.....

(7) PUMP: Manufacturer's Name.....
Type: ..... H.P.....

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ..... ft.
Static level 49 ft. below top of well Date 2/12/76
Artesian pressure ..... lbs. per square inch Date.....
Artesian water is controlled by..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?.....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 100 gal./min. with 40 ft. drawdown after 2 hrs.
Artesian flow..... g.p.m. Date.....
Temperature of water..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown hardpan gravel	3	69
Brown sand & gravel	69	70
Blue clay shocked with sand & gravel	70	92
Blue clay	92	119
Brown sand & gravel	119	124

Work started 2/11, 1976. Completed 2/12, 1976

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108 Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 2/12, 1976

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—(Rev. 2-66)—2-66—5M. 4516.

17-D-1

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 27 74 10684
CASH OTHER NONE

Water Right Claims Registration

Water Right Claim

09

Name Philadelphia Church

Address Camp Berachah - 19830 S.E. 328th Pl.

Auburn, Washington Zip Code 98002

852-4552
Phone No. 782-4301

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: A parcel of land lying in the South 1/2 of the North 1/2 AND in the North 1/2 of the South 1/2 of Section 17, Township 21 North, Range 6 East W.M. in King County, WA., being more particularly described as follows: Beginning at the Southwest corner of the Northwest 1/4 of Section 17, Township 21 North, Range 6 East W.M.; thence East along the South line of said Northwest 1/4, 520 feet, more or less, to the center of Covington Creek which is the true point of beginning for this description; thence continuing East along said South line of said Northwest 1/4 to a point that lies 700 feet East of the Said Southwest corner; thence South at right angles for 100 feet; thence East parallel to the South line of the Northwest 1/4, 880 feet; thence North 100 feet to the aforesaid South line; thence East on said line, 4 feet; thence North 41°18' East, 425.80 feet; thence North 44°45' West, 413.73 feet; thence North 38°52' East, 303.86 feet; thence North 56°02' West, 310 feet, more or less, to the center of Covington Creek; thence along center line of Covington Creek downstream to the true point of beginning;

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 17 T. 21 N. R. 6E E/W. W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

DEC 6 74091175

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

Philadelphia Church

X Roy Johnson Trustee

Date May 24, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER-RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

17-E-1

S. F. No. 369—1-57—581 47570. O.S.

CERTIFICATE RECORD NO. 17, PAGE NO. [redacted]

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF SURFACE WATER RIGHT

(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.)

This is to certify that [redacted]

of [redacted], *State of* [redacted], *has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the waters of* [redacted], *a tributary of* Covington Creek, *with point or points of diversion within the* [redacted] *Sec.* 17, *Twp.* 21 *N., R.* 6 E., *W. M., under and subject to provisions contained in* [redacted] *Permit No.* [redacted] *issued by the State Supervisor of Water Resources, and that said right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume* 17, *at Page* [redacted], *on the* 14th *day of* December, 19 63, *that the priority date of the right hereby confirmed is* January 30, 1961; *that the amount of water under the right hereby confirmed, for the following purposes is limited to an amount actually beneficially used and shall not exceed* 0.02 of a cubic foot per second for domestic supply.

A description of the lands under such right to which the water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

That portion of [redacted], Sec. 17, T. 21 N., R. 6 E.W.M. lying southeasterly of Covington Creek.

SW of NW ¼.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 14th *day of* December, 19 63

M. J. Walker

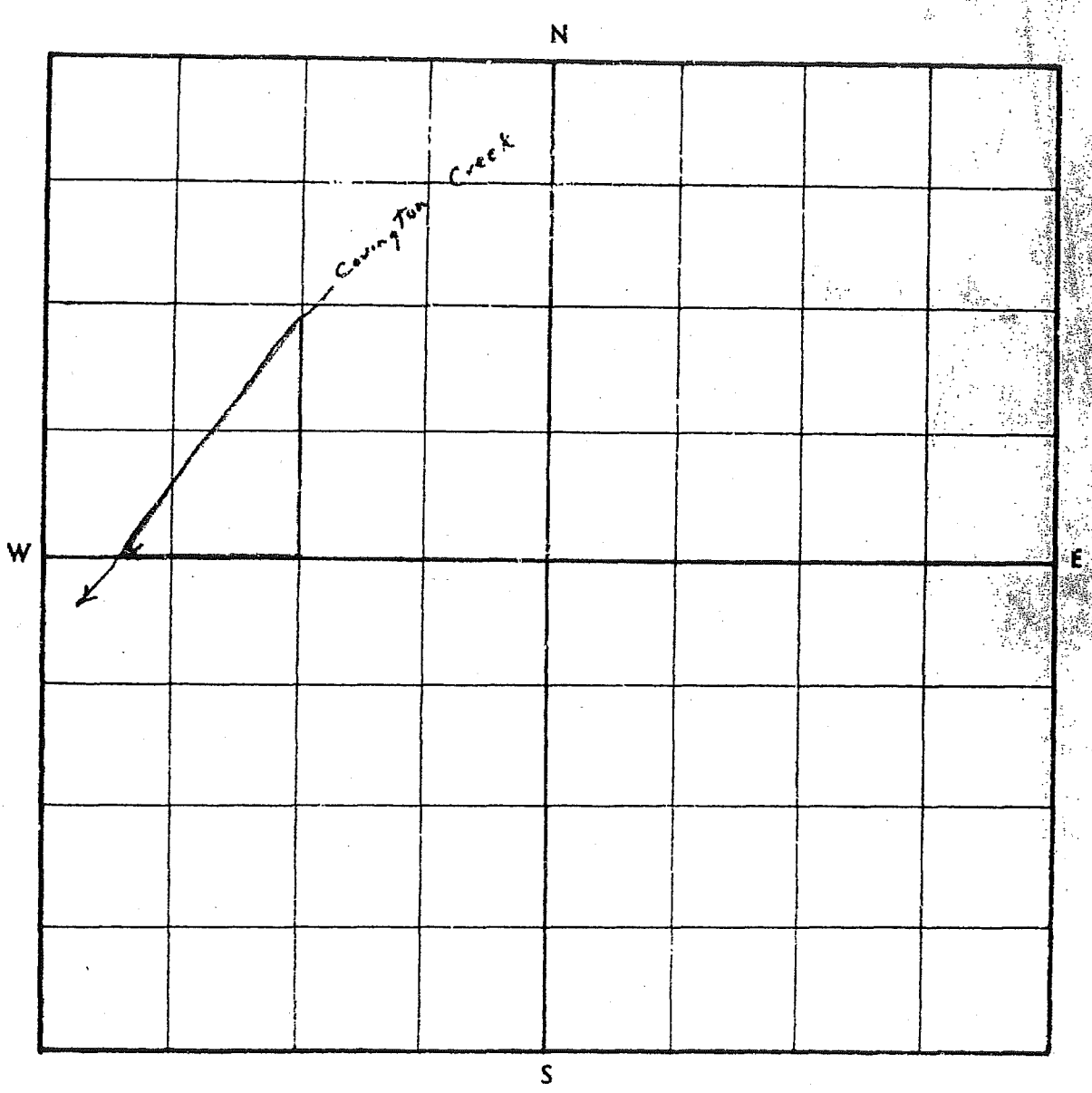
State Supervisor of Water Resources

17-E-2

S. F. No. 1834-A—OS—5-80—1031.

SECTION PLAT

Sec. 17 Twp. 21 N.R. 16 EAST



Be sure to show distance and bearing of point of diversion from nearest 40-acre corner. Also traveling directions from nearest town on main highway.

Scale: 1 inch = 800 feet.

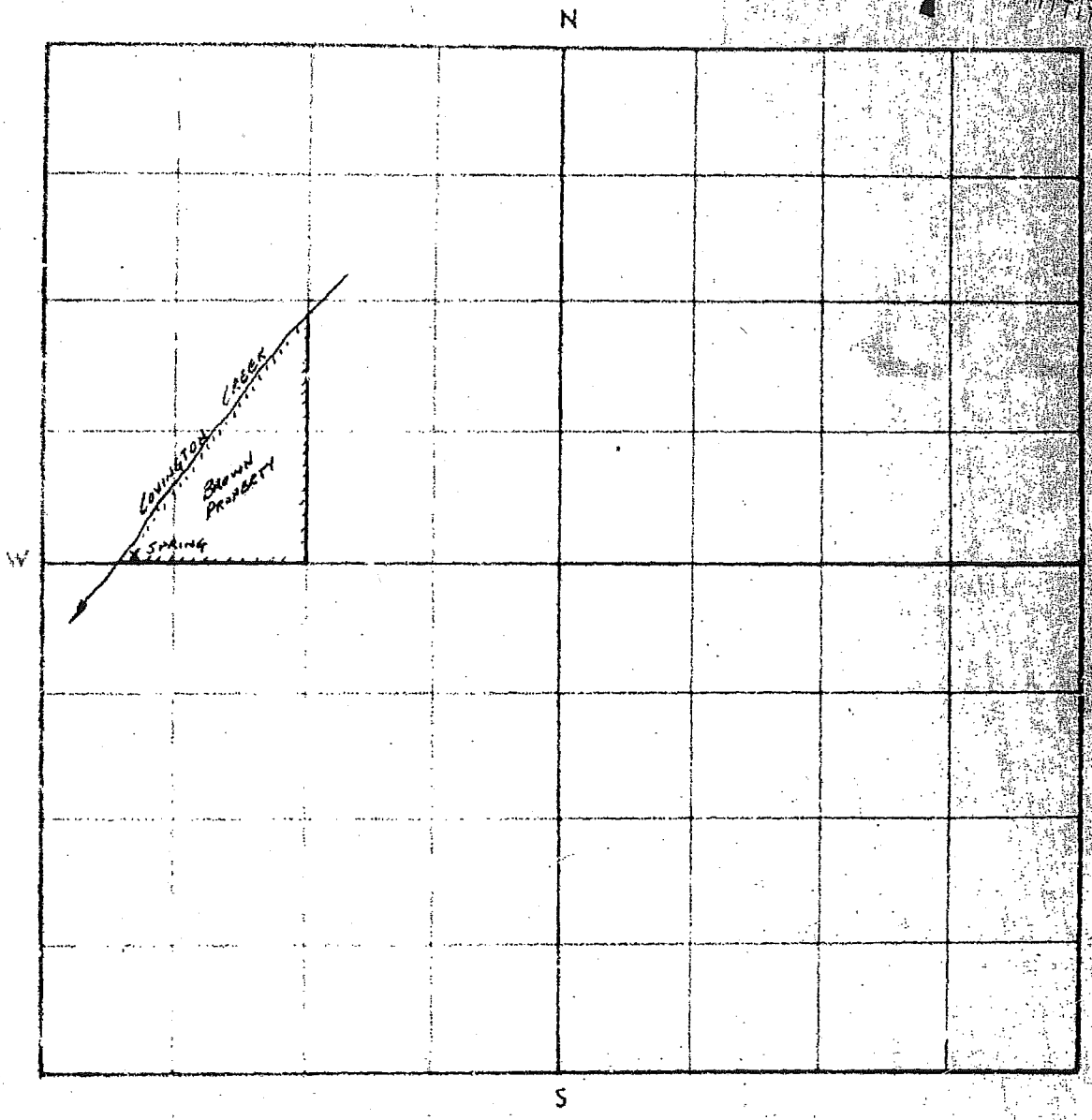
office

No. [illegible]

SECTION PLAT

RECEIVED
DEPARTMENT OF CONSERVATION
JUN 13 1961

Sec. 17 Twp. 21 N.R. 6E M.D.B.&M.



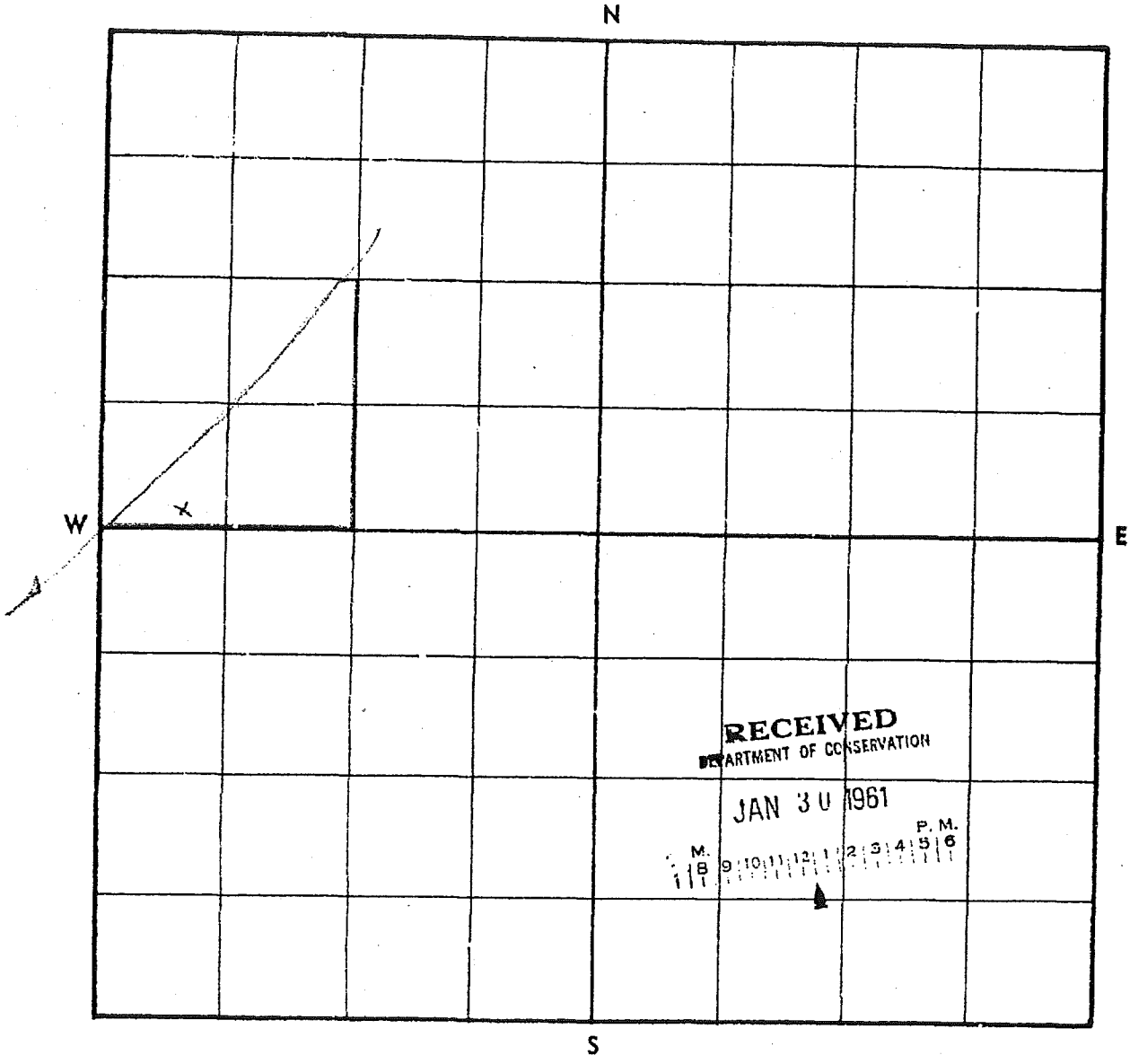
Be sure to show distance and bearing of point of diversion from nearest 40-acre corner. Also traveling directions from nearest town on main highway.

Scale: 1 inch = 800 feet.

S. F. No. 1854-A—OS—5-60—10M.

SECTION PLAT

Sec. 17 Twp. 21 N.R. 6E



RECEIVED
DEPARTMENT OF CONSERVATION
JAN 30 1961
A.M. 8 9 10 11 12 1 2 3 4 5 6 P.M.

Be sure to show distance and bearing of point of diversion from nearest 40-acre corner. Also traveling directions from nearest town on main highway.

Scale: 1 inch = 800 feet.

16511

unnamed stream
Location

S. F. No. 300—OS—7-67.

CERTIFICATE RECORD NO. 21, PAGE NO. 10282

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF SURFACE WATER RIGHT

(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Water Resources thereunder.)

This is to certify that NELS ULLELAND

of Kent, *State of* Washington, *has made proof to the satisfaction of the Department of Water Resources of Washington, of a right to the use of the waters of* unnamed spring, *a tributary of* Covington Creek *with point or points of diversion within the* NW¼SW¼ *Sec.* 17, *Twp.* 21 *N., R.* 6 E., *W. M., under and subject to provisions contained in* appropriation *Permit No.* 13767 *issued by the Department of Water Resources, and that said right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the Department of Water Resources of Washington and entered of record in Volume* 21, *at Page* 10282, *on the* 3rd *day of* April, 1968 *that the priority date of the right hereby confirmed is* January 13, 1965; *that the amount of water under the right hereby confirmed, for the following purposes is limited to an amount actually beneficially used and shall not exceed* 0.04 cubic feet per second, 2.7 acre-feet per year continuously each year for group domestic supply for 4 homes

A description of the lands under such right to which the water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

NW¼SW¼, Sec. 17, T. 21 N., R. 6 E.W.M.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

This certificate of surface water right is specifically subject to relinquishment for nonuse of water as provided in Section 18, Chapter 233, Laws of 1967.

WITNESS the seal and signature of the Assistant Director, Division of Water Management, Department of Water Resources affixed this 3rd *day of* April, 1968

Glen H. Ludler
Assistant Director
Division of Water Management
Department of Water Resources

17-E-3

Nels Ulleland

Kent, Washington

January 13, 1965

an unnamed spring

0.01 second-foot

Covington Creek

[illegible] continuously

domestic supply;

[illegible]

17 21 6 E. King

16th January 65

W. G. [illegible]

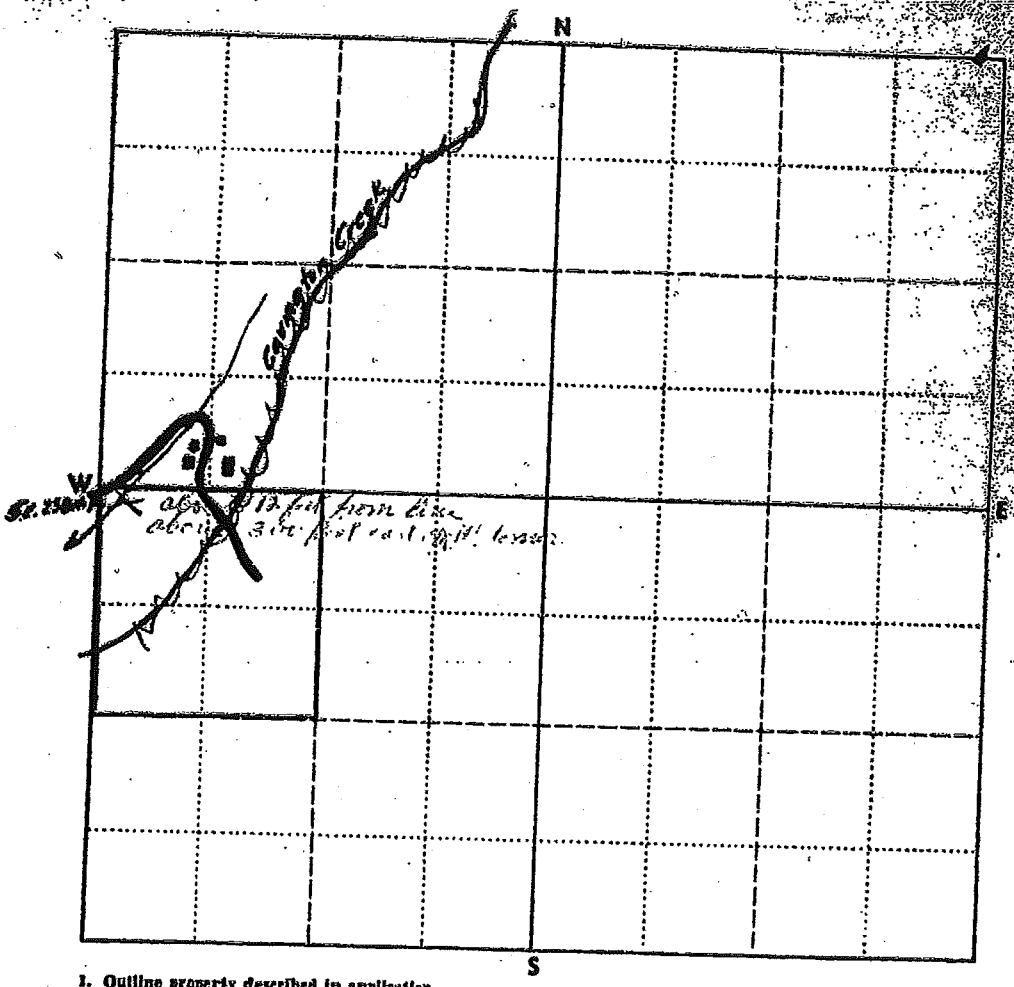
S.E. No. 1811-A-OS

SECTION PLAT

18839

RECEIVED

Sec. 17 Twp. 21 N.R. 6 E



1. Outline property described in application.
2. Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.
3. Indicate traveling directions from nearest town.

Pls note: [illegible] 320 acres.

OFFICE 1

Scale: 1 inch = 800 feet (each small square = 10 acres)

Take freeway from Tacoma through Auburn and follow road leaving it about a mile past Auburn. Take road to Black Diamond by the fish hatchery. Turn left on 328 place SE. go up ½ mile [illegible] behind closed gate and [illegible] spring is to the left about 100 ft up the creek

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

7050

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W108090
AB0445

(1) OWNER: Name FISHER, BARRY Address 22426 SE 300TH BLACK DIAMOND, WA 98010-

(2) LOCATION OF WELL: County KING SW 1/4 NE 1/4 Sec 17 T 21 N., R 6E WM
(2a) STREET ADDRESS OF WELL (or nearest address) AUBURN BLACK DIAMOND LOT1

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 189 ft. Depth of completed well 189 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 189 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type SUBMERSIBLE H.P. 1

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 88 ft. below top of well Date 06/03/99
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? YES If yes, by whom? HAYES DRILLING
Yield: 11 gal./min with 100 ft. drawdown after 2 hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test
Bailer test gal/min. ft. drawdown after hrs.
Air test 12 gal/min. w/ stem set at 188 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? YES

(10) WELL LOG 21-6E-17G

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	2
BROWN SILT GRAVEL & COBBLES	2	19
BROWN GRAVEL & SILT	19	42
BROWN GRAVEL & SAND	42	48
GRAY GRAVEL & SAND	48	83
BROWN SILT GRAVEL & CLAY	83	94
BROWN GRAVEL SAND & SILT	94	143
BROWN GRAVEL & CLAY	143	151
BROWN GRAVEL SAND & SILT & WATER	151	154
BROWN CLAY & GRAVEL	154	185
BROWN GRAVEL SAND & CLAY	185	188
BROWN GRAVEL SAND & WATER	188	

RECEIVED
JUN 10 1999
DEPT OF ECOLOGY

Work started 05/24/99 Completed 06/01/99

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME HAYES DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 5696 ERSHIG RD. BOW, WA

[SIGNED] Ryan Wilhoyan License No. 2190

Contractor's
Registration No. HAYESDI106J5 Date 06/08/99

6778

17-6-1

7050

WATER WELL REPORT — STATE OF WASHINGTON

ENTERED

(1) OWNER: Name FISCHER, BARRY Address 22426 SE 300TH BLACK DIAMOND, WA 98010-

(2) LOCATION OF WELL: County KING - SW 1/4 NE 1/4 Sec 17 T 21 N., R 6E WM
(2a) STREET ADDRESS OF WELL (or nearest address) AUBURN BALCK DIAMOND RD 21-6E-17G

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 2
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 133 ft. Depth of completed well 132.5 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 129.5 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type SUBMERSIBLE H.P. 1.0

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 76.5 ft. below top of well Date 07/27/99
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
BROWN GRAVEL SAND & SILT	0	20
GRAY GRAVEL SAND & CLAY	20	25
GRAY GRAVEL & SAND	25	40
GRAY GRAVEL & CLAY	40	80
BROWN GRAVEL SAND & CLAY	80	120
BROWN GRAVEL SILT SAND & WATER	120	122
BROWN GRAVEL CLAY SAND & WATER	122	128
BROWN GRAVEL SAND & WATER	128	131
GRAY GRAVEL CLAY SAND & WATER	131	

RECEIVED
AUG 24 1999
DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

Work started 07/26/99 Completed 07/27/99

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? YES If yes, by whom? HAYES DRILLING
Yield: 11.5 gal./min with 51.2 ft. drawdown after 1 hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test
Bailer test gal/min. ft. drawdown after hrs.
Air test 10 gal/min. w/ stem set at 128 ft. for 1.5 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? YES

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME HAYES DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 5696 ERSHIG RD. BOW, WA

[SIGNED] License No. 2189

Contractor's Registration No. HAYESDI106J5 Date 08/10/99

6836

17-6-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

7050 WATER WELL REPORT STATE OF WASHINGTON WI18635 AER081

(1) OWNER: Name FISHER, BARRY Address 22426 SE 300TH BLACK DIAMOND, WA 98010-

(2) LOCATION OF WELL: County KING - SW 1/4 NE 1/4 Sec 17 T 21 N., R 6E WM
(2a) STREET ADDRESS OF WELL (or nearest address) AUBURN BLACK DIAMOND RD 21-6E-17G

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 3
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 95 ft. Depth of completed well 94.75 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 92 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type SUBMERSIBLE H.P. .75

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 59 ft. below top of well Date 07/28/99
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? YES If yes, by whom? HAYES DRILLING
Yield: 10.5 gal./min with 29 ft. drawdown after 1 hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test
Bailer test gal/min. ft. drawdown after hrs.
Air test 10 gal/min. w/ stem set at 90 ft. for 1.5 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? YES

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
BROWN GRAVEL SAND & SILT	0	35
GRAY GRAVEL & SAND	35	39
GRAY CLAY & GRAVEL	39	78
GRAY GRAVEL & CLAY	78	90
GRAY GRAVEL SAND & WATER	90	93
GRAY GRAVEL SAND & CLAY	93	

RECEIVED
AUG 24 1999
DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

Work started 07/28/99 Completed 07/28/99

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME HAYES DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 5696 EDSHIG RD. BRN, WA

[SIGNED] [signature] License No. 2189

Contractor's Registration No. HAYESDI106J5 Date 08/10/99

6835

17-6-3

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

7050

WELL REPORT — STATE OF WASHINGTON

Start Card No. W118636
AER082

(1) OWNER: Name FISHER, BARRY Address 22426 SE 300TH BLACK DIAMOND, WA 98010-

(2) LOCATION OF WELL: County KING - SW 1/4 NE 1/4 Sec 17 T 21 N, R 6E WM
(2a) STREET ADDRESS OF WELL (or nearest address) AUBURN BLACK DIAMOND RD

21-6E-17G

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 4
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 90 ft. Depth of completed well 87.75 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 83.75 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: YES
Manufacturer's Name COOK
Type STAINLESS STEEL Model No.
Diam. 6 slot size 20 from 82.75 ft. to 87.75 ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type SUBMERSIBLE H.P. .75

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 4 ft. below top of well Date 08/03/99
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? YES If yes, by whom? HAYES DRILLING
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 7 gal/min. 10 ft. drawdown after .5 hrs.
Air test 20 gal/min. w/ stem set at 85 ft. for 1.5 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? YES

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
BROWN GRAVEL & SILT	0	20
GRAY GRAVEL & CLAY	20	80
GRAY SAND GRAVEL & WATER	80	89
GRAY CLAY & GRAVEL	89	

RECEIVED
AUG 24 1999
DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

Work started 07/29/99 Completed 07/29/99

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME HAYES DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 5690 ERSHIG RD. BOW, WA

[SIGNED] _____ License No. 2189

Contractor's Registration No. HAYESDI106J5 Date 08/10/99

6834

17-6-4

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

WATER WELL REPORT

ECOLOGY Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission *("x" in circle)* 156338
- [x] Construction
- [ ] Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT Notice of Intent No. W176117 J

Unique Ecology Well ID Tag No. AKR 314

Water Right Permit No.

Property Owner Name BRUCE ZIEGLER

Well Street Address 328XX 210 AVE SE AUBURN

City AUBURN County: 98092

Location NE 1/4 - 1/4 SE 1/4 Sec 17 Twn 21 R 6 (EWM or WWM) *circle one*

Lat/Long: (s,t,r still REQUIRED) Lat Deg Lat Min/Sec Long Deg Long Min/Sec

Tax Parcel No.

PROPOSED USE: [x] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other

TYPE OF WORK: Owner's number of well (if more than one)

[x] New Well [ ] Reconditioned *Method:* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 32 ft. Depth of completed well 32 ft.

CONSTRUCTION DETAILS

Casing [ ] Welded 6" Diam. from +2 ft. to 18 ft.

Installed: [x] Liner installed 4" Diam. from -2 ft. to 22 ft.

[ ] Threaded " Diam. from ft. to ft.

Perforations: [ ] Yes [ ] No

Type of perforator used

SIZE of perfs in. by in. and no. of perfs from ft. to ft.

Screens: [x] Yes [ ] No [ ] K-Pac Location

Manufacturer's Name WESTERN

Type PVC Model No.

Diam. 4" Slot Size 015 from 22 ft. to 32 ft.

Diam. Slot Size from ft. to ft.

Gravel/Filter packed: [x] Yes [ ] No Size of gravel/sand 8-12

Materials placed from 32 ft. to 18 ft.

Surface Seal: [x] Yes [ ] No To what depth? 18 ft

Materials used in seal BENTONITE

Did any strata contain unusable water? [ ] Yes [x] No

Type of water? Depth of strata

Method of sealing strata off

PUMP: Manufacturer's Name GOULDS

Type: SUB. H.P. 1

WATER LEVELS: Land-surface elevation above mean sea level ft.

Static level 10.5 ft. below top of well Date SEPT 16/04

Artesian pressure lbs. per square inch Date

Artesian water is controlled by (cap,valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.

Was a pump test made? [ ] Yes [ ] No If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

Yield: gal./min. with ft. drawdown after hrs.

Yield: gal./min. with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test 20 gal./min. with 0 ft. drawdown after 1 hrs.

Airtest gal./min. with stem set at ft. for hrs.

Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? [ ] Yes [x] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Top SOIL	0	1
SANDY CLAY W/COBBLES	1	5
SANDY CLAY	5	17
STICKY SAND	17	20
COURSE SAND (WATER)	20	26
SANDY BROWN CLAY	26	32

RECEIVED
SEP 23 2004
DEPT OF ECOLOGY

Start Date SEPT 15/04 Completed Date SEPT 16/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[x] Driller [ ] Engineer [ ] Trainee Name (Print) CURTIS GOSLING

Driller/Engineer/Trainee Signature

Driller or Trainee License No. 2654

If trainee, licensed driller's Signature and License no.

Drilling Company CASCADE DRILLING NW INC.

Address 7411 30TH ST NE

City, State, Zip MARYSVILLE, WA

Contractor's Registration No. CASCADN976J4 Date SEPT 20/04

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

17 J-1

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy Driller's Copy

85005

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W118747

UNIQUE WELL I D # AFJ617

Water Right Permit No

(1) OWNER Name DALE EDWARDS Address 9835 SOUTH 265 ST. KENT 98031

(2) LOCATION OF WELL County KING SE 1/4 SE 1/4 Sec 17 T 21 N R 6 E WM

(2a) STREET ADDRESS OF WELL (or nearest address) 32911 216 AVE SE AUBURN WA.

TAX PARCEL NO 21-6E-17R

(3) PROPOSED USE ☑ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK Owner's number of well (if more than one)
☑ New Well Method ☐ Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☑ Rotary ☐ Jetted ☐ Decommission

(5) DIMENSIONS Diameter of well 6 inches
Drilled 107 feet Depth of completed well 107 ft

(6) CONSTRUCTION DETAILS
Casing Installed
☐ Welded 6" Diam from +1.5 ft to 18.5 ft
☑ Liner installed 4" Diam from -5 ft to 87 ft
☐ Threaded " Diam from ft to ft

Perforations ☐ Yes ☑ No
Type of perforator used
SIZE of perforations in by in
perforations from ft to ft

Screens ☑ Yes ☐ No ☐ K Pac Location
Manufacturer's Name WESTERN
Type PVC Model No
Diam 4 Slot Size 15 from 87 ft to 107 ft
Diam Slot Size from ft to ft

Gravel/Filter packed ☑ Yes ☐ No ☐ Size of gravel/sand 8-12 SILICA
Material placed from 15 ft to 107 ft

Surface seal ☑ Yes ☐ No To what depth? 18.5 ft
Material used in seal BENTONITE
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP Manufacturer's Name GOULDS
Type SUBMERSABLE HP 1½

(8) WATER LEVELS Land-surface elevation above mean sea level ft
Static level 76 ft below top of well Date DEC 12/00
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes, by whom?
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 22 gal/min with 3 ft drawdown after 2 hrs
Airtest gal/min with ft drawdown after hrs
Artesian flow gpm Date
Temperature of water Was a chemical analysis made? ☐ Yes ☑ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
TOP SOIL	0	1
BROWN CLAY + ROCKS	1	12
BROWN TILL	12	26
BLUE TILL	26	30
BLUE CLAY	30	92
SAND + GRAVEL (WATER)	92	107

RECEIVED
DEC 13 2000
DEPT OF ECOLOGY

Work Started Dec 12/00 Completed Dec 13/00

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name L. GOSLING License No 1539
(Licensed Driller/Engineer)

Trainee Name License No
Drilling Company CASCADE DRILLING
(Signed) License No 1539
(Licensed Driller/Engineer)
Address 7411 30 ST NE Marysville WA.
Contractor's Registration No CASCADO91PE Date Dec 13/00

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407-6600 The TDD number is (360) 407 6006

ECY 050 1-20 (11/98) 85005

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle)
110637
- (x) Construction
- ( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*_____

CURRENT
Notice of Intent No. W128940 WATER WELL

Unique Ecology Well ID Tag No. ABO-503

Water Right Permit No. 21-6E-174 ABE

Property Owner Name Erling Larsen

Well Street Address SE 335th & 210th Ave SE or

City Auburn-Black Diamond **County:** King

Location SE 1/4 - 1/4 SE 1/4 Sec 17 Twn 21 R 6 (WWM) circle one or WWM

Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 172106-9059

PROPOSED USE: (x) Domestic ( ) Industrial ( ) Municipal ( ) DeWater ( ) Irrigation ( ) Test Well ( ) Other_____

TYPE OF WORK: Owner's number of well (if more than one)_____
(x) New Well ( ) Reconditioned *Method* ( ) Dug ( ) Bored ( ) Driven ( ) Deepened ( ) Cable (x) Rotary ( ) Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 100 ft
Depth of completed well 96 ft

CONSTRUCTION DETAILS
Casing Installed: (x) Welded 6" Diam from 0 ft to 96 ft.
( ) Liner installed _____" Diam from _____ ft to _____ ft.
( ) Threaded _____" Diam from _____ ft to _____ ft

Perforations: ( ) Yes (x) No
Type of perforator used_____
SIZE of perfs____in by____in. and no of perfs____ from____ft. to____ft

Screens: ( ) Yes (x) No ( ) K-Pac Location_____
Manufacturer's Name_____
Type_____ Model No_____
Diam_____ Slot Size_____ from_____ft to_____ft
Diam_____ Slot Size_____ from_____ft to_____ft

Gravel/Filter packed: ( ) Yes (x) No ( ) Size of gravel/sand_____
Materials placed from_____ft to_____ft

Surface Seal: (x) Yes ( ) No To what depth? 18 ft
Materials used in seal bentonite
Did any strata contain unusable water? ( ) Yes (x) No
Type of water?_____ Depth of strata_____
Method of sealing strata off_____

PUMP: Manufacturer's Name_____
Type_____ H.P_____

WATER LEVELS: Land-surface elevation above mean sea level_____ft
Static level 36 ft below top of well Date 3-18-02
Artesian pressure_____lbs per square inch Date_____
Artesian water is controlled by_____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ( ) Yes (x) No If yes, by whom?_____
Yield _____gal/min. with_____ft drawdown after_____hrs
Yield _____gal/min with_____ft drawdown after_____hrs
Yield _____gal/min with_____ft drawdown after_____hrs
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test_____
Bailer test_____gal/min with_____ft drawdown after_____hrs
Airtest 15-18 gal/min with stem set at 92 ft for 2 hrs
Artesian flow_____g p m Date_____
Temperature of water____Was a chemical analysis made? ( ) Yes (x) No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Surface	0	3
Hardpan-brown	3	27
Hardpan-gray	27	60
clay-gray	90	90
sand-gravel-gray	90	95
water		
clay-gray	95	100

RECEIVED
MAR 25 2002
DEPT OF ECOLOGY

Start Date 3-11-02 Completed Date 3-18-02

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

(x) Driller ( ) Engineer ( ) Trainee Name (Print) Brad Johnson
Drilling Company Johnson Drilling Co., Inc
Driller/Engineer/Trainee Signature _____
Address 19415 108th Ave SE
Driller or Trainee License No. 0233
City, State, Zip Renton, WA 98055
Contractor's Registration No. JOHNSDC207QM Date 3-18-02

If trainee, licensed driller's Signature and License no._____

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

17-J-3

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21-6E17K

WATER WELL REPORT

ECOLOGY Original & 1st copy Ecology 2nd copy owner 3rd copy driller

Construction/Decommission (x in circle)
(●) Construction 129297
( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT
Notice of Intent No W153674
Unique Ecology Well ID Tag No ABO-556
Water Right Permit No
Property Owner Name Dodd Lori Vicari
Well Street Address 32975 210th Ave SE
City Auburn County King
Location NW 1/4 1/4 SE 1/4 Sec 17 Twn 21 R 6 (EWM) circle or one WWM
Lat/Long (s,t,r still REQUIRED) Lat Deg Lat Min/Sec Long Deg Long Min/Sec
Tax Parcel No 172106-9079

PROPOSED USE (■) Domestic ( ) Industrial ( ) Municipal ( ) DeWater ( ) Irrigation ( ) Test Well ( ) Other

TYPE OF WORK Owner's number of well (if more than one)
(■) New Well ( ) Reconditioned *Method* ( ) Dug ( ) Bored ( ) Driven ( ) Deepened ( ) Cable (■) Rotary ( ) Jetted

DIMENSIONS Diameter of well 6 inches drilled 159 ft
Depth of completed well 159 ft

CONSTRUCTION DETAILS
Casing Installed (■) Welded 6 Diam from 0 ft to 159 ft
( ) Liner installed Diam from ft to ft
( ) Threaded Diam from ft to ft

Perforations ( ) Yes (■) No
Type of perforator used
SIZE of perfs in by in and no of perfs from ft to ft

Screens ( ) Yes (■) No ( ) K Pac Location
Manufacturer's Name
Type Model No
Diam Slot Size from ft to ft
Diam Slot Size from ft to ft

Gravel/Filter packed ( ) Yes (■) No Size of gravel/sand
Materials placed from ft to ft

Surface Seal (■) Yes ( ) No To what depth? 18 ft
Materials used in seal bentonite
Did any strata contain unusable water? ( ) Yes (■) No
Type of water? Depth of strata
Method of sealing strata off

PUMP Manufacturer's Name
Type H P

WATER LEVELS Land surface elevation above mean sea level ft
Static level 119 ft below top of well Date 3-11-03
Artesian pressure lbs per square inch Date
Artesian water is controlled by (cap valve etc)

WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ( ) Yes (■) No If yes by whom?
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal/min with ft drawdown after hrs
Airtest 5 gal/min with stem set at 156 ft for 2 hrs
Artesian flow g p m Date
Temperature of water Was a chemical analysis made? ( ) Yes (■) No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color character size of material and structure and the kind and nature of the material in each stratum penetrated with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Surface	0	3
clay-gravel-brown	3	8
Hardpan-brown	8	37
Hardpan-tan	37	73
Sandy silt-fine clay	73	104
Clay-gray	104	155
Sand-gravel-water-gray	155	159
Hardpan-gray	159	—

RECEIVED
MAR 21 2003
DEPT OF ECOLOGY

Start Date 2-28-03 Completed Date 3-11-03

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

(■) Driller ( ) Engineer ( ) Trainee Name (Print) Brad Johnson
Driller/Engineer/Trainee Signature
Driller or Trainee License No 0233
Drilling Company Johnson Drilling Co, Inc
Address 19415 108th Ave SE
City State, Zip Renton, WA 98055
Contractor's Registration No JOHNSOC207QM Date 3-11-03

If trainee, licensed driller's Signature and License no

Ecology is an Equal Opportunity Employer ECY 050 1-20 (Rev 4/01)

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

17-5-4

170194

Please print, sign and return to the Department of Ecology

21-6E.17

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W166282

Unique Ecology Well ID Tag No. AKG-815

Water Right Permit No. N/A

Property Owner Name WALTHERS DEVELOPMENT CORP

Well Street Address 33119 210TH AVE SE

City AUBURN County KING

Location NE 1/4-1/4 SE 1/4 Sec 17 Twn 21N R 6E ☒ E WM ☐ W WM (circle one)

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 1721069080

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 98 ft. Depth of completed well 87 ft.

CONSTRUCTION DETAILS

Casing ☒ Welded 6 " Diam. from 0 ft. to 98 ft.

Installed: ☐ Liner installed _____ " Diam. from _____ ft. to _____ ft.

☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by ____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 79 6

Manufacturer's Name Johnson

Type Telescopic Model No. _____

Diam. 5 Slot size 15 from 84 ft. to 79 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal Bentonite chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 26 ft. below top of well Date 3-18-05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 30 gal./min. with stem set at 65 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Soft brn silty gravels	0	10
grey till	10	45
grey clay	45	75
Sand & gravel Active	75	90
fine silty sand	90	98

RECEIVED
APR 15 2005
DEPT OF ECOLOGY

Start Date 3-18-05 Completed Date 3-18-05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) John Artman

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2673

If TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Drilling Company HOLT DRILLING/BOART LONGYEAR

Address PO BOX 1870

City, State, Zip MILTON WA 98354

Contractor's Registration No. BOARTLE055PZ Date 3-21-05

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

17-J-5

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

Group B - located by map 4056 106-17K

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy -- Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No. ...

(1) OWNER: Name Henrik O. Sorten/Lilleland Firs Com. Water system Address 21000 334th SE Auburn

(2) LOCATION OF WELL: County King — SE ¼ SE ¼ Sec. 17 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 260 ft. Depth of completed well 236 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 236 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☒ ." Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 115 ft. below top of well Date 8-20-85
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" 20 " 70 " 2½ "
" " Air Jet "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown surface	0	3
Tan sand & gravel	3	10
Gray sand & gravel	10	30
Gray clay gravel	30	45
Gray clay	45	63
Gray silt	63	67
Gray silt-gravel	67	71
Gray clay	71	225
Gray clay gravel-water	225	230
Gray clay	230	237
Gray gravel-water	237	244
Tan clay	244	260

RECEIVED
AUG 29 1985
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 8-12 1985 Completed 8-20 1985

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 8-20 19 85

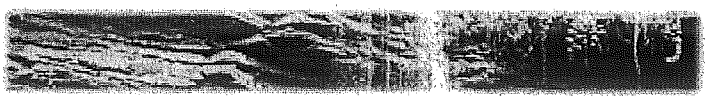
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

17-J-6

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_43126_01

General Location Details:

Name: Henrick Sorton / Uhleland Firs

Unique Well ID: GrpB_43126_01
Parcel ID Number: 1721069056
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 17 QS: SE/SE
Local Number: 21N/06E-17
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Well Well Depth: 236 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
9/5/1997	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

17-J-6

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 02/22/2005
Printed: 03/12/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
43126 2	ULLELAND FIRS #1	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

HENRIK SORTUN [WS - PRIMARY CONTAC
26700 138TH PL SE
KENT, WA 98042

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS | **8. Owner Number** 012608

HENRIK SORTUN
26700 138TH PL SE
KENT, WA 98042

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (253)631-6704		Owner Daytime Phone: (253)631-6704	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [x] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18										19			20	21						22	23	24			
	SOURCE NAME	INTERTIE	SOURCE CATEGORY										USE				TREATMENT						DEPTH		SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL #1		X										X				X						260	35	SE SE	17	21N	06E

17-J-6

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
43126 2	ULLELAND FIRS #1	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	6	8
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	6		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		6	8

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 6

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

File Original with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent No. U098859

UNIQUE WELL I.D. # ACG804

Water Right Permit No. 98042

(1) OWNER: Name Henrik Sorton Address 26702 138TH PL SE, Kent

(2) LOCATION OF WELL: County KING NE 1/4 SE 1/4 Sec 17 T 21 N.R. 6E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 33XX 210TH PL SE Auburn

TAX PARCEL NO.: 172166-9013

21-6E-17J

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☒ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater 2 hook-ups

(4) TYPE OF WORK: Owner's number of well (if more than one) ____

☒ New Well ☐ Deepened ☐ Reconditioned ☐ Decommission

Method: ☐ Dug ☐ Bored ☐ Cable ☐ Driven ☒ Rotary ☐ Jetted

(5) DIMENSIONS: Diameter of well 6 inches

Drilled 92 feet. Depth of completed well 92 ft.

(6) CONSTRUCTION DETAILS

Casing Installed:

☒ Welded 6" Diam. from 0 ft. to 92 ft

☐ Liner installed ____" Diam. from ____ ft. to ____ ft.

☐ Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used ____

SIZE of perforations ____ in. by ____ in.

____ perforations from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location ____

Manufacturer's Name ____

Type ____ Model No. ____

Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Diam ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand ____

Material placed from ____ ft. to ____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 18 ft

Material used in seal bentolite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? ____ Depth of strata ____

Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____

Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.

Static level 60 ft. below top of well Date 3-30-99

Artesian pressure ____ lbs. per square inch Date ____

Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____

Yield: ____ gal /min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal /min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____

Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.

Airtest 25 gal./min. with 85 ft. drawdown after 2 hrs.

Artesian flow ____ g.p.m. Date ____

Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

ECY 050-1-20 (11/98)

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	3
Brown sand, gravel	3	8
Brown hardpan	8	31
Gray hardpan	31	47
Gray clay	47	80
Gray silt	80	86
Gray water sand gravel	86	92
Gray hardpan	92	—

RECEIVED

APR 6 1999

DEPT OF ECOLOGY

Work Started 3-29-99 Completed 3-30-99

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson License No. 0223 (Licensed Driller/Engineer)

Trainee Name ____ License No. ____

Drilling Company Johnson Drilling Co

(Signed) ____ License No. 0233 (Licensed Driller/Engineer) 98053

Address 19415 108TH Ave SE, Renton, WA

Contractor's Registration No JOHNSDC207CM Date 3-30-99

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

17-J-7

The Department of Ecology does NOT Warr... by the Data and/or the Information on this Well ...ort.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
November 23, 1987	G1-25140	G1-25140P	G1-25140C

NAME
Henrik O. Sortun

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
26700 138th Place S.E.	Kent	Washington	98042

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
---	12	4.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Group domestic supply - continuously (8 services)

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
635' north and 540' west from SE corner of Section 17.

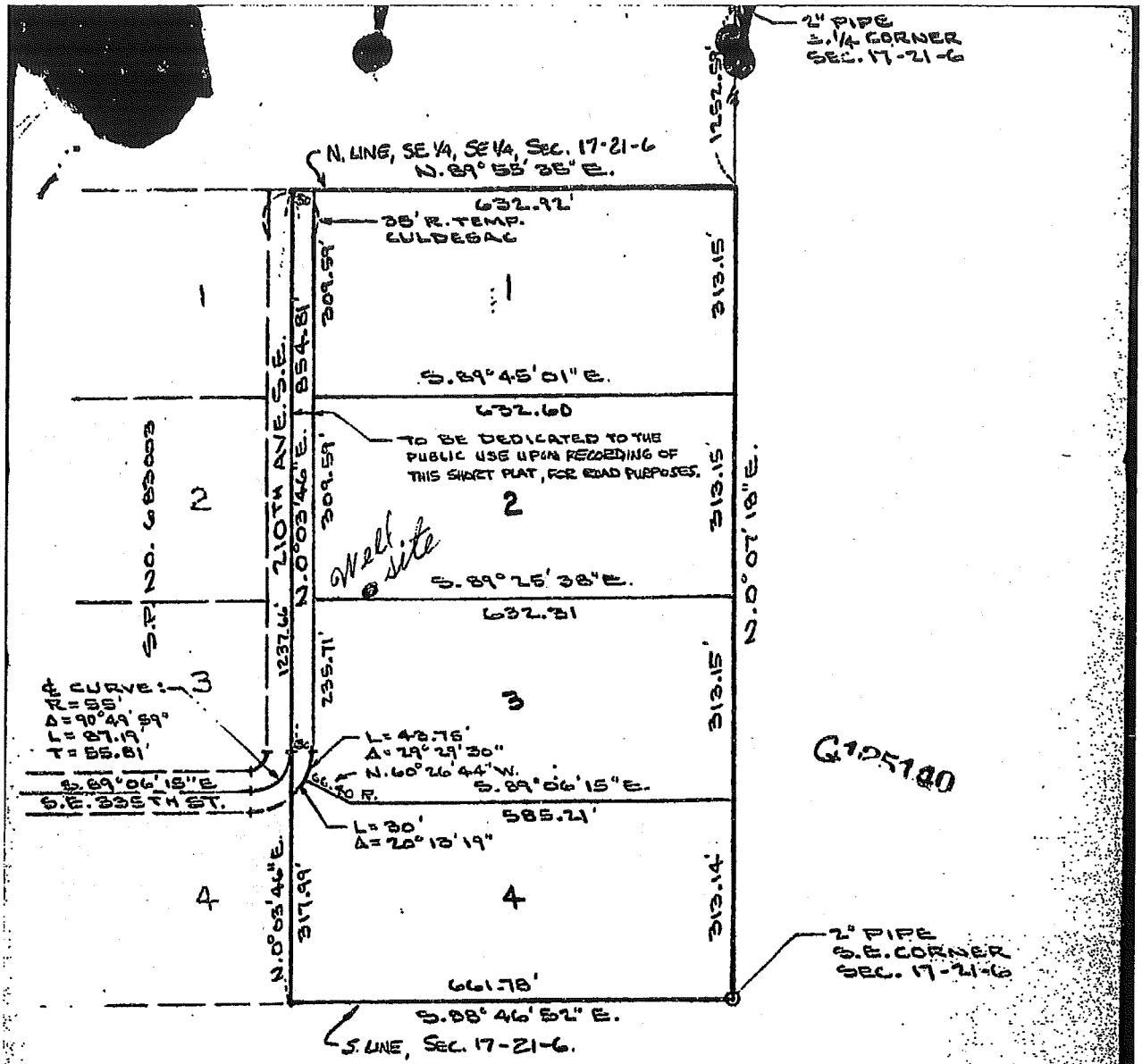
LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SE¼ SE¼	17	21	6E	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

T.21N., R.06E., Section 17, SE¼ SE¼



G125140

WARNING: King County has no responsibility to build, improve, maintain or otherwise serve the public roads contained within or providing service to the property described in this short plat.

FREDERICK M. DRAKE
STATE OF WASHINGTON
REGISTERED
Professional Engineer & Land Surveyor

Land Surveyor's Certificate:

This short plat correctly represents a survey made by me or under my direction in conformance with the requirements of appropriate state and county statute and ordinance.

3/10/84 Frederick M. Drake
Date

Certificate No: 3933

Short Plat No. 683004

Map on File in Vault

RECEIVED
Direction:
NOV 23 1987
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Scale: 1" = 200'

0 200 400

RECEIVED
FEB 25 1986
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

30039

AFFIDAVIT OF PUBLICATION

Audrey Benner, being first duly sworn on oath states that he/she is the Chief Clerk of the

VALLEY DAILY NEWS
• Kent Edition • Renton Edition • Auburn Edition

Daily newspapers published six (6) times a week. That said newspapers are legal newspapers and are now and have been for more than six months prior to the date of publication referred to, printed and published in the English language continually as daily newspapers in Kent, King County, Washington. The Valley Daily News has been approved as a legal newspaper by order of the Superior Court of the State of Washington for King County.

The notice in the exact form attached, was published in the Kent Edition X, Renton Edition _____, Auburn Edition _____, (and not in supplement form) which was regularly distributed to its subscribers during the below stated period. The annexed notice a _____

Notice of Application

was published on ~~January 10 and 17, 1988~~ K7935

The full amount of the fee charged for said foregoing publication is the sum of $ 45.00.

Audrey Benner

Subscribed and sworn to before me this 17th day of ~~January~~ 19 88

Notary Public for the State of Washington,
residing at Federal Way,
King County, Washington.

VDN #87 Revised 11/86

Public Notice
STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That HENRIK O. SORTUN of KENT, WASHINGTON on NOVEMBER 23, 1987 under Application No. G1-25140 filed for permit to appropriate public waters, subject to existing rights, from WELL in the amount of 12 GALLONS PER MINUTE each year for GROUP DOMESTIC SUPPLY — CONTINUOUSLY.

The source of the proposed appropriation is located within SE 1/4 SE 1/4 of Section 17, Township 21 N., Range 6E W.M., in KING County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections, protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology at the address shown below, within thirty (30) days from January 17, 1988.

Department of Ecology
Northwest Regional Office
4350 150th Ave. N.E.
Redmond, Washington 98052

Published in the Valley Daily News January 10 and 17, 1988 K7935

RECEIVED
JAN 27 1988
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That HENRIK O. SORTUN

of KENT, WASHINGTON on NOVEMBER 23, 1987 under

Application No. G1-25140 filed for permit to appropriate public waters, subject to existing rights,

from WELL

in the amount of 12 GALLONS PER MINUTE

each year, for GROUP DOMESTIC SUPPLY - CONTINUOUSLY

The source of the proposed appropriation is located within SE 1/4 SE 1/4

of Section 17, Township 21 N., Range 6E W.M., in KING County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, at the address shown below, within thirty (30) days from

Department of Ecology
Northwest Regional Office
4350 - 150th Ave. N. E.
Redmond, Washington 98052

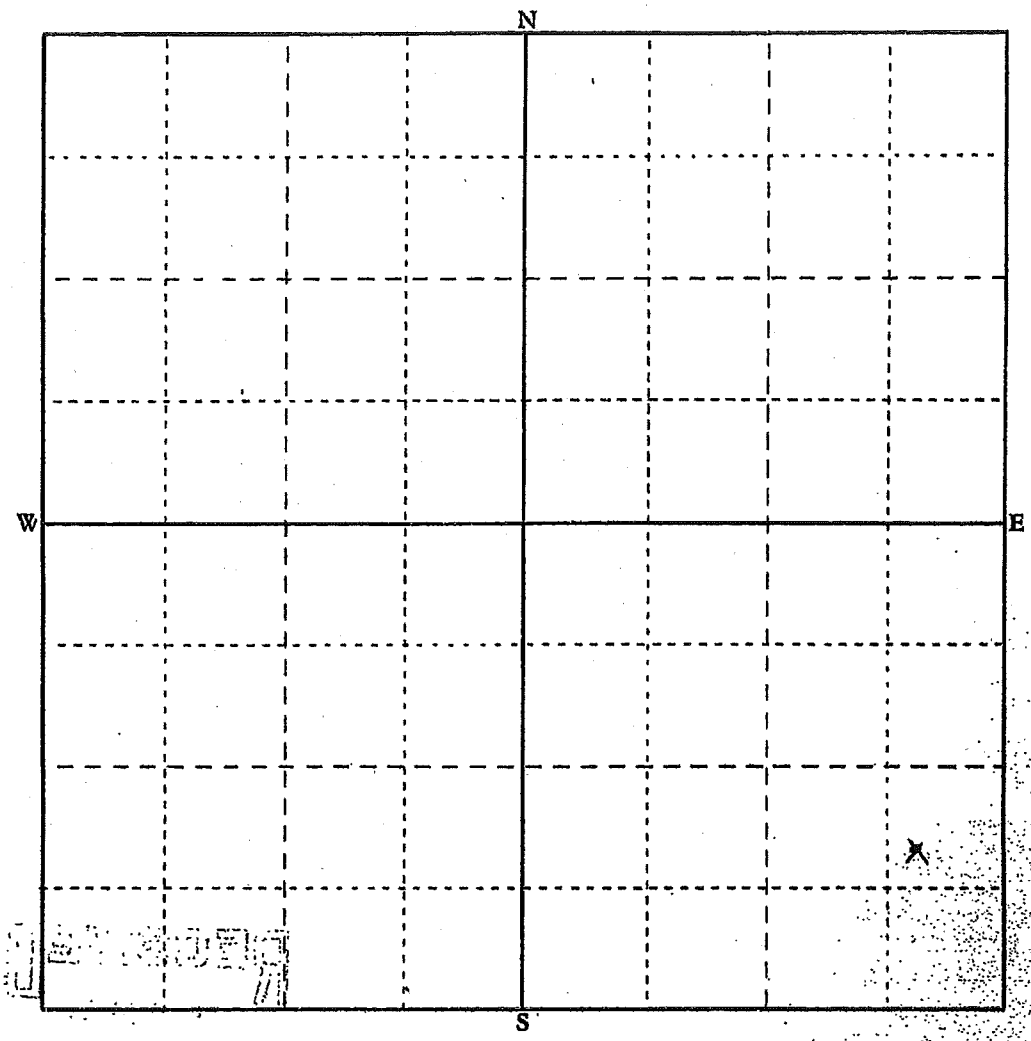
(Last date of publication to be entered above by publisher)

NOTICE

ECY 040-1-1
Rev 2/79

SECTION MAP

Sec. 17 Twp. 21 N. R. 6 E. W. M.



Scale: 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.

Indicate traveling directions from nearest town in space below.

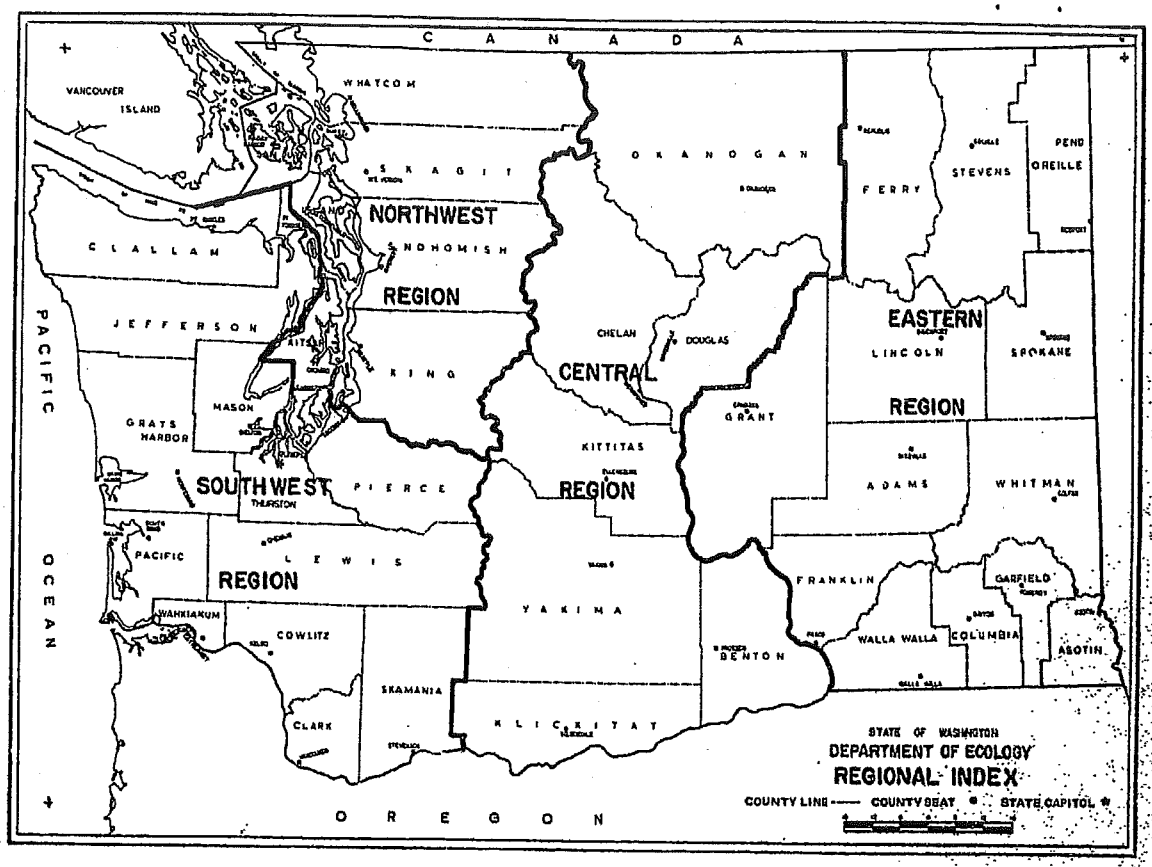
G1-25140

Detach here

Fold along scale

FEET 0 400 800 1,200 1,600 2,000 2,400 2,800 3,200 3,600 4,000 4,400 4,800 5,200

Detach this scale at the perforation, fold excess paper under or cut off excess by cutting along the scale line. This scale corresponds to the SECTION MAP above. You can read feet directly from this scale to outline property and locate points of diversion or withdrawal on the SECTION MAP. Enclose this map along with the application and $10.00 examination fee.



Your water right application will be processed by the Regional Office of the Department of Ecology having jurisdiction in the area in which your water works are located. Please submit your completed application form, maps, sketches and $10.00 examination fee to the appropriate Regional Office.

RECEIVED
FEB 25 1986
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Northwest Regional Office
4350 150th Avenue N.E.
Redmond, Washington 98502 - 5301
Tel. (206) 885-1900

Central Regional Office
3601 West Washington
Yakima, Washington 98903 - 1164
Tel. (509) 575-2491

Southwest Regional Office
7272 Cleanwater Lane
Olympia, Washington 98504 - 6811
Tel. (206) 753-2353

Eastern Regional Office
N. 4601 Monroe, Suite 100
Spokane, Washington 99205 - 1295
Tel. (509) 456-2926

The appropriate Regional Office will be happy to answer any further questions you may have.

RECEIVED
NOV 23 1987
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond *Washington, this* 15th *day of* April, *19* 89.

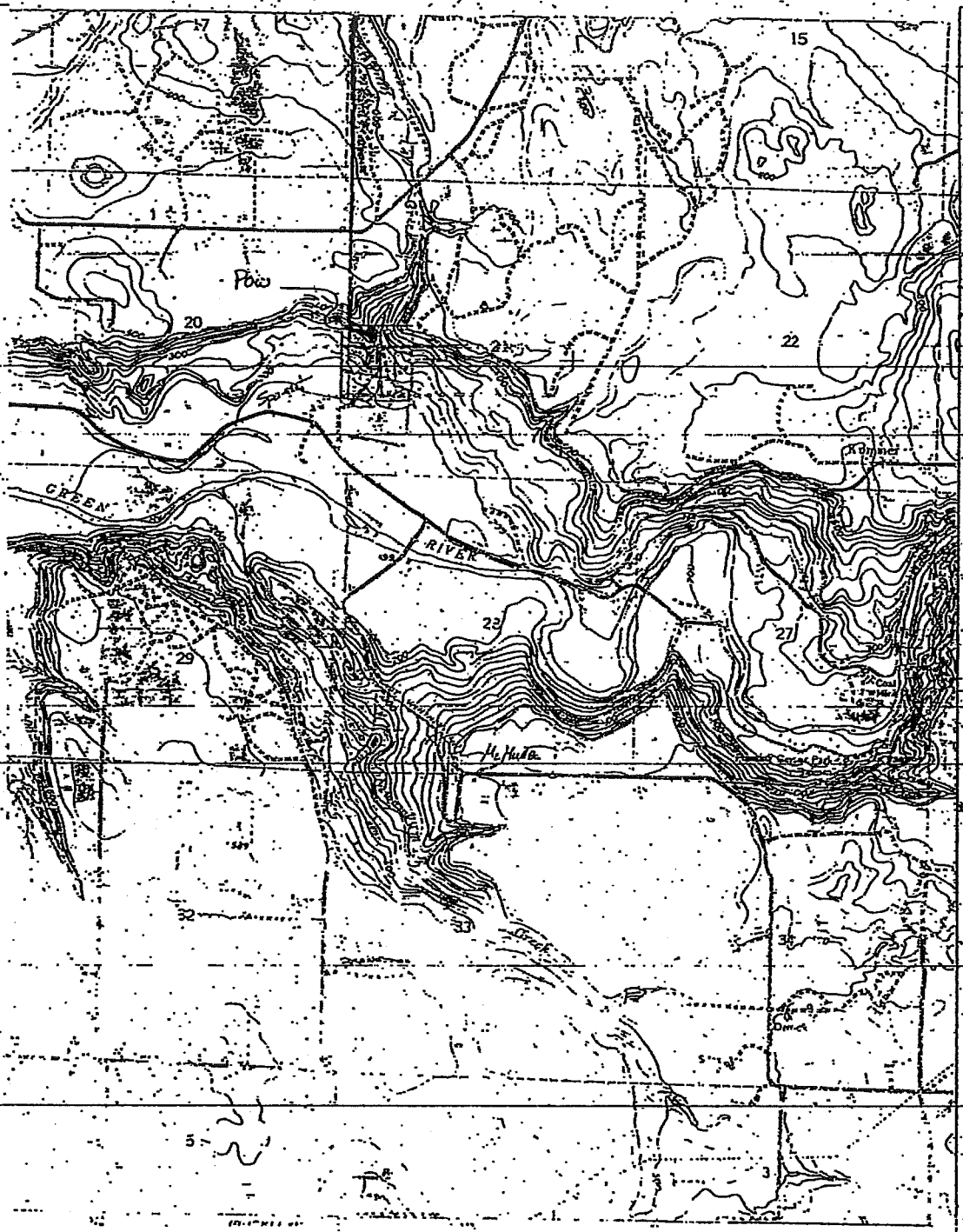
Department of Ecology

ENGINEERING DATA OK

by Herman H. Huggins

Herman H. Huggins, Section Supervisor Water Resources

FOR COUNTY USE ONLY



15
Pow
20
22
GREEN
RIVER
22
27
29
32
33
5
3

Affidavit of Publication

STATE OF WASHINGTON
COUNTY OF KING } ss

Laurie Fieser being first duly sworn on oath, deposes and says that she is the Chief Clerk of THE DAILY GLOBE NEWS, a newspaper published six (6) times a week. That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publication referred to, printed and published in the English language continually as a newspaper published four (4) times a week in Kent, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the Daily Globe News has been approved as a legal newspaper by order of the Superior Court of the County in which it is published, to-wit, King County, Washington. That the annexed is a Notice of Application

... as it was published in regular issues (and not in supplement form of said newspaper) once each issue for a period of 2/Wednesday consecutive issues, commencing on the 6th day of August 1980 and ending the 13th day of August 1980, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of $ 19.35 which has been paid in full at the rate of per folio of one hundred words for the first insertion and per folio of one hundred words for each subsequent insertion

Laurie Fieser

Subscribed and sworn to before me this 13th day of August, A.D. 80

Notary Public in and for the State of Washington, residing at Kent, King County
Auburn

- Passed by the Legislature, 1955, known as Senate Bill 281, effective June 9th, 1955

- Western Union Telegraph Co rules for counting words and figures, adopted by the newspapers of the State

VPC Form No 47 Rev 1-75

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That Diamond Springs Water Association of Auburn, Washington on May 27, 1980 made Application No. G1-22628 filed for permit to appropriate public waters, subject to existing rights from tributaries of Crisp Creek in the amount of 60 gallons per minute and 4.0 acre feet per annum for community domestic supply. Continuously. The source of the proposed appropriation is located within NW¼ SW¼ of Section 21, Township 21 N., Range 6 E.W.M. in King County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a fee (check or money order) of $2.00, recording fee, and filed with the Department of Ecology at the address shown below, within thirty (30) days from Aug 6, 1980. Department of Ecology, Northwest Regional Office, 4350 150th Ave. N.E., Redmond, Washington 98052

Published in the Daily Globe News, August 6 and 13, 1980. 42582

$28.86
dp
JM

136

King County Home News Services Comments Search

Natural Resources and Parks
Water and Land Resources Division

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_07393_01

General Location Details:

None: U-Firs #2

Unique Well ID: GrpB_07393_01
Parcel ID Number: 1721069013
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 17 QS: NE/SE
Local Number: 21N/06E-17J
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Well Well Depth: 92 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

17 ~~[illegible]~~ J-7

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 10/03/2006
Printed: 03/12/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
07393 P	U-FIRS #2	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

JOSEPH SACCONE [CONTACT]
27004 211TH PL SE
COVINGTON, WA 98042

7. OWNER NAME & MAILING ADDRESS — **8. Owner Number** 020616

HENRICK SORTUN
26702 138TH PL SE
KENT, WA 98042

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (206) 250-3770		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [X] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [X] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [X] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL #1		X										X				X						92	25	NE SE	17	21N	06E

17-[illegible]5-7

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
07393 P	U-FIRS #2	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	2	2
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	2		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		2	2

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 5

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	**ANNUALLY**	**ONCE EVERY 3 YEARS**
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____ **TITLE:** _____

File Original with Department of Ecology
Second Copy Owner's Copy
Third Copy - Driller's Copy

84311

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W118800
UNIQUE WELL I.D. # AFJ 616
Water Right Permit No

(1) OWNER Name JANE BALLARD-SEIBEL Address

(2) LOCATION OF WELL County King NE 1/4 NE 1/4 Sec 17 T 21 N R 6E WM

(2a) STREET ADDRESS OF WELL (or nearest address) 33210 210 AVE SE AUBURN

TAX PARCEL NO 172106-9013

21-6E-17A

(3) PROPOSED USE ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK Owner's number of well (if more than one)
☒ New Well ☐ Deepened ☐ Reconditioned ☐ Decommission
Method ☐ Dug ☐ Cable ☒ Rotary ☐ Bored ☐ Driven ☐ Jetted

(5) DIMENSIONS Diameter of well 6 inches
Drilled 95 feet Depth of completed well 95 ft

(6) CONSTRUCTION DETAILS
Casing Installed
☐ Welded 6" Diam from +1.5 ft to 18.5 ft
☒ Liner installed 4" Diam from -15 ft to 75 ft
☐ Threaded " Diam from ft to ft

Perforations ☐ Yes ☒ No
Type of perforator used
SIZE of perforations in by in
perforations from ft to ft

Screens ☒ Yes ☐ No ☐ K-Pac Location
Manufacturer's Name WESTERN
Type PVC Model No
Diam 4 Slot Size 15 from 75 ft to 95 ft
Diam Slot Size from ft to ft

Gravel/Filter packed ☒ Yes ☐ No ☐ Size of gravel/sand 8-12 SILICA
Material placed from 18 ft to 95 ft

Surface seal ☒ Yes ☐ No To what depth? 18.5 ft
Material used in seal BENTONITE
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP Manufacturer's Name GOULDS
Type SUBMERSABLE HP 3/4

(8) WATER LEVELS Land surface elevation above mean sea level ft
Static level 57 ft below top of well Date Dec 7/00
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom?
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 22 gal/min with 2 ft drawdown after 2 hrs
Airtest gal/min with ft drawdown after hrs
Artesian flow g p m Date
Temperature of water Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Top soil	0	1
Broken clay + cobbles	1	7
Blue clay	7	57
Sand (coarse brown)	57	66
Blue clay	66	77
Sand Gravel (water)	77	94
Blue clay	94	95

RECEIVED
DEC 11 2000
DEPT OF ECOLOGY

Work Started Dec 6/00 Completed Dec 7/00

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name L. GOSLING License No 1539
(Licensed Driller/Engineer)

Trainee Name License No
Drilling Company CASCADE DRILLING
(Signed) [signature] License No 1539
(Licensed Driller/Engineer)
Address 7411 30 ST NE MARYSVILLE
Contractor's Registration No CASCAD091P8 Date Dec 7/00

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407-6600 The TDD number is (360) 407-6006

ECY 050-1-20 (11/98) 24 11

17-J-8

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-6E 17K

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission ("x" in circle) 265545

- (x) Construction
- ( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W244668

Unique Ecology Well ID Tag No. APR-457

Water Right Permit No. _____

Property Owner Name Kurt Edwards

Well Street Address 20502 SE 330th ST

City Auburn County King

Location NW 1/4-1/4 SE 1/4 Sec 17 Twn 21 R 6 (EWM or WWM) circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 9158400190

PROPOSED USE: (x) Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

(x) New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable (x) Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 105 ft. Depth of completed well 103 ft.

CONSTRUCTION DETAILS

Casing Installed: (x) Welded 6" Diam. from 0 ft. to 99 ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes (x) No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: (x) Yes ☐ No (x) K-Pac Location 97-98

Manufacturer's Name Cook

Type Stainless Steel Model No. Telescopic

Diam. 6 Slot size .010 from 98 ft. to 103 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes (x) No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: (x) Yes ☐ No To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? ☐ Yes (x) No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 75 ft. below top of well Date 6-18-07

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes (x) No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 8 gal./min. with stem set at 95 ft. for 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes (x) No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Clay-gravel brown	3	40
Clay-gravel-gray	40	99
Sand-gravel-gray-water	99	102
Clay-gray	102	105

RECEIVED
JUN 22 2007
DEPT. OF ECOLOGY

Start Date 6-13-07 Completed Date 6-18-07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

(x) Driller ☐ Engineer ☐ Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature Brad Johnson

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co., Inc

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSOC207QM Date 6-18-07

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

The Department of Ecology does NOT Warranty the Data and/or the Information on this W-ll Report.

17-K-1

✓ parcel 1044 21-6-[illegible]

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W098802
UNIQUE WELL I.D. # ACV 770
Water Right Permit No.

(1) OWNER: Name Larry McKimm Address 21708 102nd PL SE, Kent, WA 98031

(2) LOCATION OF WELL: County King NE 1/4 NE 1/4 Sec 20 T 21 N, R 6 E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 33730 211 PL SE, Auburn

(3) PROPOSED USE: ☒ Domestic ☐ Irrigation ☐ DeWater Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐
Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 300 feet. Depth of completed well 300 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 300 ft.
Welded ☒ " Diam. from ft. to ft.
Liner installed ☐ " Diam. from ft. to ft.
Threaded ☐

Perforations: Yes ☒ No ☐
Type of perforator used star wheel
SIZE of perforations 118 in. by 2 in.
60 perforations from 243 ft. to 253 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 210 ft. below top of well Date 12-22-97
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Valley Pump
Yield: 6.7 gal./min. with 25 ft. drawdown after 1 1/2 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 5+ gal./min. with 16 ft. drawdown after 2 1/2 hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	3
Brown sand	3	8
Brown silty clay	8	28
Brown sand	28	39
Brown sand-gravel	39	44
Tan clay	44	67
Gray hardpan	67	81
Gray clay-gravel	81	140
Gray clay	140	175
Gray sand-gravel	175	180
Gray clay-gravel	180	230
Tan clay gravel	230	245
Tan water sand-gravel	245	251
Gray clay	251	265
Gray silt sand	265	275
Gray clay	275	300

G.S. ~470
SW 210
260

below lower S&G
base Cpog [illegible] 44 or 67
elev. 426 or 403'

Work Started 12-12, 19. Completed 12-22, 1997

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co., Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 19415 108th Ave SE, Renton, WA 98055
(Signed) [signature] (WELL DRILLER) License No. 0233
Contractor's Registration No. JOHNSDC207QM Date 12-22, 1997

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

20-A-1

The Department of Ecology does NOT Warr[illegible]y the Data and/or the Information on this Well [illegible]ort.

64223 21-6-20A

ENTERED

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W098751
UNIQUE WELL I.D. # ACV765
Water Right Permit No.

(1) OWNER: Name Dwayne McGraw Address 33920 211 PL SE, Auburn, WA 98092

(2) LOCATION OF WELL: County King NE 1/4 NE 1/4 Sec 20 T 21 N R 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 33920 211 PL SE, Auburn

(3) PROPOSED USE: ☐ Domestic ☒ Irrigation ☐ DeWater Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 77 feet. Depth of completed well 77 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from 0 ft. to 77 ft.
Welded ☒ " Diam. from ft. to ft.
Liner Installed ☐ " Diam. from ft. to ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H P

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 48 ft below top of well Date 1-8-98
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 20 gal./min with stem set at 73 ft. for 2 1/2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	2
Brown clay-gravel	2	8
Brown hardpan	8	35
Brown sand	35	57
Brown water sand-gravel	57	77
Tan clay	77	—

~G.S. 470
SW 40
430
poss lower S+G

DEPT

ECOLOGY

Work Started 1-7, 19. Completed 1-8, 1998

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co. Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 19415 108th Ave SE, Renton, WA 98055
(Signed) [signature] (WELL DRILLER) License No. 0233
Contractor's Registration No. JOHNSDC207QM Date 1-8, 1998

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

20-A-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

Parcel 9028

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 064798
Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name GUNTER, BILL Address 33927 211 PL SE AUBURN, WA 98022

(2) LOCATION OF WELL: County KING - NE 1/4 NE 1/4 Sec 20 T 21 N., R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) 33927 211 PL SE, AUBURN

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 240 ft. Depth of completed well 170 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 170 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 85 ft. below top of well Date 06/12/96
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 5 gal/min. w/ stem set at 170 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG 21-6E-20A

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	2
BROWN SILTY SAND	2	17
WATER BEARING SAND W/OCC GRAVEL	17	45
BROWN SILT	45	54
BROWN CEMENTED SAND & GRAVEL	54	66
BLUE GLACIAL TILL	66	142
BLUE CLAY	142	160
BLUE GLACIAL TILL	160	170
WATER BEARING	170	171
BLUE GLACIAL TILL	171	227
BLUE CLAY	227	240

~ G.S. 470
SW 85
385
below lower S+G
base of Opog 66'
elev ~ 404'

Work started 06/06/96 Completed 06/12/96

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] [signature] License No. 0097

Contractor's Registration No. NORTHPD137PO Date 06/21/96

20-A-3

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

DEPARTMENT OF ECOLOGY
REC # 774080295
CASH__ OTHER__ NONE X

WATER RIGHT CLAIM

1. NAME CHARLES H. & ANNE N. SHANNON

ADDRESS 20856 SE AUBURN BLACK DIAMOND ROAD, P.O. BOX 691

AUBURN, WASHINGTON ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND WATER (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS WELLS

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 10 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 2 GPM

B. ANNUAL QUANTITY CLAIMED 6 ACRE - FEET (ACRE FEET PER YEAR) PRESENTLY USED 3.1 ACRE - FEET

C. IF FOR IRRIGATION, ACRES CLAIMED 3 ACRES PRESENTLY IRRIGATED 2 ACRES

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: CONTINUOUSLY

4. DATE OF FIRST PUTTING WATER TO USE: MONTH AUGUST YEAR 1967

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 600 300 FEET SOUTH AND 700 700 FEET west FROM THE NORTHEAST (NE) CORNER OF SECTION 20

BEING WITHIN NE ¼, NE ¼ OF SECTION 20 T. 21 N., R. 6 E (E.OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: EAST 175 FEET, OF WEST ½, OF NE¼, OF NE¼ OF SEC. 20, TOWNSHIP ~~XX~~ 21 NORTH, RANGE 6 EAST, WILLAMET MERIDIAN

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC SUPPLY, AGRICULTURE IRRIGATION & LIVESTOCK

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPROPRIATION

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

JUN 20 75 164086

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Charles H. Shannon

DATE FEBRUARY 8, 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☒ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/ OR WELL CONSTRUCTION IS AVAILABLE

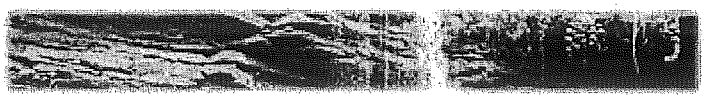
A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ~~ALONG WITH YOUR FEE~~ TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

20-A-4

King County Home | News | Services | Comments | Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471755122034501

General Location Details:

Unique Well ID: S_471755122034501 Name: Blondell
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: NE/NE
Local Number: 21N/06E-20A01
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 103 Feet
Surface Elevation: 465 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

20-A-5

the Division of Water Management
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Permit No. 002244

(1) OWNER: Name PAUL J. PHIPPS Address 33623-206 SE AUBURN, WN 98002

(2) LOCATION OF WELL: County KING N 1/2, E 1/2, W 1/2 NW 1/4 NE 1/4 Sec. 20 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner 2260' W + 100' S FROM NE CORNER OF SEC. 20

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐ Irrigation ☑ Test Well ☐ Other ☐ (TROUT)

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled ..... ft. Depth of completed well 45 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 45 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☐ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☑ No ☐
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from 35 ft. to 45 ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☑ No ☐ To what depth? 12 ft.
Material used in seal mud
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: SUBMERSIBLE H.P. 3/4

(8) WATER LEVELS: Land-surface elevation above mean sea level 500 ft.
Static level 27 ft. below top of well Date 9-1966
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test Sept 1966
Bailer test 12 gal./min. with 8 ft. drawdown after 2 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water 48 Was a chemical analysis made? Yes ☒ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Loose Gravel	0	12
Grey Clay	12	20
Hard Pan	20	27
water sand + gravel	27	45

Work started Sept 1966 Completed Sept 1966

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton Wash

[Signed] Myrl M. Johnson (Well Driller)

License No. 223-02-5842 Date 7-1, 1971

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 5-69)—5-69.

20-B-1

The Department of Ecology does NOT Warr[illegible]ty the Data and/or the Information on this Well [illegible]ort.

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
JAN 20 71 003066
CASH ___ OTHER ✓ NONE ___

1. NAME PAUL J. PHIPPS
ADDRESS 33623 - 206 S.E.
AUBURN, WASH. ZIP CODE 98002

2 SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED. WELL-GROUND (SURFACE OR GROUND WATER)
WRIA 09 (LEAVE BLANK)

A IF GROUND WATER, THE SOURCE IS WELL

B. IF SURFACE WATER, THE SOURCE IS ___

3 THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A QUANTITY OF WATER CLAIMED 50 PRESENTLY USED 10
~~CUBIC FEET PER SECOND OR~~ GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 20 PRESENTLY USED 4
ACRE FEET PER YEAR)

C IF FOR IRRIGATION, ACRES CLAIMED 5 PRESENTLY IRRIGATED 1

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED JAN. 1 TO JAN. 1

4 DATE OF FIRST PUTTING WATER TO USE: ___ MONTH DEC YEAR 1966

5 LOCATION OF THE POINT(S) OF DIVERSION, WITHDRAWAL 2260 FEET WEST AND 100 FEET SOUTH FROM THE NE CORNER OF SECTION 20

BEING WITHIN NE 1/4 OF SECTION 20 T. 21 NORTH R 6E (E.or W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF

GIVE NAME OF PLAT OR ADDITION

6 LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED N 1/2 OF THE E 1/2 OF THE W 1/2 NW 1/4 OF THE NE 1/4 OF SEC. 20, TW 21, NORTH, RANGE 6 EAST, WM.

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED DOMESTIC (1), IRRIGATION, FISH PROP.

8 THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED APPROPRIATION

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED REGISTRY NUMBER

JAN 20 71 002244 < THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

Glen H. Fiedler

ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT-DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Paul J. Phipps

DATE 18 JAN 1971

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☒ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL

KEEP ON ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE. BLDG. NO. 2, OLYMPIA, WASHINGTON 98501

20-B-1

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

Name R. A. McKinney

Address

Zip Code

Phone No

1) Source from which the right to take and make use of water is claimed — ☐ Surface Water ☒ Ground Water

If surface water, please indicate source: give name if known

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☐ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used.

If located within the limits of a recorded platted property:

Lot Block of

(Give name of plat or addition)

In addition, please indicate Sec. T N, R E W.M.

County in which lands are located

DO NOT USE THIS SPACE—

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered: SEP 3 74

This has been assigned Water Right Claim Registry No: 74777

Director, Department of Ecology: John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X

Date

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

property owner name listed in IMAP's property history for parcel 2021069046 33623 206TH AVE SE

20-B2

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 26 74 1 33 480
CASH ___ OTHER ___ NONE ___

09

Name Lawrence O. Corbett

Address 33849-206th S.E.

Auburn, Wash Zip Code 98002

Phone No. 854-5783

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water
If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: The east half of the following: The east half of The West half of the South half of the Northwest quarter of the Northeast quarter of Section 20, Township 21 North, Range 6 East, W.M., in King County, Washington

If located within the limits of a recorded platted property:

Lot ___ Block ___ of ___ (Give name of plat or addition)

In addition, please indicate Sec. 20 T. 21 N., R. 6 (E) W. W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

MAR 10 75 1 44840

Director, Department of Ecology John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X L. O. Corbett

Date June 25, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

20-B-3

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

Name Mrs. Leo Dean

(Short Form) 09

Address 20626 S. E. 34th St.

Auburn, Washington Zip Code 98002

Phone No. TE-3-4370

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source: give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☐ Domestic ☒ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: S½ of W½ of NE¼ less E 368 Ft. & less CO RD

If located within the limits of a recorded platted property:

Lot 20-21-06 Block 9025 of COUN: 4795

(Give name of plat or addition)

In addition, please indicate Sec. 20 T. 21 N., R. RG: 06 E/W, W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

Fee 27 N054256

Director, Department of Ecology Robert Bigg

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Mrs Leo Dean

Date January 14, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☒ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

FEE OF $ 20.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

20-B-4

alter dwl

Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

Q6310

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W114597

UNIQUE WELL I D # AGA-164

Water Right Permit No 98092

(1) OWNER Name Leonard Tompkins Address 34304 196th Ave SE, Auburn, WA

(2) LOCATION OF WELL County King SW 1/4 NW 1/4 Sec 20 T 21 N R CE WM

(2a) STREET ADDRESS OF WELL (or nearest address) 34304 196th Ave SE - Auburn

TAX PARCEL NO 202106-9035

(3) PROPOSED USE
- [X] Domestic
- [ ] Industrial
- [ ] Municipal
- [ ] Irrigation
- [ ] Test Well
- [ ] Other
- [ ] DeWater

(4) TYPE OF WORK Owner's number of well (if more than one)
- [X] New Well
- [ ] Deepened
- [ ] Reconditioned
- [ ] Decommission

Method
- [ ] Dug
- [ ] Cable
- [X] Rotary
- [ ] Bored
- [ ] Driven
- [ ] Jetted

(5) DIMENSIONS Diameter of well 6 inches
Drilled 94 feet Depth of completed well 94 ft

(6) CONSTRUCTION DETAILS
Casing Installed
- [X] Welded 6" Diam from 0 ft to 94 ft
- [ ] Liner installed " Diam from ft to ft
- [ ] Threaded " Diam from ft to ft

Perforations [ ] Yes [X] No
Type of perforator used
SIZE of perforations in by in
perforations from ft to ft

Screens [ ] Yes [X] No [ ] K-Pac Location
Manufacturer's Name
Type Model No
Diam Slot Size from ft to ft
Diam Slot Size from ft to ft

Gravel/Filter packed [ ] Yes [X] No [ ] Size of gravel/sand
Material placed from ft to ft

Surface seal [X] Yes [ ] No To what depth? 18 ft
Material used in seal bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP Manufacturer's Name
Type H P

(8) WATER LEVELS Land-surface elevation above mean sea level ft
Static level 74 ft below top of well Date 6-13-01
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom?
Yield gal /min with ft drawdown after hrs
Yield gal /min with ft drawdown after hrs
Yield gal /min with ft drawdown after hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal /min with ft drawdown after hrs
Airtest 8 gal /min with 10 ft drawdown after 2 1/2 hrs
Artesian flow g p m Date
Temperature of water Was a chemical analysis made? [ ] Yes [X] No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Surface	0	3
Sand-gravel-brown	3	6
Hardpan-clay-tan	6	46
Clay-grey	46	63
Hardpan-gravel-brown	63	88
Sand-gravel-water brown	88	94
clay-gravel-brown	94	—

RECEIVED
JUN 18 2001
DEPT OF ECOLOGY

Work Started 6-7-01 Completed 6-13-01

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name Brad Johnson License No 0233
(Licensed Driller/Engineer)

Trainee Name License No

Drilling Company Johnson Drilling Co., LLC

(Signed) [signature] License No 0233 98055
(Licensed Driller/Engineer)

Address 19415 108th Ave SE, Renton, WA

Contractor's Registration No JOHNSDC207QM Date 6-13-01

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407-6600 The TDD number is (360) 407-6006

ECY 050-1-20 (11/98)

20-E-01

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

a1106-a20

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. ....

Permit No ....

(1) OWNER: Name William Walmer Address 26852 165th Pl. S.E. Kent, Wa.

(2) LOCATION OF WELL: County King NW ¼ NW ¼ Sec. 20 T. 21 N. R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 220 ft. Depth of completed well 220 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 220 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used ....
SIZE of perforations ... in. by ... in.
perforations from ... ft. to ... ft.
perforations from ... ft. to ... ft.
perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ....
Type ... Model No ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ....
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ... Depth of strata ...
Method of sealing strata off ....

(7) PUMP: Manufacturer's Name ....
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 157 ft. below top of well Date 10-12-87
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test 45 gal./min. with 20 ft. drawdown after 1 hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Topsoil	0	2
Brn. Till	2	10
Blue Till	10	54
Brn. Cemented Sand & Gravel	54	105
Blue Silty Sand	105	208
Water Bearing Sand & Gravel	208	220

DEC 3 ...

Work started 10-6-87 19 Completed 10-12-87 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NW Pump & Drilling Co.
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South

[Signed] ... (Well Driller)

License No. 0097 Date 10-26-87 19

(USE ADDITIONAL SHEETS IF NECESSARY)

FORM 050 1 20

20-E-6301

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. 073853
Permit No. ....

(1) OWNER: Name Bob Almy Address 19650 SE 344th Auburn 98002

(2) LOCATION OF WELL: County King SE ¼ SW ¼ Sec. 20 T. 21 N. R. 6 W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 200 ft. Depth of completed well 135 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 135 ft.
Threaded [ ] " Diam. from .... ft. to .... ft.
Welded [X] " Diam. from .... ft. to .... ft.

Perforations: Yes [X] No [ ]
Type of perforator used Hole star (shear)
SIZE of perforations 1/8 in. by 3 in.
60 perforations from 100 ft. to 120 ft.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name....
Type.... Model No....
Diam. .... Slot size .... from .... ft. to .... ft.
Diam. .... Slot size .... from .... ft. to .... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: ....
Gravel placed from .... ft. to .... ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? .... Depth of strata....
Method of sealing strata off....

(7) PUMP: Manufacturer's Name....
Type: .... H.P....

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level 100 ft. below top of well Date 10-15-90
Artesian pressure .... lbs. per square inch Date....
Artesian water is controlled by.... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? ....
Yield: .... gal./min. with .... ft. drawdown after .... hrs.
" 8 gpm Stem set at 120' 2½ hrs "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
....	....	....	....	....	....
....	....	....	....	....	....
....	....	....	....	....	....

Date of test ....
Bailer test .... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date ....
Temperature of water.... Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	4
Brown sand - gravel	4	25
Tan gravel - clay	25	90
Brown gravel - sand	90	99
Brown gravel - sand - seepage	99	116
Gray fine sand - silt - water	110	120
Gray silty clay	120	135
Gray clay	135	200

Work started 9-18 19 90 Completed 10-15 19 90

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print) 98055
Address 19415 108th Ave SE Renton
[Signed] (Well Driller)
License No. 0233 Date 10-15 19 90

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

20-E-0202

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

124618

WATER WELL REPORT

21-6E-20E

Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle)
- (•) Construction
- ( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* _____

CURRENT Notice of Intent No AW153668

Unique Ecology Well ID Tag No AB0-539

Water Right Permit No _____

Property Owner Name Gary Taylor

Well Street Address 33920 196th SE

City Auburn Area County King

Location SW 1/4 - 1/4 NW 1/4 Sec 20 Twn 21 R 6 (EWM) or WWM circle one

Lat/Long (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No 20210C - 9039

PROPOSED USE [x] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK Owner's number of well (if more than one) _____
[x] New Well [ ] Reconditioned Method [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS Diameter of well 6 inches, drilled 173 ft
Depth of completed well 173 ft

CONSTRUCTION DETAILS
Casing Installed: [x] Welded 6" Diam from 0 ft to 173 ft
[ ] Liner installed _____" Diam from _____ ft to _____ ft
[ ] Threaded _____" Diam from _____ ft to _____ ft

Perforations [ ] Yes [x] No
Type of perforator used _____
SIZE of perfs ____ in by ____ in and no of perfs ____ from ____ ft to ____ ft

Screens [ ] Yes [x] No [ ] K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No _____
Diam _____ Slot Size _____ from _____ ft to _____ ft
Diam _____ Slot Size _____ from _____ ft to _____ ft

Gravel/Filter packed [ ] Yes [x] No [ ] Size of gravel/sand _____
Materials placed from _____ ft to _____ ft

Surface Seal [x] Yes [ ] No To what depth? 18 ft
Materials used in seal bentonite
Did any strata contain unusable water? [ ] Yes [x] No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP Manufacturer's Name _____
Type _____ H P _____

WATER LEVELS Land-surface elevation above mean sea level _____ ft
Static level 140 ft below top of well Date 12-3-02
Artesian pressure _____ lbs per square inch Date _____
Artesian water is controlled by _____ (cap,valve, etc)

WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [x] No If yes by whom? _____
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Recovery data (time taken as zero when pump turned off)(water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test ____ gal/min with ____ ft drawdown after ____ hrs
Airtest 10-12 gal/min with stem set at 169 ft for 1 1/2 hrs
Artesian flow _____ g p m Date _____
Temperature of water ____ Was a chemical analysis made? [ ] Yes [x] No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
surface	0	3
Sand-gravel-clay-brown	3	8
Hardpan - brown	8	21
Sand-gravel-brown	21	24
Hardpan - brown	24	35
Sand-gravel-brown	35	38
Hardpan - brown	38	60
clay-gray	60	169
Sand-gravel-gray	169	173
water		
Hardpan-gravel-gray	173	—

RECEIVED
DEC 16 2002
DEPT OF ECOLOGY

Start Date 11-29-02 Completed Date 12-3-02

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

[x] Driller [ ] Engineer [ ] Trainee Name (Print) Brad Johnson
Driller/Engineer/Trainee Signature Brad Johnson
Driller or Trainee License No 0233

Drilling Company Johnson Drilling Co., LLC
Address 19415 108th Ave SE
City, State, Zip Renton, WA 98055
Contractor's Registration No JOHNSOC207QM Date 12-3-02

If trainee, licensed driller's Signature and License no _____

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

20-E-0850

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
MAR 5 1407 9697
CASH OTHER NONE

1. NAME Gary L. Taylor
ADDRESS 1225 So Southern St
Seattle Wash ZIP CODE 98108

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground water (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS well

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 5 GPM (~~CUBIC FEET PER SECOND~~ OR GALLONS PER MINUTE) PRESENTLY USED .05 GPM

B. ANNUAL QUANTITY CLAIMED 1 (ACRE FEET PER YEAR) PRESENTLY USED .01

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: JAN 1 to Dec. 31

4. DATE OF FIRST PUTTING WATER TO USE: MONTH June YEAR 1973

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL. 215 FEET North AND 220 FEET East FROM THE Southwest CORNER OF SECTION NE¼ SW¼

BEING WITHIN NW¼ SW¼ NW¼ OF SECTION 20 T. 21 N., R. 6 (E OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED. The South half of the Northwest quarter of the southwest quarter of the Northwest quarter of Section 20, Township 21 North, Range 6 East W. M. in King County Washington

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic supply, 1 home.

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED - THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

JUN 14 706617

John Biggs
DIRECTOR, DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Gary Taylor

DATE 3-1-84

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $7.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P.O. BOX 829 OLYMPIA WASHINGTON 98501

20-E-dk
05

RECEIVED

MAR 1 1 74 08 1 82

CASH ___ OTHER ___ NONE ___

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

Name Patrick Joseph Mayer

(Short Form) Ø9

Address 19854 S.E. 342nd Street

Auburn, Washington Zip Code 98002

Phone No. 939-1704

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source, give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☐ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: SE 1/4 OF NE 1/4 OF SW 1/4 OF NW 1/4

E & S 30 FT FOR RD

If located within the limits of a recorded platted property:

Lot 29-[illegible] Block [illegible] of [illegible]

(Give name of plat or addition)

In addition, please indicate Sec. 20 T. 21 N. R. 06 E E/W.W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

JUL 1 7 74 070957

Director, Department of Ecology

John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Patrick Joseph Mayer

Date March 2, 1974

If claim filed by designated representative, print or type full name and mailing address of agent below.

☒ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

20-E-06

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
APR 23 1974 093177
CASH OTHER NONE

Water Right Claims Registration

Water Right Claim

Name KENNETH EUGENE SIMON (Short Form) 09

Address 19855 S.E. 342nd

AUBURN, WASHINGTON Zip Code 98002 Phone No. 939-0156

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M.

If located within the limits of a recorded platted property:

Lot Block of
(Give name of plat or addition)

In addition, please indicate Sec. 20 T. 21 N., R. 6 E ~~EAST~~ W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered This has been assigned Water Right Claim Registry No.

OCT 22 1974 084663

Director, Department of Ecology John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Kenneth Eugene Simon

Date APRIL 10, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

20-E-07

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
FEB 7 1972759
CASH OTHER NONE

1. NAME CLINTON S. McENTIRE
ADDRESS 19650 SE 344ST
AUBURN - WASH. ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: (WELL) - GROUND (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)
A. IF GROUND WATER, THE SOURCE IS WELL
B. IF SURFACE WATER, THE SOURCE IS —

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:
A. QUANTITY OF WATER CLAIMED 12 GPM PRESENTLY USED 12 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)
B. ANNUAL QUANTITY CLAIMED 2 AC FT PRESENTLY USED 2 AC FT (ACRE FEET PER YEAR)
C. IF FOR IRRIGATION, ACRES CLAIMED — PRESENTLY IRRIGATED —
D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: —

4. DATE OF FIRST PUTTING WATER TO USE: MONTH 4 - 17 YEAR 64

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 170 FEET NORTH AND 35 FEET WEST FROM THE SE CORNER OF SE¼ SW¼ SW¼ NW¼ SEC 20 T21 R06E CORNER OF SECTION
BEING WITHIN OF SECTION 20 T. 21 N. R 06 E (E.OR W.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
SE¼, SW¼, SW¼, NW¼ - SEC. 20, T.21, R 06E WM.
COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED. HOUSE HOLD - YARD - GARDEN + ANIMALS

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED:

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED THIS HAS BEEN ASSIGNED
WATER RIGHT CLAIM REGISTRY NO.
JUN 1 1 74065969
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF
X Clinton S. McEntire
DATE
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P.O. BOX 829 OLYMPIA, WASHINGTON 98501

20-E-09

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

RECEIVED
DEPARTMENT OF ECOLOGY
FEB 7 1974 072988
CASH OTHER NONE

WATER RIGHT CLAIM

1. NAME DON E. AND/OR MARY J. ORTON
ADDRESS 19850 - S.E. 344TH ST.
AUBURN, WASHINGTON ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND WATER (SURFACE OR GROUND WATER)
(WELL) W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS WELL

B. IF SURFACE WATER, THE SOURCE IS NONE

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 4 C.F.S. (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 1 C.F.S.

B. ANNUAL QUANTITY CLAIMED 2 ACRE FT. (ACRE FEET PER YEAR) PRESENTLY USED 1 ACRE FT.

C. IF FOR IRRIGATION, ACRES CLAIMED 2 1/2 PRESENTLY IRRIGATED 1/2

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED. JAN. 1ST TO DEC. 31

4. DATE OF FIRST PUTTING WATER TO USE: MONTH JULY YEAR 1971

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 160 FEET NORTH AND 1620 FEET WEST FROM THE CENTER ~~CORNER~~ OF SECTION 20
BEING WITHIN N.W. 1/4 OF SECTION 20, T. 21 N., R. 6 E., (E. OR W.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT NONE BLOCK NONE OF NONE
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 IN SECTION 20, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M., IN KING COUNTY, WASHINGTON.

COUNTY KING

7 PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC SUPPLY (1 HOME)

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPROPRIATION

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED REGISTRY NUMBER
APR 15 1974 059887
THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT-DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
X Don E. Orton
DATE 2-5-74
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE BUILDING-OLYMPIA WASHINGTON 98501

ORIGINAL
DWR

09
20-E-09

(6) The legal mete-and-bound description of your land is part of your deed or purchase contract. Use this or part of this, as explained below. DO NOT USE THE LEGAL DESCRIPTION FROM A TAX STATEMENT OR TAX LOT DESCRIPTION. If the place of use of water is considerably less than the total lands you own, modify your legal description so as to delete from it the (large) areas upon which water is not being used. For example: If you own the W1/2 of Section 4, but only irrigate the NW1/4NW1/4, you should accordingly state the place of use to be the NW1/4NW1/4 of Section 4. The legal description must include section, township, range and county. If additional space is needed to furnish this legal description of place of use, attach a sheet of paper to this claim and complete the legal description on that attached sheet (one copy is sufficient). If the Water Right Claim is for more than one property ownership, separate legal descriptions of each place of use must be noted, together with proper identification of ownership of each tract.

(7) Examples of purpose(s) of use include, but are not limited to, the following: domestic supply, municipal supply, commercial use, industrial use, irrigation, stock water, power generation and fish propagation. If used for more than one purpose, show all purposes for which used. If used for domestic supply, include statement of number of homes served. If used for industrial purposes, specify type of operations. For example: refrigeration, gravel washing, etc.

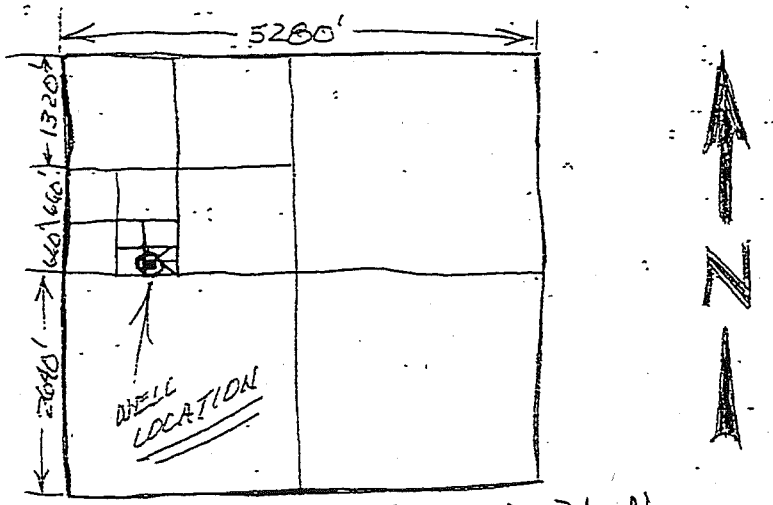
(8) State the basic legal doctrine (appropriation or riparian) under which the claimed right has been established. If the doctrine is statutory, cite the statute. If the claim is based on a court decree, cite the cause number, date of decree and name of court.

PLEASE NOTE: In the lower right-hand corner of the Water Right Claim form is a box to be checked if technical data related to well construction well depth, ground water levels, pump test results and water quality is available to the department. If such additional data is available for public record purposes, please so signify. This office will subsequently forward a separate form for your use in providing the technical data for inclusion in our basic data section as a part of our continuing program of basic data collection.

When you have completed this form, sign your name with your customary signature and insert the appropriate date in the blanks provided. If the claim was filed by your designated representative, please have the representative print or type his name and mailing address in the space provided.

A TWO DOLLAR ($2.00) STATUTORY FILING FEE MUST ACCOMPANY THIS WATER RIGHT CLAIM. Return the Water Right Claim, IN TRIPLICATE, to the following address

DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
Union Avenue Building
Olympia Washington 98501



Sec 20 TWNSHP 21 N
R-6 E W.M. KING Co. WN.

365
400 GALS DAY
146,000 GALS. YR.

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 14 74 100754
CASH OTHER MONE

Water Right Claims Registration

Water Right Claim

Name DAVID F HASBARGEN (Short Form) 09

Address 19823 SE 340TH

AUBURN Zip Code 98002 Phone No. UL-2-1214

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: SEC 20 TWP 21 RANGE 6 W ½ OF NE ¼ OF SW ¼ OF NW ¼ LESS CO RD. LOT 20-21-06 BLOCK 9007 CODE 4795

If located within the limits of a recorded platted property:

Lot 20-21-06 Block 9007 of

(Give name of plat or addition)

In addition, please indicate Sec. 20 T. 21 N., R. 6E ~~E/W~~, W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

DEC 174089386

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X David F. Hasbargen

Date May 11, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

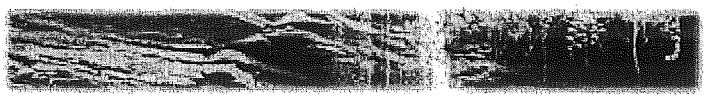
A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

20-E-1

King County Home | News | Services | Comments | Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471747122044501

General Location Details:

Name: Branham

Unique Well ID: S_471747122044501
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 20 QS: SW/NW
Local Number: 21N/06E-20E01
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 80 Feet
Surface Elevation: 472 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

20-E-11

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

W 7-0955
21-6E-20-F

WATER WELL REPORT

STATE OF WASHINGTON

Application No. NONE
Permit No. 21/06-20F

(1) OWNER: Name John Fournier Address 196th and the end of 344th

(2) LOCATION OF WELL: County King — S.E. ¼ N.W. ¼ Sec. 20 T. 21 N., R. 6 E. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 187 ft. Depth of completed well 187 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 169 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 127 ft. below top of well Date 3/5/76
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 7.5 gal./min. with 30 ft. drawdown after 3 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown clay	0	7
Brown hardpan	7	14
Gray hardpan	14	28
Gray boulders hardpan gravel	28	38
Brown hardpan gravel	38	60
Gray hardpacked gravel	60	122
Gray clay	122	165
Gray clay & gravel (water seepage)	165	178
Gray clay	178	187

Work started 3/3 1976 Completed 3/5 1976

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave S.E. Renton

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 3/6, 1976

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

20-F-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
SEP-8 70001713
CASH ___ OTHER ✓ NONE ___

1 NAME MORTON M. MANN JR.

ADDRESS 20231 SE 340Th. ST AUBURN
WASH. ZIP CODE 98002

2 SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND WATER (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A IF GROUND WATER, THE SOURCE IS DRILLED WELL

B. IF SURFACE WATER, THE SOURCE IS ___

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 12 GALLON per Min. (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 500 GAL PER DAY

B. ANNUAL QUANTITY CLAIMED 1 ACRE FEET PER YEAR (ACRE FEET PER YEAR) PRESENTLY USED 182500 GAL.

C. IF FOR IRRIGATION, ACRES CLAIMED 1 ACRE PRESENTLY IRRIGATED 1 ACRE

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED APRIL TO OCTOBER

4. DATE OF FIRST PUTTING WATER TO USE ___ MONTH JUNE YEAR 1946

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL. 557 FEET NORTH AND 448 FEET West FROM THE SE CORNER OF SECTION 20-21-6 SW¼ NW¼

BEING WITHIN ~~SW~~ OF SECTION 20 T. 21 N. 6 R. EWM (E. OR W.) W.M

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY LOT ___ BLOCK ___ OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED. THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SECTION TWENTY (20) TOWNSHIP TWENTY-ONE (21) NORTH, RANGE SIX (6) EAST OF THE W.M. EXCEPT COUNTY ROAD

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: HOME USE AND IRRIGATION

8 THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED. APPROPRIATION

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED REGISTRY NUMBER

SEP-8 70001222 ← THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO

Glen H. Lidbo

ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT-DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Morton M. Mann Jr.

DATE Sept. 3, 1970

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

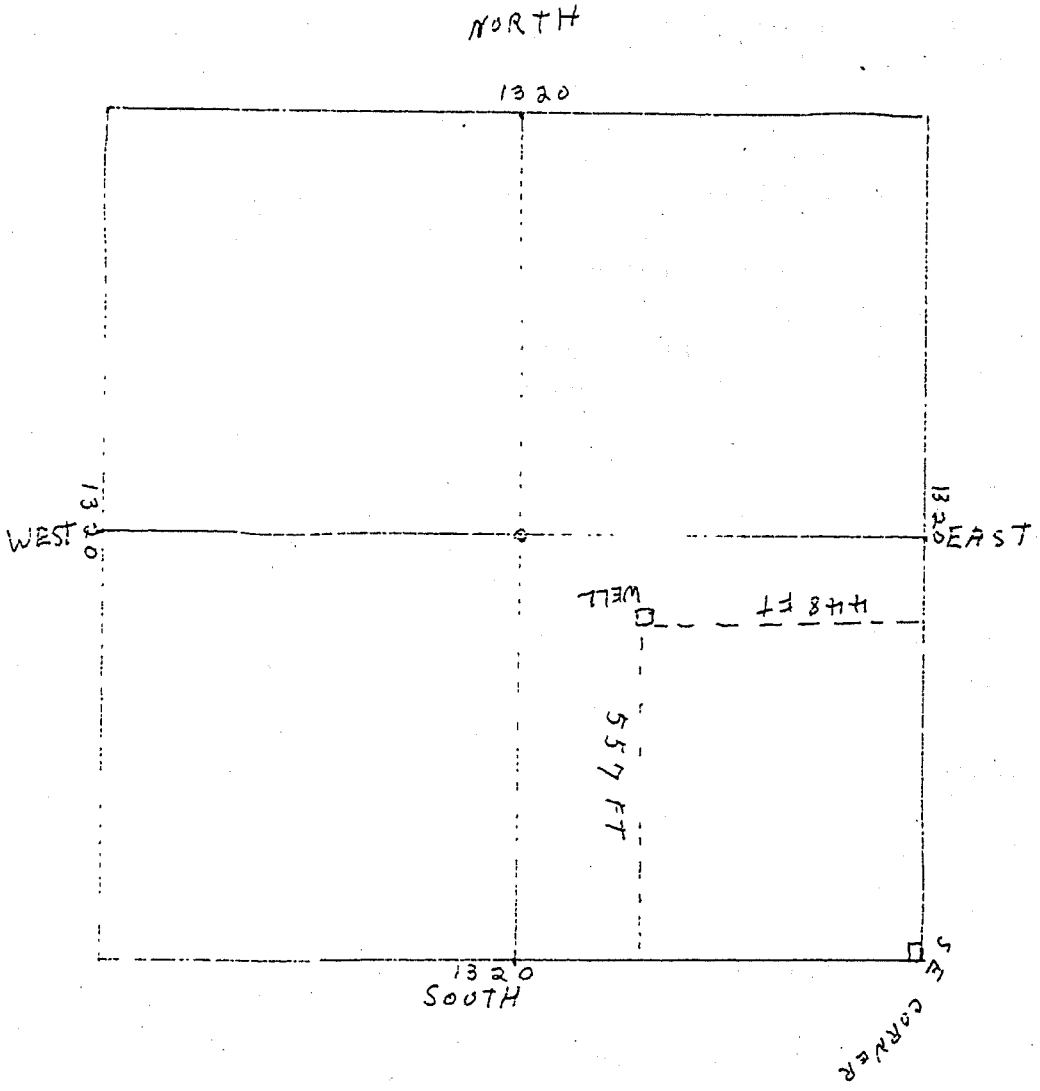
☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH ANY FEE REQUIRED TO THE NEAREST OFFICE OF THE DEPARTMENT OF WATER RESOURCES DIVISION OF WATER MANAGEMENT UNION AVE. BUILDING OLYMPIA, WASH.

20-F-2

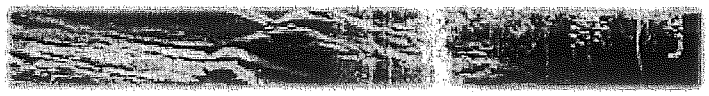
MORTON M. MANN
20231 - SE 340TH ST.
AUBURN, WASH.
98002



SW¼ OF NW¼
SEC 20 - TN 21 - R 6 EWM

557 ft NORTH AND 448 FT WEST
FROM THE SE CORNER OF SW¼ OF NW¼ 20-21-6E

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471742122041301

General Location Details:

Unique Well ID: S_471742122041301
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SE/NW
Local Number: 21N/06E-20F01
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 94 Feet
Surface Elevation: 465 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: Mann

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

20-F-2

21/06-06P

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No .....

(1) OWNER: Name Bill Brandner Address 34108 206th S.E., Auburn, WA 98002

(2) LOCATION OF WELL: County King – SE ¼ SW ¼ Sec. 6 T. 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 136 ft. Depth of completed well 136 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 136 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Johnson
Type stainless Model No .....
Diam. 6 Slot size .020 from 131 ft. to 136 ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite & cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level ..... ft.
Static level 66 ft. below top of well Date 1/31/79
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 10 gal./min. with 30 ft. drawdown after 1 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
top soil	0	3
brown till	3	14
brown silty sand	14	47
blue silty sand	47	113
brown till	113	120
water bearing sand & gravel	120	136

Work started 1/29/79 19 Completed 1/31/79 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Northwest Pump & Drilling Co.
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn, WA

[Signed] R. B. DeRemer II
(Well Driller)

License No. 0097 Date 1/31/79, 19

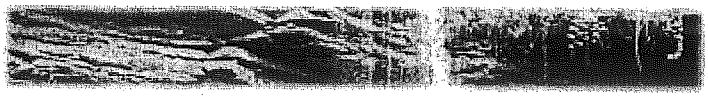
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20

20-6-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471747122035301

General Location Details:

Name: Brandner

Unique Well ID: S_471747122035301
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/NE
Local Number: 21N/06E-20G03
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 136 Feet
Surface Elevation: 465 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
7/31/1986	12:30	24.86	440.14	Steel tape
4/8/1987	16:08	18.58	446.42	Steel tape

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton,

Related Information:

20-6-1

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

RECEIVED
DEPARTMENT OF ECOLOGY
JAN 15 74 066936
CASH OTHER NONE

Name John Krogstadt

(Short Form) 09

Address 20465 S.E. 384th

Auburn, Washington Zip Code 98002

Phone No. TE-3-4142

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☐ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: E½ of W½ of SW ¼ of NE ¼ Less N 132 Ft. of S 528 Ft. THOF Less CO RD

If located within the limits of a recorded platted property:

Lot 20-21-06 Block 5021 of CODE: 4795
(Give name of plat or addition)

In addition, please indicate Sec. 20 T. 21 N., R. 06 E/W. W.M. RG:

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

FOR 2/W 054255

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X John Krogstadt

Date January 14, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☒ Additional information relating to water quality and/or well construction is available.

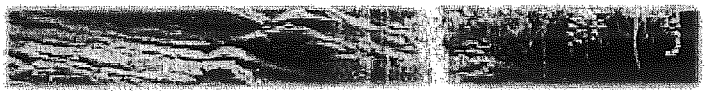
A FEE OF $20.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

20-6-2

King County | Home | News | Services | Comments | Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_03461_01

General Location Details:

Name: Krogstadt

Unique Well ID: GrpB_03461_01
Parcel ID Number: 2021069021
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/NE
Local Number: 21N/06E-20
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Well Well Depth: 0 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

20-6-2

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 05/14/2002
Printed: 03/11/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
03461 R	KROGSTADT COMMUNITY WELL	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

JOHN KROGSTADT [PURVEYOR]
20465 AUBURN BLACK DIAMOND RD
AUBURN, WA 98092

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 019011

KROGSTADT, JOHN
20465 AUBURN BLACK DIAMOND RD
AUBURN, WA 98092

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (253) 833-4142		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

1. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [x] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18										19			20	21						22	23	24			
	SOURCE NAME	INTERTIE	SOURCE CATEGORY										USE				TREATMENT						DEPTH		SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL		X										X				X								NW NE	20	21N	06E

20-6-2

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
03461 R	KROGSTADT COMMUNITY WELL	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	2	Undetermined
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	2		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
28. TOTAL SERVICE CONNECTIONS		2	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 5

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. 48007

(1) OWNER: Name Roger Scott Address 20425 SE Black Diamond Rd Auburn

(2) LOCATION OF WELL: County King w½, w½ - SW¼ NE¼ Sec 20 T 21 N., R 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well ... 6 inches.
Drilled ... 58 ft. Depth of completed well ... 58 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 58 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 44 ft. below top of well Date 8/12/82
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 30 gal./min. with 4 ft. drawdown after 2½ hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown silty sand	3	25
Gray sandy clay	25	45
Gray water sand & gravel	45	58
Gray hardpan	58	—

Work started 8/11 19 82 Completed 8/12 19 82

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc.
(Person, firm, or corporation) (Type or print)
Address 19415 108TH Ave SE Renton 98055

[Signed] Brad Johnson
(Well Driller)

License No. 0233 Date 8/12, 19 82

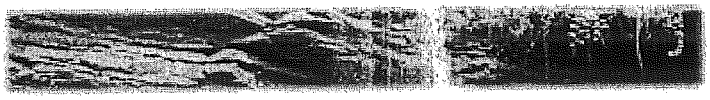
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

20-6-4

The Department of Ecology does NOT Warr 'y the Data and/or the Information on this Well F ort.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471750122040801

General Location Details:

Unique Well ID: S_471750122040801
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: NW/NE
Local Number: 21N/06E-20B02
City: King County
Zipcode: 98092
Data Source: Historic - unknown source
Who are these data sources?
Location Type: Well
Well Depth: 58 Feet
Surface Elevation: 465 Feet
What is surface elevation?
Location Accuracy: QTRQTRSEC
What are these location accuracies?

Name: Scott Roger

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
6/3/1986	10:05	35.39	429.61	Steel tape
4/7/1987	14:10	33.65	431.35	Steel tape

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

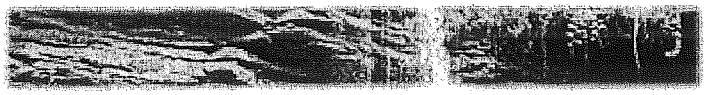
Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton,

Related Information:

20-6-3

King County | Home | News | Services | Comments | Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_42848_01

General Location Details:

Name: Scott/Sorensen

Unique Well ID: GrpB_42848_01
Parcel ID Number: 2021069098
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/NE
Local Number: 21N/06E-20
City: King County
Zipcode: 98092
Data Source: Seattle - KC Health
Who are these data sources?
Location Type: Well
Well Depth: 58 Feet
Surface Elevation: 0 Feet
What is surface elevation?
Location Accuracy: Parcel
What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
11/18/1992	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
9/20/1994	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		0.4 mg/L MDL:	

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
12/9/1997	23:59	WA_DoH_WQ_testing	Normal Environmental	1

20-6-3

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

11/19/2001	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land Resources Web site, please contact Fred Bentler, webmaster.

Department of Natural Resources and Parks
Water and Land Resources Division

Related Information:

Water and Land Resources Topics

Groundwater Management

Updated: 03/11/2008 11:58:05

King County | Natural Resources and Parks | Water and Land Resources | News | Services | Comments | Search

Links to external sites do not constitute endorsements by King County.
By visiting this and other King County web pages,
you expressly agree to be bound by terms and conditions of the site.
The details.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 08/11/2005
Printed: 03/11/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
42848 E	SCOTT/SORENSON	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

JOHN DOUGLAS [CONTACT]
34230 204TH SE
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 012521

JOHN DOUGLAS
34230 204TH SE
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (000)000-0000		Owner Daytime Phone: (000)000-0000	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [X] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [X] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [X] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

1,452

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
	WELL		X										X				X						58	26	NE NW	20	21N	06E

DOH 331-011 (Rev. 06/03)

20-6-3

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
42848 E	SCOTT/SORENSON	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	4	4
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	4		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		4	4

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 10

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No
Permit No.

(1) OWNER: Name Gunther M. Schulter Address 34320 206th Ave S.E. Auburn 98002

(2) LOCATION OF WELL: County King, LOT 4 of KC - S/2 - SW 1/4 NE 1/4 Sec. 20 T. 21 N. R. 06 W.M.
Bearing and distance from section or subdivision corner Short Plat 776047, REC AF # 7802090861

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 290 ft. Depth of completed well 274 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 274 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 225 ft. below top of well Date 12/10/79
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 2 gal./min. with 38 ft. drawdown after 24 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown clay - gravel	3	18
Brown sand	18	60
Gray clay	60	130
Gray silty clay	130	200
Gray clay	200	238
Gray sand & gravel	238	240
Gray clay - rocks	240	260
Gray hardpan	260	270
Gray sand seepage	270	272
Gray gravel	272	274
Gray hardpan	274	290

Work started 12/3 19 79 Completed 12/10 19 79

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc. (Person, firm, or corporation) (Type or print)
Address 19415 108th Ave SE Renton 980
[Signed] Brad Johnson (Well Driller)
License No. 0233 Date 12/10, 19 79

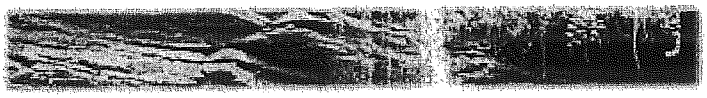
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

20-6-4

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471741122035801

General Location Details:

Unique Well ID: S_471741122035801
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/NE
Local Number: 21N/06E-20G01
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 274 Feet
Surface Elevation: 460 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: [illegible] None

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

20-6-4

ie Original and First Copy with
epartment of Ecology
Second Copy -- Owner's Copy
Third Copy -- Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Merlyn Canfield Canfield Address 206 Auburn-Black Diamond Rd, Auburn

(2) LOCATION OF WELL: County King N½ of S½ of E½ of SW¼ NE¼ Sec. 20 T. 21 N. R. 6 E. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 240 ft. Depth of completed well 240 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 240 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel.
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 145 ft. below top of well Date 12/4/78
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 11 gal./min. with 80 ft drawdown after 4 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown sand	3	60
Gray clay	60	95
Seepage - Typical	95	
Blue gray clay	95	160
Gray silt & clay	160	200
Gray clay	200	235
Gray water sand - Typical	235	240

Work started 11/30, 19 78 Completed 12/4, 19 78

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 12-4-, 19 78

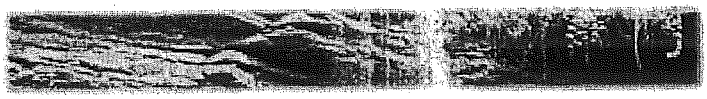
(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

20-G-5

The Department of Ecology does NOT Warra[nt] the Data and/or the Information on this Well R[eport].

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471738122035401

General Location Details:

Unique Well ID: S_471738122035401
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/NE
Local Number: 21N/06E-20G02
City: King County
Zipcode: 98092
Data Source: Historic - unknown source
Who are these data sources?
Location Type: Well
Well Depth: 240 Feet
Surface Elevation: 460 Feet
What is surface elevation?
Location Accuracy: QTRQTRSEC
What are these location accuracies?

Name: [redacted] None

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

20-6-5

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

1. NAME REUBEN WARREN BUBLITZ

ADDRESS 34221 - 206th SE

AUBURN WN ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND. (SURFACE OR GROUND WATER)

GROUND WATER W.R.I.A. Ø9 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS SUB PUMP IN 6" CASE 280' DEEP WELL

B. IF SURFACE WATER, THE SOURCE IS

3 THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 8 GAL PER MIN PRESENTLY USED 30 MIN 240 GAL (~~CUBIC FEET PER SECOND~~ OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 17.3 (ACRE FEET PER YEAR) PRESENTLY USED 1/3 ACFT - GAL 108617 YR

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED:

4. DATE OF FIRST PUTTING WATER TO USE: MONTH OCT. YEAR 1963

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 599 FEET EAST AND 427 FEET NORTH FROM THE CENTER ~~CORNER~~ OF SECTION 20

BEING WITHIN OF SECTION 20 T. 21 N. NORTH R. 6 (E.~~OR~~) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: THE NORTH ONE HUNDRED THIRTY-TWO (132) FEET OF THE SOUTH FIVE HUNDRED TWENTY-EIGHT (528) FEET OF THE EAST ONE-HALF OF THE WEST ONE-HALF OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 20, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M. COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC - ONE HOME - LAWN GARDEN

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED DEED 5489864 VOL 4329 PAGE 237

DO NOT USE THIS SPACE.
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED REGISTRY NUMBER

THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

Dec 6 72 020140

ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT DEPARTMENT OF ~~WATER RESOURCES~~ Ecology

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Reuben W Bublitz

DATE Nov 28, 1972

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL
DWR

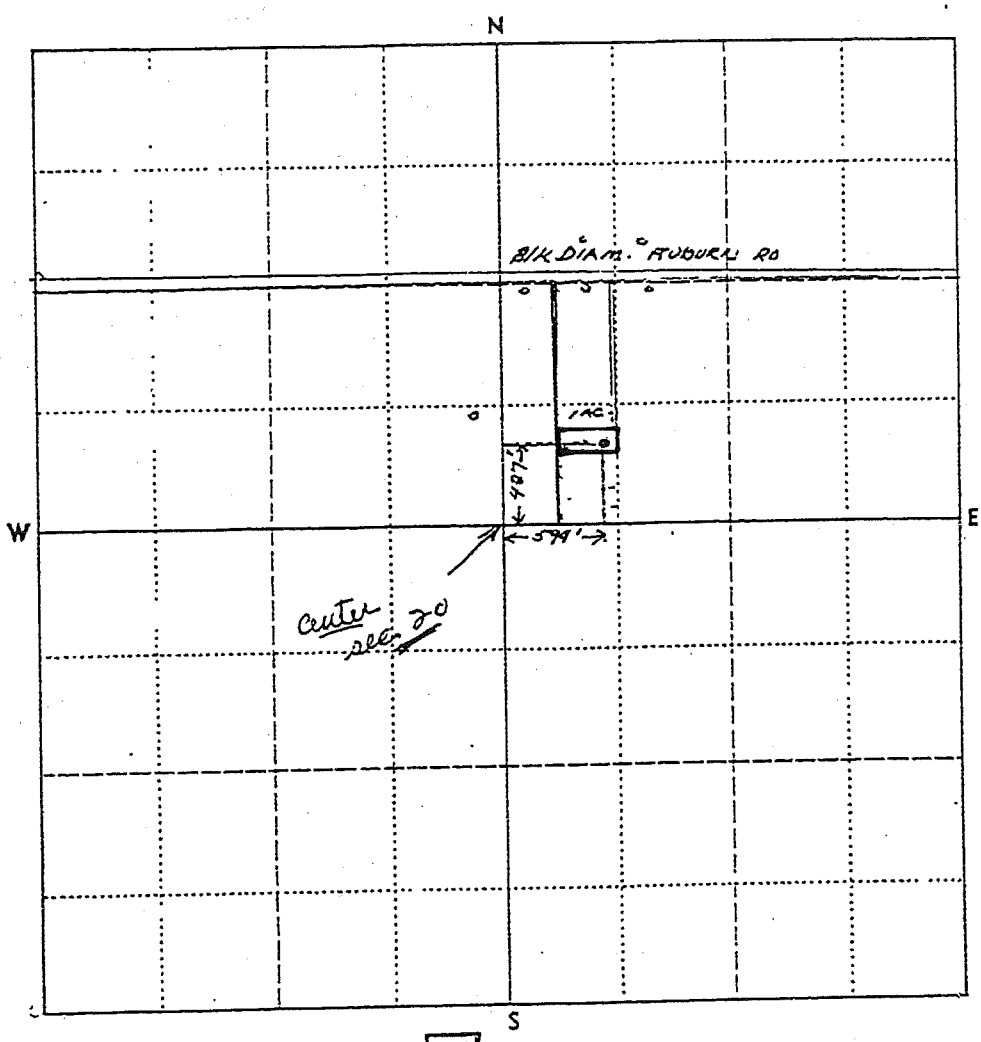
RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE BUILDING-OLYMPIA WASHINGTON 98501

20-6-6

S. F. No. 1534-A—OS

SECTION PLAT

Sec. 20 Twp. 21 N. R. 6



1. Outline property described in application.
2. Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.
3. Indicate traveling directions from nearest town.

Scale: 1 inch = 800 feet (each small square = 10 acres)

4 MILES WEST OF BLACK DIAMOND TOWARD AUBURN ON BLK DIA AUBURN ROAD. TURN LEFT OR SOUTH AT 206th WHICH IS AN EASEMENT TO PROPERTY LOCATED ABOUT 792' OFF BLK. DIAM. AUBURN RD.

ENTERED 21-6-21 N

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 407542 9

UNIQUE WELL I.D. # ACM 308

Water Right Permit No.

(1) OWNER: Name Jamie Lynn Address 12663 SE Green Valley Rd Auburn 98092

(2) LOCATION OF WELL: County King SW 1/4 SW 1/4 Sec 20 T 21 N. R 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 34815 212th St

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well inches. Drilled 76 feet. Depth of completed well 76 ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: ☒ Welded ☐ Liner installed ☐ Threaded

6" Diam. from +1½ ft. to 76 ft.

Perforations: Yes ☐ No ☒

Type of perforator used

SIZE of perforations in. by in.

perforations from ft. to ft.

perforations from ft. to ft.

perforations from ft. to ft.

Screens: Yes ☐ No ☒

Manufacturer's Name

Type Model No.

Diam. Slot size from ft. to ft.

Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel

Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.

Material used in seal Volclay grout

Did any strata contain unusable water? Yes ☐ No ☐

Type of water? Depth of strata

Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.

Static level 10 ft. below top of well Date 8/11/97

Artesian pressure lbs. per square inch Date

Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes ☐ No ☒ If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.

Airtest 30 gal./min. with stem set at 70 ft. for 1 hrs.

Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Brown Gravel & Cobbles	0	13
Brown gravel & Cobbles	13	23
Brown Silty Sandy Gravel	23	31
Grey Gravel & Cobbles	31	62
Grey Bigger gravels with water	62	76

RECEIVED
FEB 11 1998
WR
DEPT OF ECOLOGY

Work Started 7/31 19. Completed 8/1/97 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Geoboring & Development Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 9405 512th Puyallup 98372

(Signed) (WELL DRILLER) License No. 1733

Contractor's Registration No. GEOBOI11707 Date Aug 4, 1997

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

20-J-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☒ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☐ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
September 29, 1977	S1-22989	S1-22989P	S1-22989C

NAME
MUCKLESHOOT INDIAN TRIBE Attn: Dennis Moore

ADDRESS (STREET)	(CITY)	(STATE)	ZIP CODE
39015 - 172nd S. E.	Auburn	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology; and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Unnamed spring

TRIBUTARY OF (IF SURFACE WATERS)
Crisp Creek

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
2.0		1.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Fish propagation - continuously, 1.99 cfs, Non-consumptive

Single domestic supply - continuously, .01 cfs, 1 acre-foot per year

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL
200 feet South and 150 feet West of East Quarter corner of Sec. 20

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE E. OR W.M.	W.R.I.A.	COUNTY
NE¼SE¼	20	21	6 E.	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

That portion of the E½E½SE¼ of Sec. 20, T. 21 N., R. 6 E.W.M. lying northerly of the center line of Crisp Creek.

20-J-2

PROVISIONS

In accordance with the Department of Fisheries and Game: 1.) The inlet and outlet structures shall be screened with 1/8 inch, or smaller, mesh to prevent interference with existing fishery resources. 2.) Any work done within the channel of the stream will require a Hydraulic Project Approval from those Departments. 3.) This activity shall be in compliance with Fisheries and Game regulations WAC 232-12-675 and WAC 232-12-676 regarding egg taking and fish rearing.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond *Washington, this* 13th *day of* May, *19* 83.

Department of Ecology

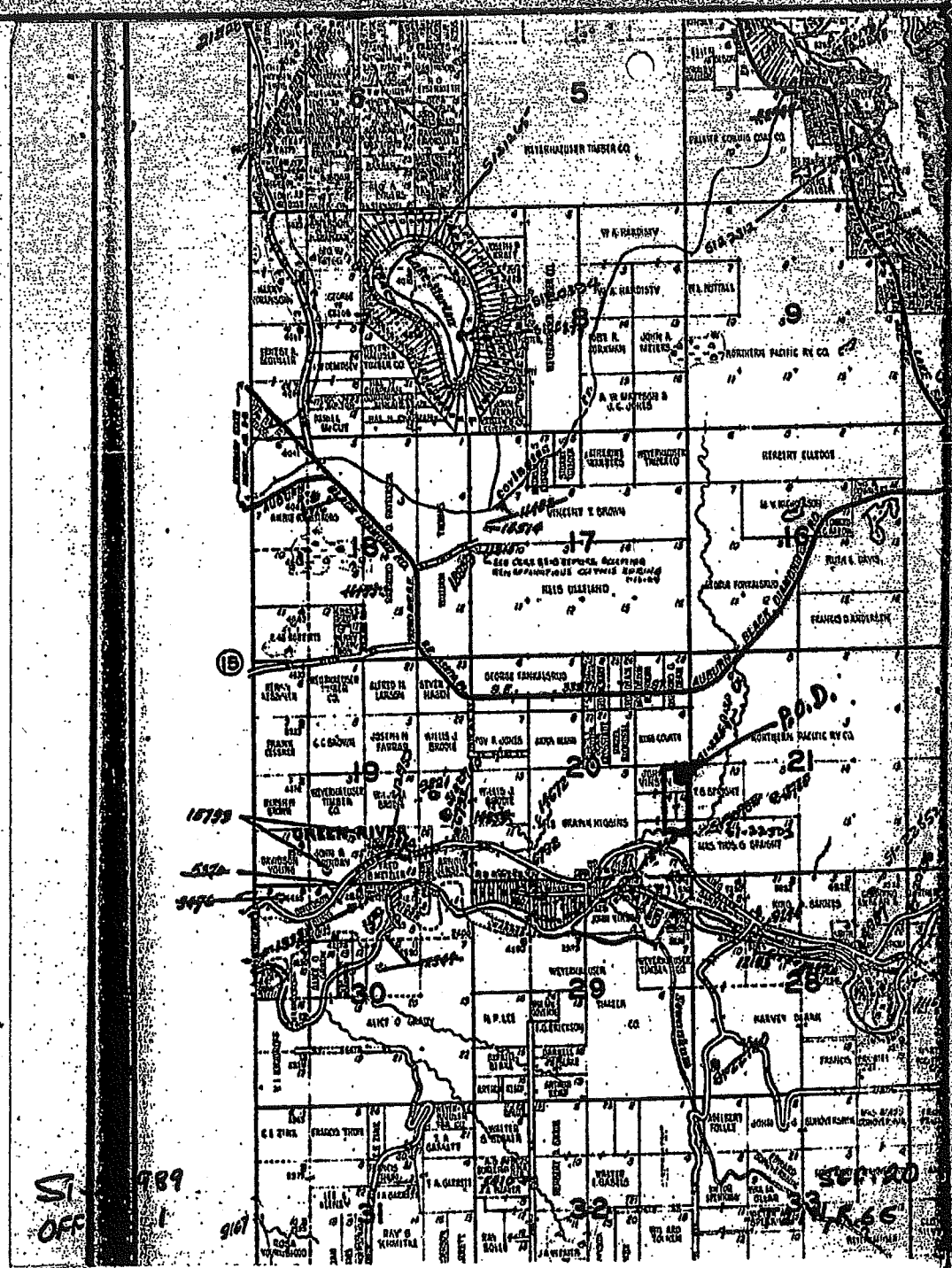
by Robert L. McCormick

ROBERT K. McCORMICK, Regional Manager

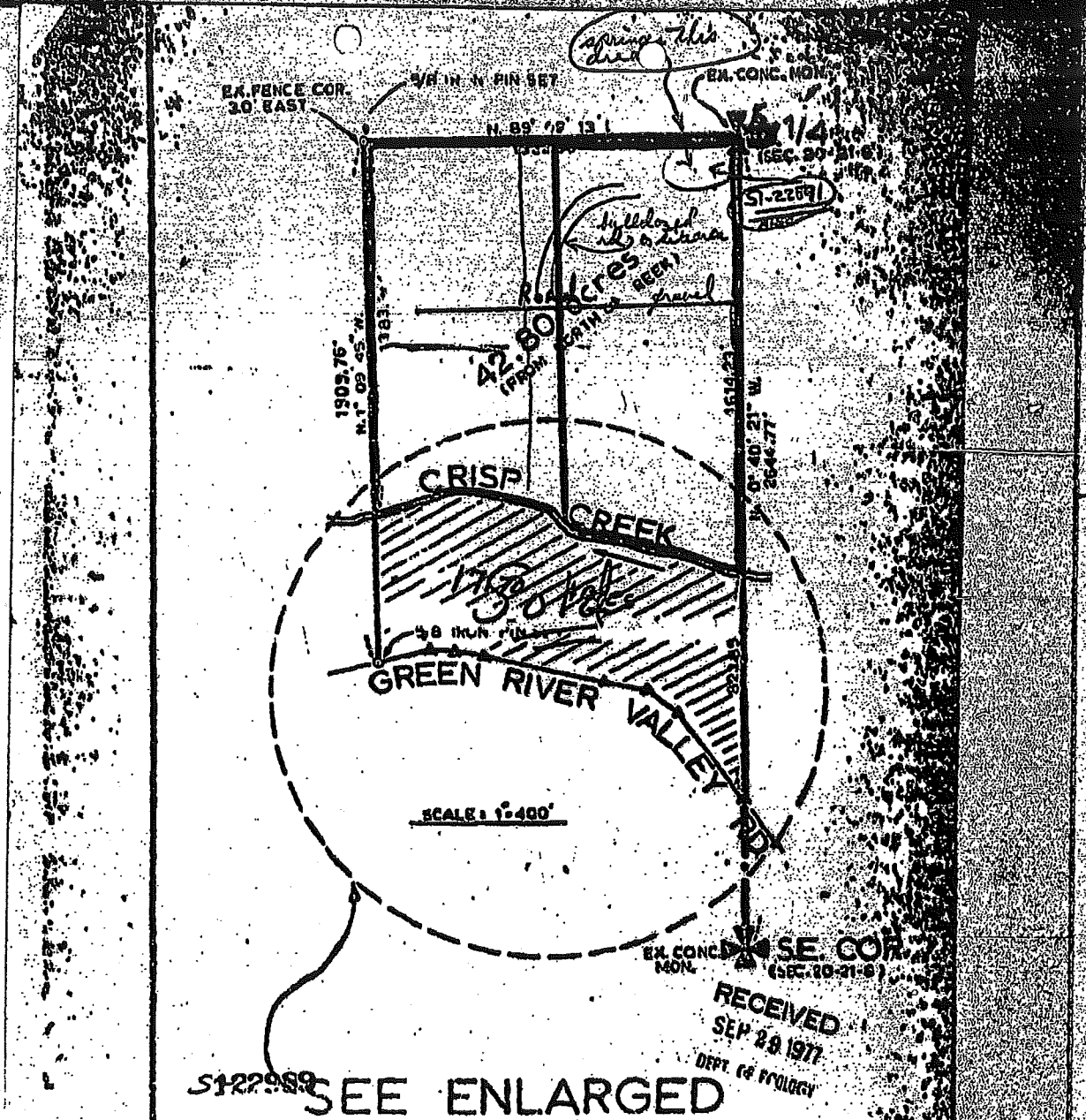
ENGINEERING DATA

on

FOR COUNTY USE ONLY


5
6
8
9
16
17
18
19
20
21
28
29
30
31
32
33
WEYERHAEUSER TIMBER CO.
W. A. HARDISTY
NORTHERN PACIFIC RY CO.
HERBERT ELLEDGE
VINCENT T. BROWN
NELS OLLELAND
GEORGE FANKALSRUD
P.O.D.
GREEN RIVER
ALICE O. GRADY
HARVEY DEARN
FRANCIS D. ANDERSEN
15
15759
5370
9476
9167
SEPT 20

Mooney Swamp
GREEN
RIVER
16
17
18
19
20
28
29
30
500
OFFICE

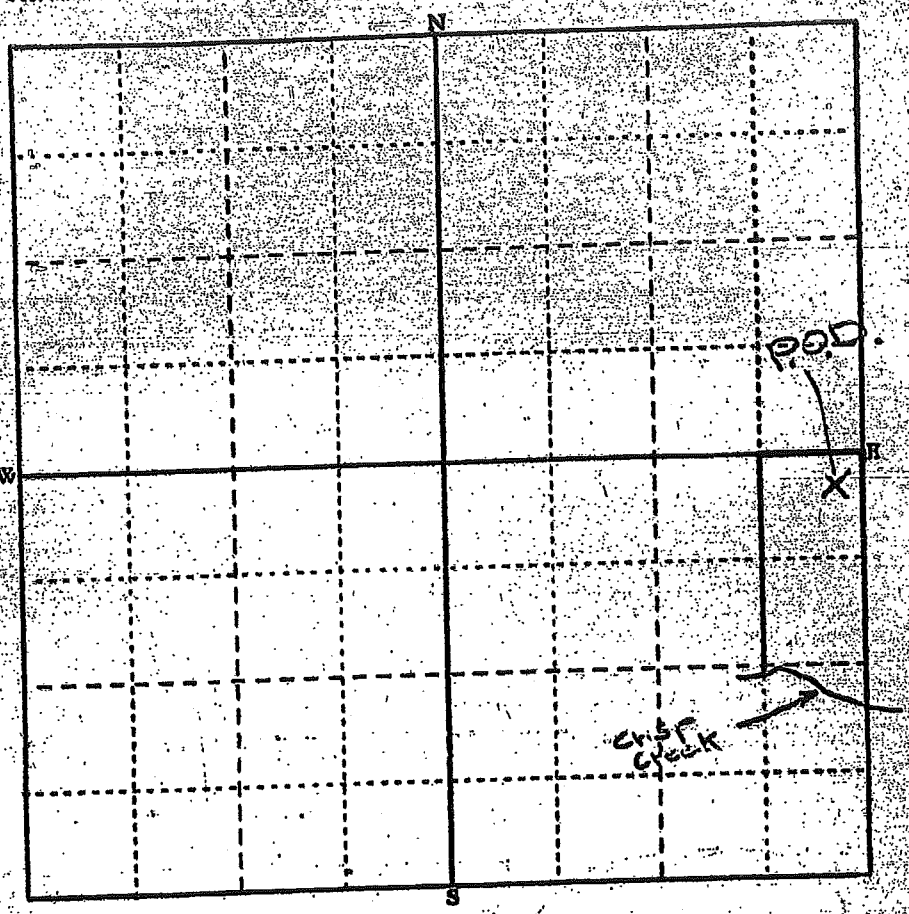


SI-22889
OFFICE 3

SEC. 20, TWP 21 N., RANGE 6 E TAMRAC

SECTION MAP

Sec. 20 Twp. 21 N. R. 65



Scale: 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.

Indicate traveling directions from nearest town in space below.

Detach here

Fold along scale

FEET 0 400 800 1,200 1,600 2,000 2,400 2,800 3,200 3,600 4,000 4,400 4,800 5,200

Detach this scale at the perforation, fold excess paper under or cut off excess by cutting along the scale line. This scale corresponds to the SECTION MAP above. You can read feet directly from this scale to outline property and locate points of diversion or withdrawal on the SECTION MAP. Enclose this map along with the application and $10.00 examination fee.

SEC. 20
T21N, R6E.

51-22989

OFFICE 4

Affidavit of Publication

STATE OF WASHINGTON
COUNTY OF KING } ss.

Anita Tecnatra being first duly sworn on oath, deposes and says that she is the chief clerk of THE AUBURN GLOBE-NEWS, a newspaper published four (4) times a week. That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publication referred to, printed and published in the English language continually as a newspaper published four (4) times a week in Kent, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the Auburn Globe-News has been approved as a legal newspaper by order of the Superior Court of the County in which it is published, to-wit, King County, Washington. That the annexed is a Notice of Application

.....

..... as it was published in regular issues (and not in supplement form of said newspaper) once each issue for a period of 2 consecutive issues, commencing on the 23rd day of November, 19 77, and ending the 30th day of November, 19 77, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of $ 30.60 which has been paid in full at the rate of per folio of one hundred words for the first insertion and per folio of one hundred words for each subsequent insertion.

Anita Tecnatra

.....

Subscribed and sworn to before me this 30th day of November, 19 77

Lee Bailey
Notary Public in and for the State of Washington, residing at Kent, King County.

— Passed by the Legislature, 1933, known as Senate Bill 281, effective June 9th, 1933.

— Western Union Telegraph Co. rules for counting words and figures, adopted by the newspapers of the State.

V.P.C. Form No. 17

[redacted]

OK TSH 1/16/78

FORM FOR [PROPOSED/FINAL] DECLARATION
of [~~SIGNIFICANCE~~/NON-SIGNIFICANCE]

State of Washington
Department of Ecology

Description of proposal Fish Propagation & Domestic

Proponent Muckleshoot Indian Tribe

Location of Proposal NE¼SE¼ Sec. 20, Twp. 21 N., R. 6E, King Co.

Lead Agency Department of Ecology

This proposal has been determined to [have/not have] a significant adverse impact upon the environment. An EIS [is/is not] required under RCW 43.21C.030(2)(c). This decision was made after review by the lead agency of a completed environmental checklist and other information on file with the lead agency.

Responsible Official Duane H. Wegner

Position/Title Resource Management Supervisor

Date 10-10-77 Signature [signature]

DISTRIBUTION: Project File/Environmental Review

ECY 010-4-106 S122989

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That MUCKLESHOOT INDIAN TRIBE

of AUBURN, WASHINGTON on SEPTEMBER 29, 1977 under

Application No. S1-22989 filed for permit to appropriate public waters, subject to existing rights,

from UNNAMED SPRINGS/CRISP CREEK

in the amount of 2 CUBIC FEET PER SECOND

each year, for FISH PROPAGATION AND DOMESTIC USE - CONTINUOUSLY

The source of the proposed appropriation is located within NE 1/4 SE 1/4

of Section 20, Township 21 N., Range 6 E W.M., in KING County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, Northwest Regional Office, [redacted] Redmond, WA. 98052

within thirty (30) days from [redacted]
(Last date of publication to be entered above by publisher)

ECY 070-24

NOTICE

Prepared by the
Council on
Environmental Policy

ENVIRONMENTAL CHECKLIST

Introduction: The State Environmental Policy Act of 1971, Chapter 43.21C, RCW, requires all state and local governmental agencies to consider environmental values both for their own actions and when licensing private proposals. The Act also requires that an EIS be prepared for all major actions significantly affecting the quality of the environment. The purpose of this checklist is to help the agencies involved determine whether or not a proposal is such a major action.

Please answer the following questions as completely as you can with the information presently available to you. Where explanations of your answers are required, or where you believe an explanation would be helpful to government decision makers, include your explanation in the space provided, or use additional pages if necessary. You should include references to any reports or studies of which you are aware and which are relevant to the answers you provide. Complete answers to these questions now will help all agencies involved with your proposal to undertake the required environmental review without unnecessary delay.

The following questions apply to your total proposal, not just to the license for which you are currently applying or the proposal for which approval is sought. Your answers should include the impacts which will be caused by your proposal when it is completed, even though completion may not occur until sometime in the future. This will allow all of the agencies which will be involved to complete their environmental review now, without duplicating paperwork in the future.

NOTE: This is a standard form being used by all state and local agencies in the State of Washington for various types of proposals. Many of the questions may not apply to your proposal. If a question does not apply, just answer it "no" and continue on to the next question.

S122989

FEB 28 1973
RECEIVED

ENVIRONMENTAL CHECKLIST FORM

I. BACKGROUND

1. Name of Proponent TIM SHELDON HUCKLESHOOT INDIAN TRIBE
2. Address and Phone Number of Proponent:
39003 172 SE
AUBURN WN 98002 833-5160
3. Date Checklist Submitted 9/9/77
4. Agency Requiring Checklist DOE
5. Name of Proposal, if applicable:
FISH HATCHERY
6. Nature and Brief Description of the Proposal (including but not limited to its size, general design elements, and other factors that will give an accurate understanding of its scope and nature):
2 NETARTS TYPE FISH BOXES
2 AT PRESENT
7. Location of Proposal (describe the physical setting of the proposal, as well as the extent of the land area affected by any environmental impacts, including any other information needed to give an accurate understanding of the environmental setting of the proposal):
SEC 20 TWP 21N R 6E
8. Estimated Date for Completion of the Proposal:
4/1/78
9. List of all Permits, Licenses or Government Approvals Required for the Proposal (federal, state and local--including rezones):
10. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain:
YES PROPOSAL FOR ADDITIONAL HATCHERY FACILITIES BEING PREPARED NOT Ready until 1979-80
11. Do you know of any plans by others which may affect the property covered by your proposal? If yes, explain:
NO
12. Attach any other application form that has been completed regarding the proposal; if none has been completed, but is expected to be filed at some future date, describe the nature of such application form:
PROPOSAL NOT COMPLETE AT THIS TIME

RECEIVED

S122989

II. ENVIRONMENTAL IMPACTS
(Explanations of all "yes" and "maybe" answers are required)

	Yes	Maybe	No
(1) Earth. Will the proposal result in:			
(a) Unstable earth conditions or in changes in geologic substructures?			✓
(b) Disruptions, displacements, compaction or overcovering of the soil?			✓
(c) Change in topography or ground surface relief features?			✓
(d) The destruction, covering or modification of any unique geologic or physical features?			✓
(e) Any increase in wind or water erosion of soils, either on or off the site?			✓
(f) Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?			✓

Explanation: _____

(2) Air. Will the proposal result in:			
(a) Air emissions or deterioration of ambient air quality?			✓
(b) The creation of objectionable odors?			✓
(c) Alteration of air movement, moisture or temperature, or any change in climate, either locally or regionally?			✓

Explanation: _____

RECEIVED
SEP 29 1977

	Yes	Maybe	No
(3) **Water.** Will the proposal result in:			
(a) Changes in currents, or the course or direction of water movements, in either marine or fresh waters?	—	—	✓
(b) Changes in absorption rates, drainage patterns, or the rate and amount of surface water runoff?	—	—	✓
(c) Alterations to the course or flow of flood waters?	—	—	✓
(d) Change in the amount of surface water in any water body?	—	—	✓
(e) Discharge into surface waters, or in any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?	—	—	✓
(f) Alteration of the direction or rate of flow of ground waters?	—	—	✓
(g) Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	—	—	✓
(h) Deterioration in ground water quality, either through direct injection, or through the seepage of leachate, phosphates, detergents, waterborne virus or bacteria, or other substances into the ground waters?	—	—	✓
(i) Reduction in the amount of water otherwise available for public water supplies?	—	—	✓

Explanation: _____

(4) **Flora.** Will the proposal result in:			
(a) Change in the diversity of species, or numbers of any species of flora (including trees, shrubs, grass, crops, microflora and aquatic plants)?	—	—	✓

FEB 20 1981
RECEIVED

S122989

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

[X] Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

[ ] Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
December 5, 1980	S1-23733	S1-23733P	S1-23733C

NAME
MUCKLESHOOT INDIAN TRIBE Attn: Dennis Moore

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
39015 - 172nd Avenue S. E.	Auburn	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Unnamed springs

TRIBUTARY OF (IF SURFACE WATERS)
Crisp Creek

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
0.01		1.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Domestic supply - continously (inhouse use only)

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
200 feet south and 150 feet west of E¼ corner of Sec. 20

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
NE¼SE¼	20	21	6 E	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

That portion of the E½E½SE¼ of Sec. 20, T. 21N., R. 6E.W.M. lying northerly of the centerline of Crisp Creek.

20-J-23

PROVISIONS

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

- **This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.**

Given under my hand and the seal of this office at Redmond *Washington, this* 13th *day of* May, *19* 83.

Department of Ecology

by Robert K. McCormick

ROBERT K. McCORMICK, Regional Manager

ENGINEERING DATA

OK

FOR COUNTY USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

[X] Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

[ ] Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
September 5, 1979	S1-22591	S1-22591P	S1-22591C

NAME: THOMAS G. SPAIGHT

ADDRESS (STREET): 21315 - 348th S. E. (CITY): Auburn (STATE): Washington (ZIP CODE): 98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE: Unnamed spring

TRIBUTARY OF (IF SURFACE WATERS): Crisp Creek

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
0.05		3.0

QUANTITY, TYPE OF USE, PERIOD OF USE: Group domestic supply - continuously (3 homes)

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL: 400 feet south and 400 feet east from NW corner of NE¼SE¼, Sec. 20

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
NE¼SE¼	20	21	6 E	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

All of the portion of the E½SE¼ of Sec. 20, T. 21 N, R. 6 E.W.M. lying northerly of the county road, except the E½E½SE¼ of Sec. 20, T. 21 N, R. 6 E.W.M. lying northerly of Crisp Creek.

(SEE REVERSE SIDE)

CERTIFICATE

ECY 040-1-2 (Rev. 4-77)

20-J-4

PROVISIONS

The amount of water granted is a maximum limit that shall not be exceeded and the water user shall be entitled only to that amount of water within the specified limit that is beneficially used within the specified place of use.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond *Washington, this* 14th *day of* January, *19* 83.

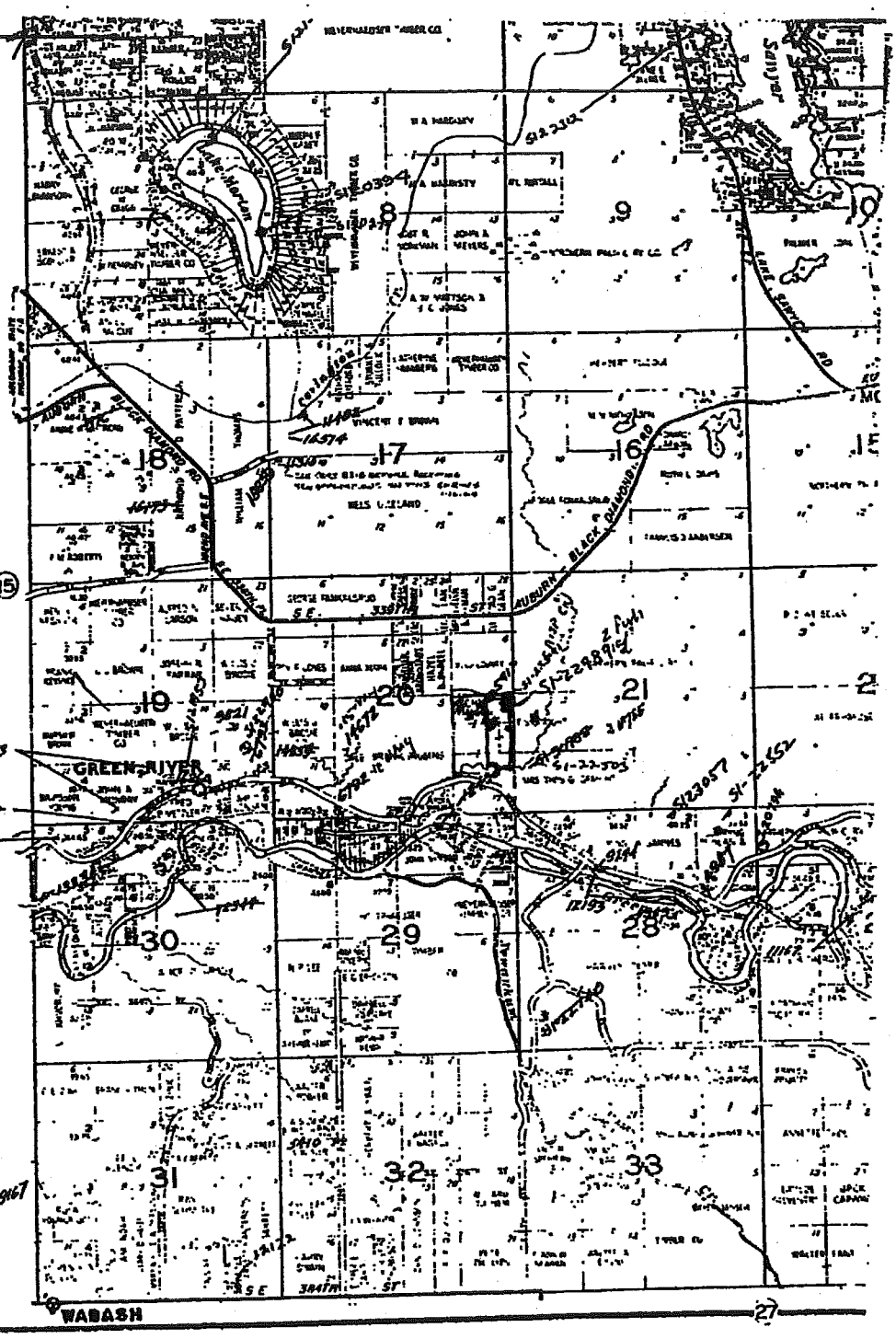
ENGINEERING DATA

Department of Ecology

by Robert K. McCormick

ROBERT K. McCORMICK, Regional Manager

FOR COUNTY USE ONLY



GREEN RIVER
WABASH
AUBURN BLACK DIAMOND RD
Lake Morton
Sanyer
8
9
10
18
17
16
15
19
20
21
30
29
28
31
32
33
15
27

STATE OF WASHINGTON
Dixy Lee Ray
Governor

DEPARTMENT OF ECOLOGY
4350 150th Ave. N.E., Redmond, Washington 98052 206/885-1900

August 13, 1980

Thomas G. Spaight
21315 348th SE
Auburn, Washington 98002

Dear Mr. Spaight:

APPLICATION FOR CHANGE ON SURFACE WATER PERMIT
S1-22591F

This letter is to confirm our meeting on July 29, 1980, and my field examination of your project under the above numbered permit.

The change of place of use and change of point of diversion are considered valid as executed since the new point of diversion involves water from the same source aquifer as the original and since the intended quantity and use remain the same.

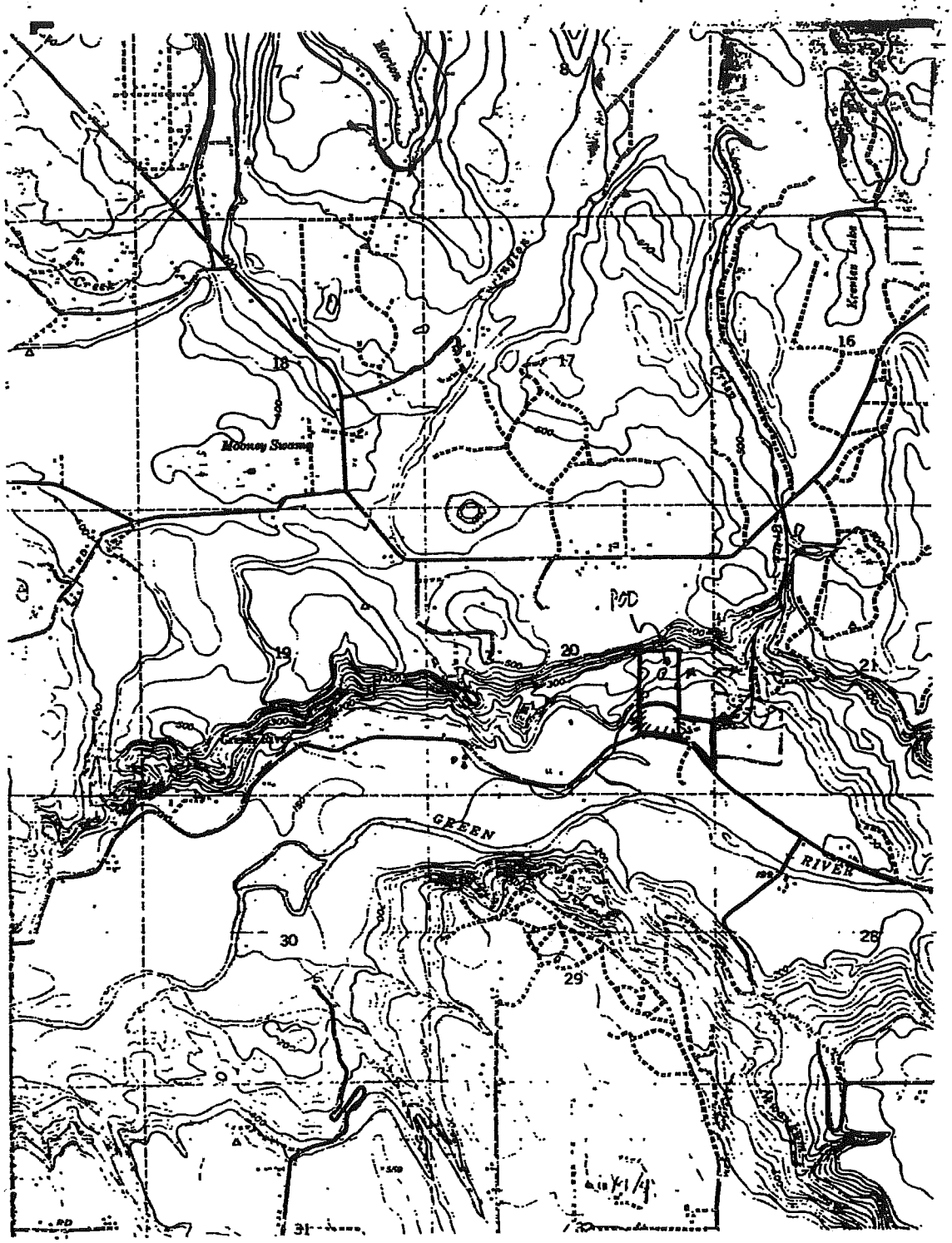
The rate of available water at the new point of diversion may be considerably less than the original 0.10 cfs permitted. On the Tuesday we met, the flow in the spring was less than 0.02 cfs. In the forthcoming findings, I will recommend a maximum quantity of 0.05 cfs to account for higher flows but a proof exam, done when your project is completed, may further reduce the maximum quantity certified.

Sincerely,

Dave Garland

Dave Garland
Resource Management

DG:hew



Morton
Creek
Mooney Swamp
Kranies Lake
POD
GREEN
RIVER
16
17
18
19
20
21
28
29
30
31

STATE OF WASHINGTON - COUNTY

—ss

No.....

LEGAL NOTICES

STATE OF WASHINGTON
OFFICE OF THE DIRECTOR OF THE
DEPARTMENT OF ECOLOGY
OLYMPIA
NOTICE OF APPLICATION FOR
CHANGE OF PLACE OF USE AND
POINT OF DIVERSION OF SURFACE
WATERS

TAKE NOTICE: That Thomas G. Spaight of Auburn, Washington has filed an application to change the place of use and point of diversion for community domestic supply as permitted in Surface Water Permit No. S1-22591P.

That this place of use will be all of the portion of the E½SE¼ of Sec. 20, T. 21 N., R. 6 E.W.M. lying northerly of the county road, except the E½E½SE¼ of Sec. 20, T. 21 N., R. 6 E.W.M. lying northerly of Crisp Creek, King County. The point of diversion will be 400 feet South and 400 feet East from the northwest corner of the NE¼SE¼ of Sec. 20, T. 21 N., R. 6 E.W.M., King County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections' protests must be accompanied by a two dollar ($2.00) recording fee and be filed with the Department of Ecology, Northwest Regional Office, 4350-150th Avenue N.E., Redmond, Washington 98052, within thirty (30) days from November 22, 1979.

Given under my hand and seal of this office, Department of Ecology, Northwest Region, this 6th day of November, 1979.

Department of Ecology
Wilbur G. Hallauer, Director
By Robert K. McCormick
Regional Manager

11/15 2tp

AFFIDAVIT OF PUBLICATION

The undersigned, on oath states that he is an authorized representative of Enumclaw Courier-Herald combined with Buckley News-Banner a weekly newspaper, which newspaper is a legal newspaper of general circulation and it is now and has been for more than six months prior to the date of publication hereinafter referred to, published in the English language continuously as a weekly newspaper in Enumclaw, King County, Washington, and Buckley, Pierce County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of this newspaper. Enumclaw Courier-Herald combined with Buckley News-Banner was approved as a legal newspaper by the Superior Court of King County and the Superior Court of Pierce County.

The notice in the exact form annexed, was published in regular issues of Enumclaw Courier-Herald combined with Buckley News-Banner, which was regularly distributed to its subscribers during the below stated period. The annexed notice, a

No. S1-22591P

was published on November 15, 22 1979

NOV 30 1979
DEPT OF ECOLOGY

The amount of the fee charged for the foregoing publication is the sum of $ 24.64 ..... which amount has been paid in full.

Eve Clark
Subscribed and sworn before me on

November 29, 1979
Letty J. Ford
Notary public for the State of Washington, residing in Enumclaw

Affidavit of Publication

(OK RF)

STATE OF WASHINGTON
OFFICE OF THE DIRECTOR OF THE DEPARTMENT OF ECOLOGY
OLYMPIA
NOTICE OF APPLICATION FOR CHANGE OF PLACE OF
USE AND POINT OF DIVERSION OF SURFACE WATERS

TAKE NOTICE: That Thomas G. Spaight of Auburn, Washington has filed an application to change the place of use and point of diversion for community domestic supply as permitted in Surface Water Permit No. S1-22591P.

That this place of use will be all of the portion of the E½SE¼ of Sec. 20, T. 21 N., R. 6 E.W.M. lying northerly of the county road, except the E½E½SE¼ of Sec. 20, T. 21 N., R. 6 E.W.M. lying northerly of Crisp Creek, King County. The point of diversion will be 400 feet South and 400 feet East from the northwest corner of the NE¼SE¼ of Sec. 20, T. 21 N., R. 6 E.W.M., King County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar ($2.00) recording fee and be filed with the Department of Ecology, Northwest Regional Office, 4350 - 150th Avenue N. E., Redmond, Washington 98052, within thirty (30) days from ~~(last date of publication to be entered by publisher)~~ January 22, 1979.

Given under my hand and seal of this office, Department of Ecology, Northwest Region, this 6th day of November, 1979.

Department of Ecology
Wilbur G. Hallauer, Director

by _____
Robert K. McCormick
Regional Manager

STATE OF WASHINGTON
OFFICE OF THE DIRECTOR OF THE DEPARTMENT OF ECOLOGY
OLYMPIA
NOTICE OF APPLICATION FOR CHANGE OF PLACE OF
USE AND POINT OF DIVERSION OF SURFACE WATERS

TAKE NOTICE: That Thomas G. Spaight of Auburn, Washington has filed an application to change the place of use and point of diversion for community domestic supply as permitted in Surface Water Permit No. S1-22591P.

That this place of use will be all of the portion of the E½SE¼ of Sec. 20, T. 21 N., R. 6 E.W.M. lying northerly of the county road, except the E½E½SE¼ of Sec. 20, T. 21 N., R. 6 E.W.M. lying northerly of Crisp Creek, King County. The point of diversion will be 400 feet South and 400 feet East from the northwest corner of the NE¼SE¼ of Sec. 20, T. 21 N., R. 6 E.W.M., King County.

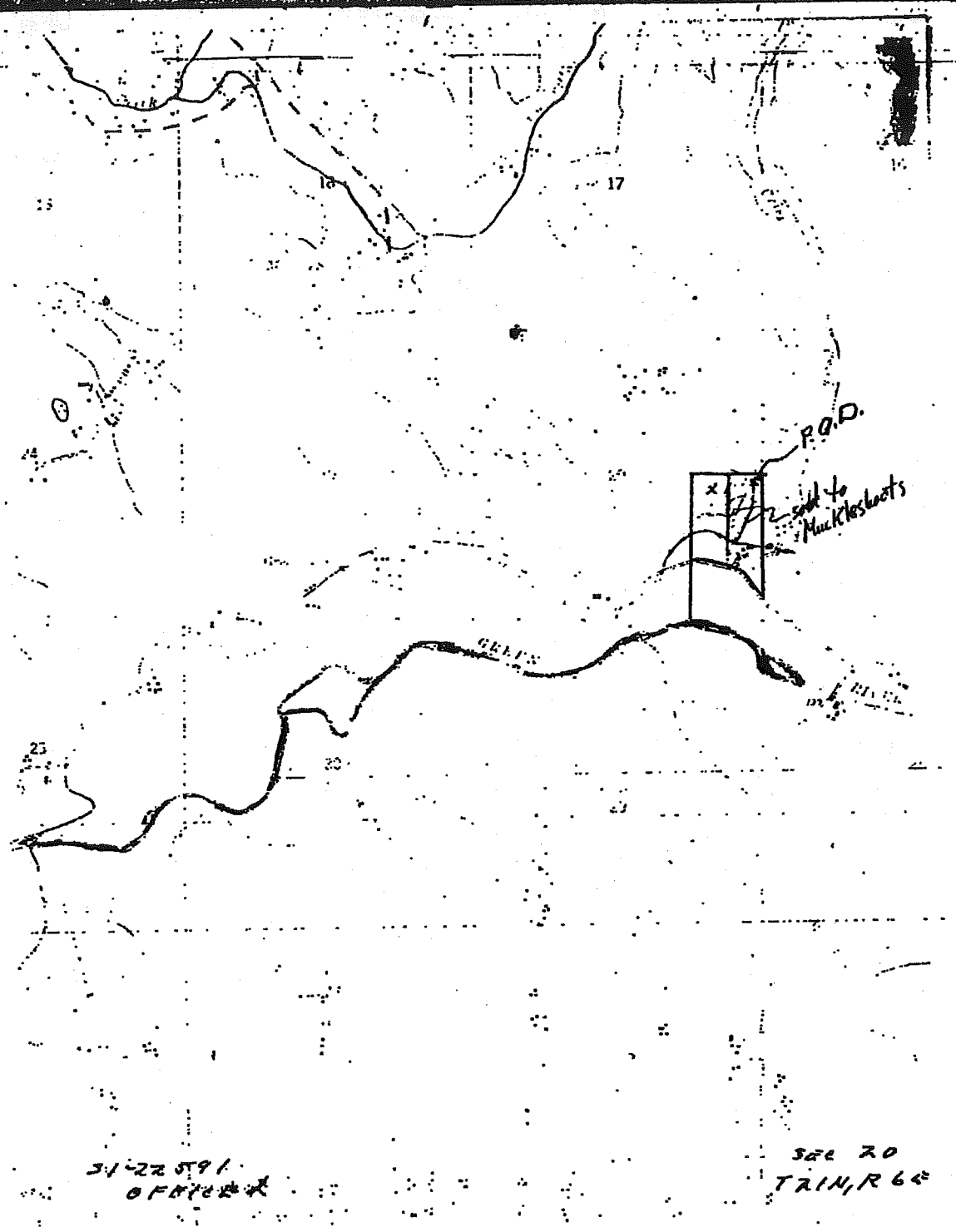
Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar ($2.00) recording fee and be filed with the Department of Ecology, Northwest Regional Office, 4350 - 150th Avenue N. E., Redmond, Washington 98052, within thirty (30) days from (last date of publication to be entered by publisher).

Given under my hand and seal of this office, Department of Ecology, Northwest Region, this 6th day of November, 1979.

Department of Ecology
Wilbur G. Hallauer, Director

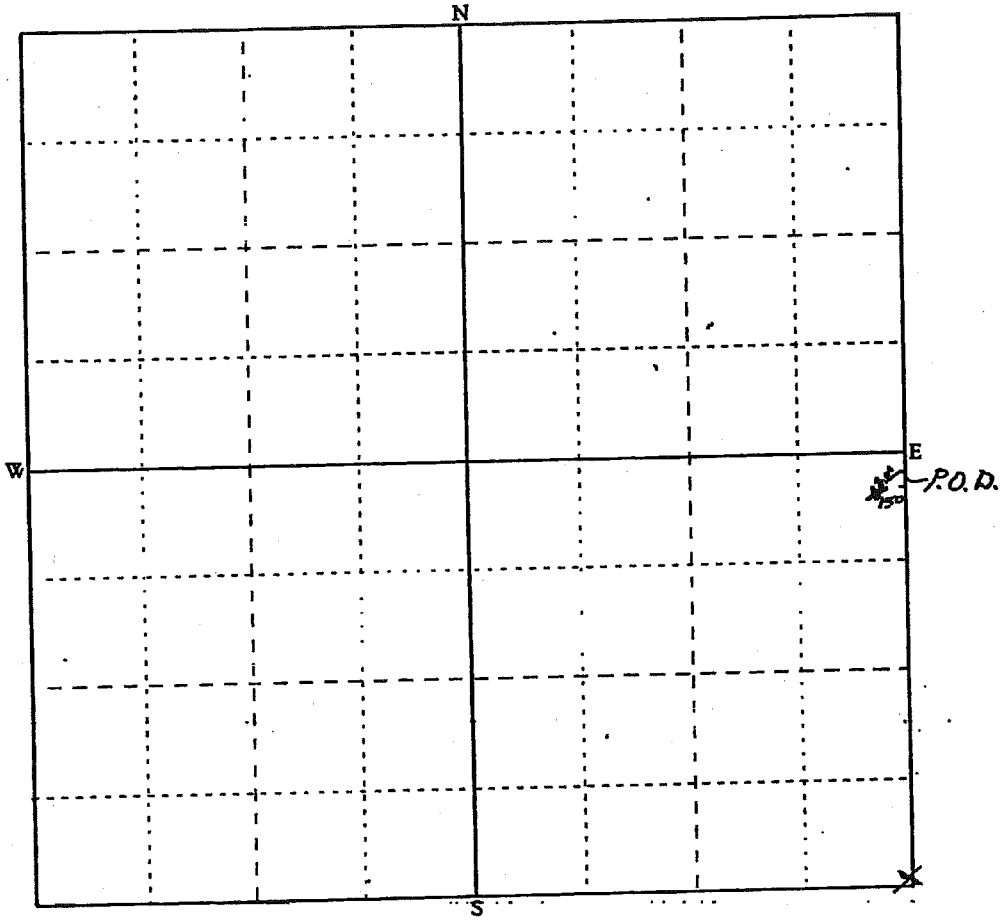
Robert K. McCormick
Regional Manager

5
Creek
9
7
8
17
16
15
Horseshoe Lake
Covington
Creek
Money Swamp
P.O.D.
19
20
21
22
GREEN RIVER
Green
28
27
29
30
Newaukum


17
P.O.D.
sold to Muckleshoots
GREEN
RIVER
23
20
31-22591
OFFICE
SEC 20
T21N, R6E

SECTION MAP

Sec. 20 Twp. 21 N. R. 6



Scale 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.

Indicate traveling directions from nearest town in space below.

S122591

Detach here

Fold along scale

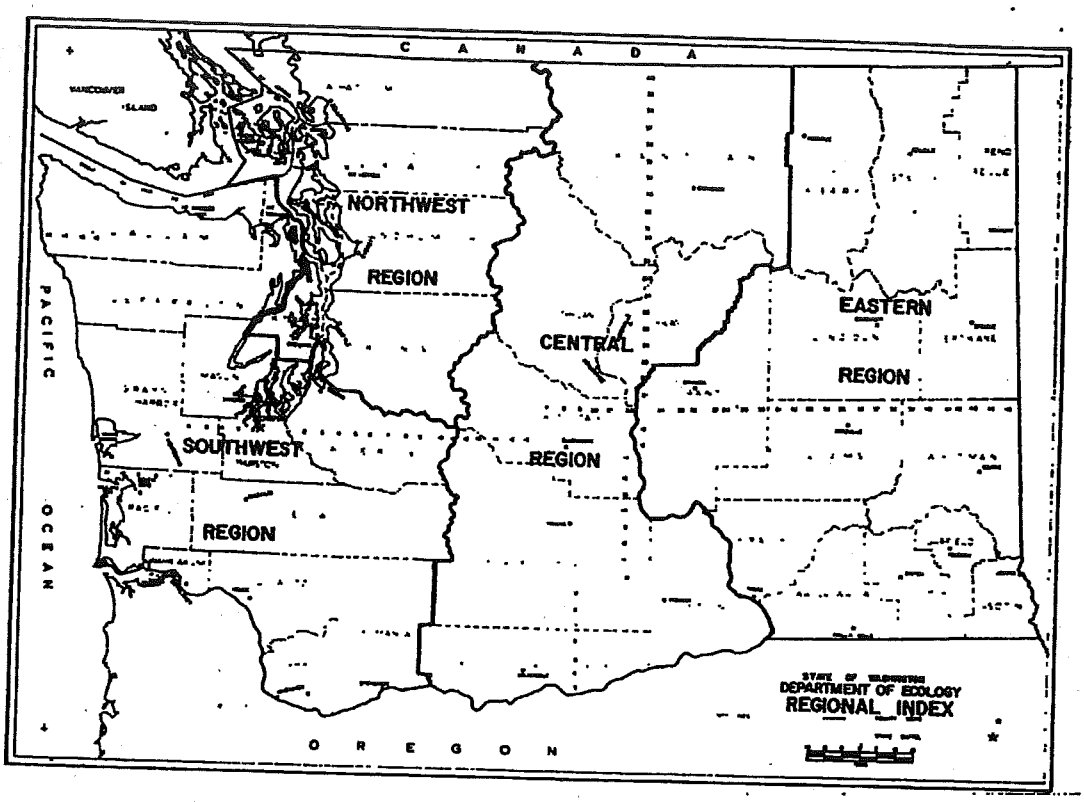
FEET 0 400 800 1,200 1,600 2,000 2,400 2,800 3,200 3,600 4,000 4,400 4,800 5,200

Detach this scale at the perforation, fold excess paper under or cut off excess by cutting along the scale line. This scale corresponds to the SECTION MAP above. You can read feet directly from this scale to outline property and locate points of diversion or withdrawal on the SECTION MAP. Enclose this map along with the application and $10.00 examination fee.

SEC 20 T21N, R6E

31-22591

OFFICE 3



Your water right application will processed by the Regional Office of the Department of Ecology having jurisdiction in the area in which your water works are located. Please submit your completed application form, maps, sketches and $10.00 examination fee to the appropriate Regional Office.

Northest Regional Office
4350 150th Avenue N.E.
Redmond, Washington 98052
Tel (206) 885-1900

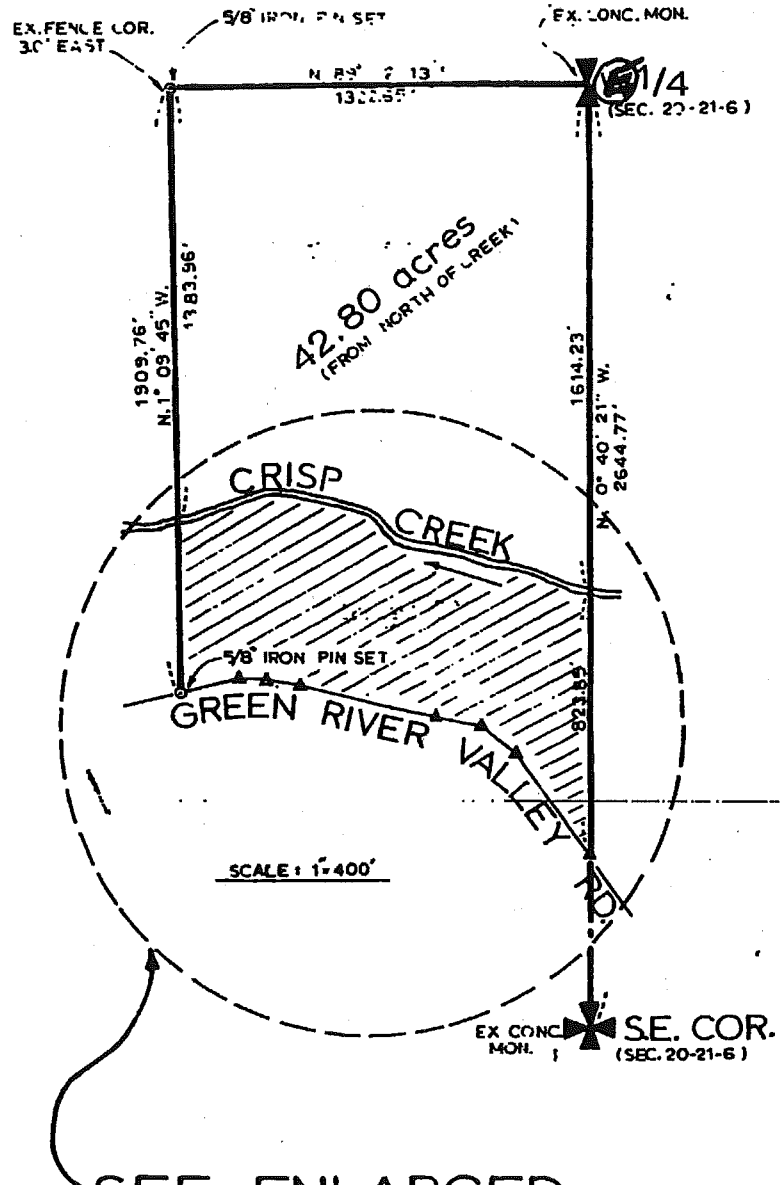
Central Regional Office
2802 Main Street
Union Gap, Washington 98903
Tel (509) 248-0981

Southwest Regional Office
7272 Clearwater Lane
Olympia, Washington 98504
Tel (206) 753-2970

Eastern Regional Office
103 East Indiana Avenue
Spokane, Washington 99207
Tel (509) 456-2926

The appropriate Regional Office will be happy to answer any further questions you may have.

NOTE: meridian assumed



SEE ENLARGED DETAIL

OFFICE 4

SEC 20
T21N, R6E

Department of

DANIEL J. EVANS
GOVERNOR

ROOM 115, GENERAL ADMINISTRATION BUILDING • PHONE 753-6600
OLYMPIA, WASHINGTON 98504

DONALD W. MOOS
DIRECTOR

December 1, 1975

Department of Ecology
Northwest Regional Office
4350 - 150th Avenue N.E.
Redmond, Washington 98052

Attention Terry Hanberg

Gentlemen:

S1-22591, Thomas G. Spaight
0.70 cfs group domestic and irrigation;
unnamed spring tributary Crisp Creek
tributary Green River WRIA 09;
NE, SE, Section 20, Township 21 North, Range 6 East
King County

The Department of Fisheries requested by letter, November 10, 1972, that the following minimum flows be established for the Green River measured at the USGS gaging station 12-1130 near Auburn:

October 15 to May 1	500 cfs
May 1 to June 1	linear decrease from 500 cfs to 300 cfs
June 1 to September 1	300 cfs
September 1 to October 15	linear increase from 300 cfs to 500 cfs

Information published by the USGS indicates that actual flows are at or above those levels less than 50% of the time from early August through late October inclusive. Therefore, fish populations are currently limited in the Green River by inadequate flows.

We ask that irrigation diversion cease August 1 of each year and/or whenever water is not available to maintain the requested minimum flows.

If you determine that water is not available for appropriation while maintaining the requested minimum flows please deny the

irrigation portion of the subject application.

The Department of Fisheries does not object to granting the group domestic portion of the subject application.

We thank you for your cooperation in our efforts to protect the valuable fishery resource belonging to the people of our state.

Sincerely,

Donald W. Moos
Director

DWM:FC:bj

cc: Jay Hunter - Game

Affidavit of Publication

STATE OF WASHINGTON }
COUNTY OF KING } ss.

Robert Olson, being first duly sworn on oath deposes and says that he is the Managing Editor of THE ENUMCLAW COURIER-HERALD, combined with THE BUCKLEY NEWS-BANNER, a weekly newspaper. That said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the superior court in the county in which it is published and it is now and has been for more than six months prior to the date of the publications hereinafter referred to, published in the English language continually as a weekly newspaper in Enumclaw, King County, Washington, and Buckley, Pierce County, Washington, and it is now and during all of said time was compiled in offices maintained at the aforesaid places of publication of said newspaper. That the annexed

is a true copy of No. S1-22591

as it was published in regular issues (and not in supplement form) of said newspaper for a period of 2 consecutive weeks, commencing on the 6 day of November 1975 and ending on the 13 day of November 1975 both dates inclusive and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of $ 5.20 which amount has been paid in full, at the rate of $2.96 a hundred and forty-two words for the first insertion and $2.24 a hundred and forty-two words for each subsequent insertion.

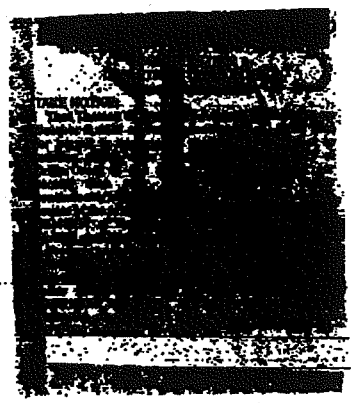
Betty Ford

Subscribed and sworn to before me this 12th day of November 1975

[illegible]

SEAL

Notary Public in and for the State of Washington, Residing at Enumclaw.



Affidavit is okay
12/4/75
[illegible]

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE

That THOMAS G. SPAIGHT under

of Auburn, Washington on October 3, 1975

Application No. S1-22591 filed for permit to appropriate public waters, subject to existing rights.

from unnamed spring tributary of Crisp Creek

in the amount of 0.70 cubic feet per second

each year, for group domestic supply—continuously

irrigation—during irrigation season

The source of the proposed appropriation is located within NE¼SE¼

of Section 20 ..., Township 21 N., Range 6 E W.M., in King County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections, protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, Northwest Regional Office, [illegible] Redmond, WA. 98052

within thirty (30) days from (Last date of publication to be entered above by publisher)

October 17, 1975

Thomas G. Spaight
21315 - 348th S.E.
Auburn, Washington 98002

Dear Mr. Spaight:

While preparing your surface water application for processing it was noticed that your springs are tributary of Crisp Creek. Crisp Creek is tributary of Green River. Green River and its tributaries have been requested closed to all consumptive diversions by the Departments of Game and Fisheries since August 19, 1953. It has been our policy to honor such requests. A consumptive diversion is any manner in which water is used so that not all of the diverted water returns to the stream. The only exceptions to this are water for domestic supply or stockwater.

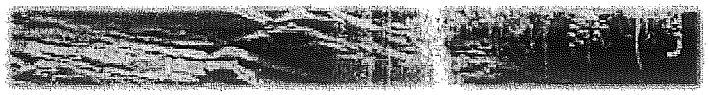
We will process your application as it is with the irrigation, pending review and recommendations of the Departments of Game and Fisheries. We can only assume, at this time, that those departments will protest your irrigation usage. If so, we could only issue a permit for stockwater and domestic use.

Sincerely,

SANDRA JAMES
Water Resources Management
Department of Ecology

SJ:ll

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471726122032801

General Location Details:

Unique Well ID: S_471726122032801
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 1
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 21 QS: NW/SW
Local Number: 21N/06E-21M02
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 20 Feet
Surface Elevation: 200 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name! Thomas G. Spai.

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
6/3/1986	10:45	7.79	192.21	Steel tape
4/8/1987	13:30	6.96	193.04	Steel tape

Water Quality Data:

Water quality data is not available.
- Could not Find an ODW report for a Community B well

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton,

Related Information:

20-J-4

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. ✓ Parcel 7081

Permit No. ....

(1) OWNER: Name Hagan, Johnson, Seabandt Address 20229 SE 34th Auburn

(2) LOCATION OF WELL: County King Parcel 1 — SE ¼ NW ¼ Sec. 20 T. 21 N., R. 06 W.M.

Bearing and distance from section or subdivision corner Short Plat 1274001 — Tile # 7508070555

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 105 ft. Depth of completed well 105 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 96 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☒ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used.....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Johnson Well Screens
Type Stainless steel Model No.....
Diam. ~~10 mesh~~ Slot size ..... from ..... ft. to ..... ft.
Diam. 5½ Slot size 10 mesh from 95 ft. to 105 ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water?..... Depth of strata.....
Method of sealing strata off.....

(7) PUMP: Manufacturer's Name Sta Rite
Type: Sub. H.P. 1½

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level 87 ft. below top of well Date 2/5/77
Artesian pressure ..... lbs. per square inch Date.....
Artesian water is controlled by..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Driller
Yield: 18 gal./min. with 5 ft. drawdown after 10 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 18 gal./min. with 5 ft. drawdown after 5 hrs.
Artesian flow ..... g.p.m. Date.....
Temperature of water..... Was a chemical analysis made? Yes ☒ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Surface	0	3
Brown clay shocked with gravel	3	11
Brown hardpan	11	19
Gray hardpan	19	63
Gray brown hardpan rocks	63	98
Brown water sand	98	101
Brown hardpan	101	105

Work started 1/1, 1977 Completed 2/5, 1977

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co, Inc (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 2/5, 1977

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

20-L-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471742122041701

General Location Details:

Name: Hogen, Johnson, Seabandsh

Unique Well ID: S_471742122041701
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SE/NW
Local Number: 21N/06E-20F03
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 105 Feet
Surface Elevation: 500 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
7/25/1986	14:20	88.28	411.72	Steel tape
4/7/1987	14:35	87.2	412.8	Steel tape

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

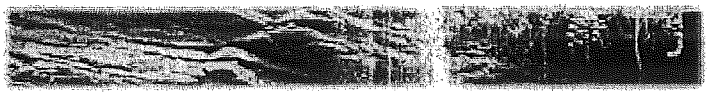
Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical

Related Information:

20-L-1

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_06119_01

General Location Details:

Name: Valley View Comm.

Unique Well ID: GrpB_06119_01
Parcel ID Number: 2021069081
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: NE/SW
Local Number: 21N/06E-20L
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Well Well Depth: 105 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
7/15/1997	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1 mg/L MDL:	

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

20-L-1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 03/26/2003
Printed: 03/11/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
06119 D	VALLEY VIEW COMM WATER SUPPLY	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

MARV SEABRANDS []
20219 SE 344TH
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 029547

MARV SEABRANDS
20219 SE 344TH
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (253) 852-9203		Owner Daytime Phone: (253) 852-9203	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [x] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

1,000

15	16	17	18 SOURCE CATEGORY										19			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL #1		X										X				X						105	18		20	21N	06E

20-L-1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
06119 D	VALLEY VIEW COMM WATER SUPPLY	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	6	Undetermined
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	6		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
28. TOTAL SERVICE CONNECTIONS		6	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 15

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

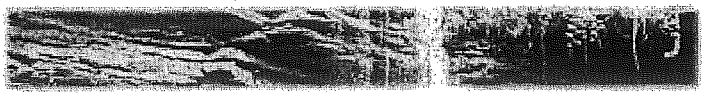
☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471732122043201

General Location Details:

Name: "not given"

Unique Well ID: N_471732122043201
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: NW/SW
Local Number: 21N/06E-20M01S
City: King County Zipcode: 98092
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Spring Well Depth:
Surface Elevation: 430 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

20-L-2

7019

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. WII4449
AER489

(1) OWNER: Name EMERALD WATER SYSTEMS Address 19863 SE 344TH AUBURN, WA 98092-

(2) LOCATION OF WELL: County KING - NW 1/4 SW 1/4 Sec 20 T 21 N, R 6E WM
(2a) STREET ADDRESS OF WELL (or nearest address) 19863 SE 344TH

21-6E-20M

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 120 ft. Depth of completed well 118 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2 ft. to 114 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft
perforations from ft. to ft.

Screens: YES
Manufacturer's Name COOK
Type STAINLESS STEEL Model No.
Diam. 6 slot size 15 from 113 ft. to 118 ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 83 ft. below top of well Date 09/03/99
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test 6 gal/min. 4 ft. drawdown after 1.5 hrs.
Air test gal/min. w/ stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
BROWN GRAVEL SILT & SAND	0	22
BROWN GRAVEL SAND & SILT	22	95
BROWN SAND & WATER	95	120

SEP 2 3 1999

Work started 08/23/99 Completed 09/03/99

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME HAYES DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 5690 ERSHIG RD. BOW, WA

[SIGNED] Ken Hayes License No. 2189

Contractor's Registration No. HAYESDI106J5 Date 09/14/99

6860

20-M-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_06094_01

General Location Details:

Name: Emerald

Unique Well ID: GrpB_06094_01
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/NW
Local Number: 21N/06E-20
City: King County Zipcode: 98092
Data Source: WA Health Who are these data sources?
Location Type: Well Well Depth: 0 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

20-M-1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 05/14/2002
Printed: 03/11/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
06094 R	EMERALD	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

KAREN WYTO [MANAGER]
19661 SE 344TH
AUBURN, WA 98092

7. OWNER NAME & MAILING ADDRESS — **8. Owner Number** 011186

MURDOCK, DON
19661 SE 344TH ST.
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (253) 833-5567		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [X] Not applicable (Skip to #12)
- [ ] Owned and Managed — SMA NAME: _____ SMA Number: _____
- [ ] Managed Only
- [ ] Owned Only

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [X] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [X] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL #1		X										X				X								NW SW	20	21N	06E

20-M-1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
06094 R	EMERALD	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	2	2
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	2		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		2	2

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 5

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

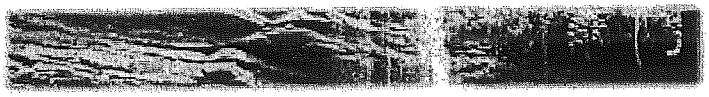
☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_29027_01

General Location Details:

Name: Sweet

Unique Well ID: GrpB_29027_01
Parcel ID Number: 2021069010
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: NW/SW
Local Number: 21N/06E-20
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Spring Well Depth: 0 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
8/10/1998	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.8 mg/L MDL:	

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
9/3/2002	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.8 mg/L MDL:	

20-M-2

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 08/25/2004
Printed: 03/11/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
29027 R	SWEET, ERIN	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

KAREN WYTKO [CONTACT]
19863 SE 344TH ST
AUBURN, WA 98092

7. OWNER NAME & MAILING ADDRESS — **8. Owner Number** 011186

MURDOCK, DON
19661 SE 344TH ST.
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone:		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

1. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [x] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18										19			20	21						22	23	24			
	SOURCE NAME	INTERTIE	SOURCE CATEGORY										USE				TREATMENT						DEPTH		SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456. IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	SPRING No.1					X							X					X						35		20	21N	06E

20-M-2

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
29027 R	SWEET, ERIN	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	3	8
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	3		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		3	8

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 8

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	**ANNUALLY**	**ONCE EVERY 3 YEARS**
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W118418
Water Right Permit No. AFA 670

(1) OWNER: Name BROWN, CHUCK & TYE Address 228 BERKLEY AVE FIRCREST, WA 98466-

(2) LOCATION OF WELL: County KING - SW 1/4 SW 1/4 Sec. 20 T. 21 N., R 6E WM
(2a) STREET ADDRESS OF WELL (or nearest address) 19930 SE GREEN VALLEY RD

21-6E-20N

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 38 ft. Depth of completed well 36.5 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2.5 ft. to 32.5 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: YES
Manufacturer's Name COOK
Type STAINLESS STEEL Model No.
Diam. 6 slot size 20 from 31.5 ft. to 36.5 ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type SUBMERSIBLE H.P. 3.0

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 15.3 ft. below top of well Date 11/11/99
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? YES If yes, by whom? HAYES DRILLING
Yield: 19 gal./min with 0.5 ft. drawdown after 1 hrs.

Recovery data
Time | Water Level | Time | Water Level | Time | Water Level

Date of test
Bailer test 50 gal/min. 1 ft. drawdown after 1 hrs.
Air test 100 gal/min. w/ stem set at 36 ft. for .5 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	1
BROWN GRAVEL SAND & COBBLES	1	6
BROWN COBBLES & SAND	6	10
BROWN GRAVEL & SAND	10	14
BROWN GRAVEL SAND & WATER	14	37
BROWN CLAY	37	

RECEIVED
MAY 26 2000
DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

Work started 11/11/99 Completed 11/11/99

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME HAYES DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 5696 ERSKIG RD. BOW, WA

[SIGNED] Steve Gilbert for Ryan Wilhonen License No. 2190

Contractor's Registration No. HAYESDI106J5 Date 05/22/00

20-N-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 064754
Unique Well I.D.
Water Right Permit No.

(1) OWNER: Name JEZEK, JOE Address 19603 SE GREEN VALLEY RD AUBURN, WA 98092 21-6E-20N

(2) LOCATION OF WELL: County KING - SW 1/4 SW 1/4 Sec 20 T 21 N., R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) 197XX SE GREEN VALLEY RD, AUBURN

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 40 ft. Depth of completed well 40 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 40 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 10 ft. below top of well Date 11/02/95
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 60 gal/min. w/ stem set at 40 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	3
BROWN CEMENTED SAND & GRAVEL	3	24
WATER BEARING SAND & GRAVEL	24	40

RECEIVED
MAR 07 1996
Department of Ecology

Work started 11/01/95 Completed 11/02/95

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING (Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] License No. 0097

Contractor's Registration No. NORTHPD137PO Date 11/03/95

20-N-2

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. 74

Permit No.

(1) OWNER: Name Dave Kocher Address [illegible] Green Valley Rd. Auburn WA

(2) LOCATION OF WELL: County King SW ¼ SW ¼ Sec. 20 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 40 ft. Depth of completed well 40 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 40 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 12 ft. below top of well Date 6/25/79
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 85 gal./min with 16 ft. drawdown after 3 hrs.
Artesian flow g.p.m. Date
Temperature of water. Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown sand	0	8
Gray hardpan	8	22
Brown water gravel	22	40

RECEIVED
OCT 15 1979
DEPT. OF ECOLOGY

Work started 6/25, 1979 Completed 6/25, 1979

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)
Address 19415 108th Ave SE Renton 98055
[Signed] Brad Johnson (Well Driller)
License No. 0233 Date 6/25, 1979

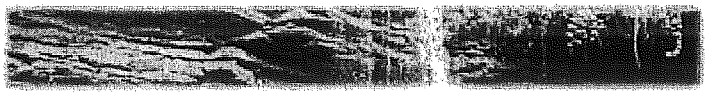
(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

20-N-3

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471717122041601

General Location Details:

Name: "not given"

Unique Well ID: N_471717122041601
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SE/SW
Local Number: 21N/06E-20P01
City: King County Zipcode: 98092
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Well Well Depth: 21 Feet
Surface Elevation: 155 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

20-P-1

S. V. No. 163-1-51-331. 41379. O.S.

CERTIFICATE RECORD NO. 15, PAGE NO. 7297

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF SURFACE WATER RIGHT

(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.)

This is to certify that DALE FRANK HIGGINS

of Auburn, State of Washington, has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the waters of Spring, a tributary of Green River, with point or points of diversion within the NE¼SW¼ Sec. 20 Twp. 21 N., R. 6 E., W. M., under and subject to provisions contained in Appropriation Permit No. 11097 issued by the State Supervisor of Water Resources, and that said right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume 15, at Page 7297, on the 22nd day of September, 19 58 that the priority date of the right hereby confirmed is February 19, 1958; that the amount of water under the right hereby confirmed, for the following purposes is limited to an amount actually beneficially used and shall not exceed 0.25 of a cubic foot per second, 50 acre-feet per year for the irrigation of 25 acres.

A description of the lands under such right to which the water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

NE¼SW¼ and NW¼SE¼ sec. 20, T. 21 N., R. 6 E.W.M., and the southwest quarter of SE¼ and SE¼SW¼ of sec. 20, T. 21 N., R. 6 E.W.M., lying north of the W.D. Lytle County Road and that portion of Government Lot 4 sec. 29, T. 21 N., R. 6 E.W.M., lying north of the Lytle Road adjacent to and south of the SE¼SW¼ of said section 29.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 22nd day of September, 19 58.

State Supervisor of Water Resources.

ENGINEERING DEPT.
O.K. [illegible]

20-8-2

S. F. No. 1254-A—3-57—10M. 48539. **SECTION PLAT**

Sec. 20 Twp. 21N N.R. 6 EWM

N

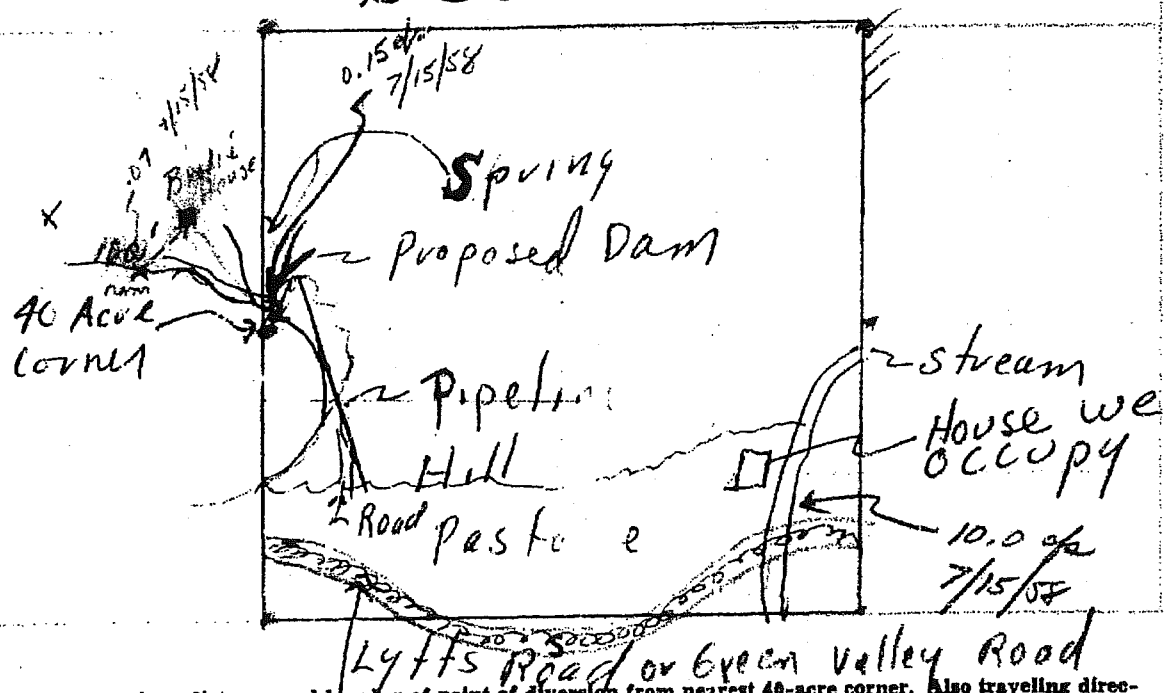
RECEIVED
DEPARTMENT OF CONSERVATION

FEB 19 1958

AM PM
7 8 9 10 11 12 1 2 3 4 5 6

Sec. 20

W E



Be sure to show distance and bearing of point of diversion from nearest 40-acre corner. Also traveling directions from nearest town on main highway.

Scale: 1 inch = 800 feet.

14672

8 Miles up Green River Valley Road from Auburn. 6 Miles past Auburn packing Company

ALD 3/11/08

Could not find 20-Q-1 well Log.

~~Locations~~

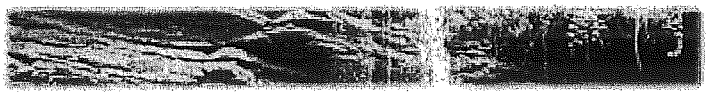
IMaps indicates there is a log somewhere

Locations Searched:

- DOE Well Logs
- WSB 28 Geo and G-W Resources of Southwestern King County, WA
- Groundwater resource bulletin of Southwestern King County

20-Q-1

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471716122035601

General Location Details:

Name: Benz

Unique Well ID: S_471716122035601
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/SE
Local Number: 21N/06E-20Q01
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 34 Feet
Surface Elevation: 159.14 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
1/9/1978	23:59	3.5	155.64	Reported
3/5/1980	23:59	4.72	154.42	Steel tape
4/2/1980	23:59	5.61	153.53	Steel tape
5/12/1980	23:59	5.8	153.34	Steel tape
3/12/1981	23:59	5.95	153.19	Steel tape
4/16/1981	23:59	5.8	153.34	Steel tape
5/12/1981	23:59	5.58	153.56	Steel tape
6/24/1981	23:59	5.26	153.88	Steel tape
6/29/1981	23:59	5.66	153.48	Steel tape
7/14/1981	23:59	6.39	152.75	Steel tape

20-Q-1

5/9/1990	10:52	5.55	153.59	Calibrated electric tape
6/20/1990	11:50	5.35	153.79	Calibrated electric tape
7/20/1990	10:36	6.7	152.44	Calibrated electric tape
8/14/1990	08:55	7.1	152.04	Calibrated electric tape
9/20/1990	10:43	6.99	152.15	Calibrated electric tape
10/17/1990	11:45	6.08	153.06	Calibrated electric tape
11/21/1990	11:05	4.87	154.27	Calibrated electric tape
1/16/1991	11:02	3.54	155.6	Calibrated electric tape
2/20/1991	11:14	3.12	156.02	Calibrated electric tape
3/20/1991	11:29	5.37	153.77	Calibrated electric tape
4/2/1991	10:33	5.76	153.38	Calibrated electric tape
4/17/1991	10:32	5.11	154.03	Calibrated electric tape
5/22/1991	10:43	5.91	153.23	Calibrated electric tape
6/19/1991	10:44	6.53	152.61	Calibrated electric tape
7/31/1991	10:33	7.01	152.13	Calibrated electric tape
8/21/1991	11:01	7.04	152.1	Calibrated electric tape
10/2/1991	11:34	7.25	151.89	Calibrated electric tape
10/30/1991	10:59	7.32	151.82	Calibrated electric tape
11/27/1991	10:54	4.71	154.43	Calibrated electric tape
1/3/1992	11:32	6.14	153	Calibrated electric tape
2/5/1992	11:00	4.8	154.34	Calibrated electric tape
3/11/1992	10:45	6.2	152.94	Calibrated electric tape
4/1/1992	11:13	6.56	152.58	Calibrated electric tape
5/6/1992	11:18	6.46	152.68	Calibrated electric tape
6/3/1992	11:09	6.95	152.19	Calibrated electric tape
7/1/1992	10:51	7.2	151.94	Calibrated electric tape
8/5/1992	11:22	7.29	151.85	Calibrated electric tape
9/30/1992	11:48	6.52	152.62	Calibrated electric tape
10/7/1992	12:10	6.69	152.45	Calibrated electric tape
11/4/1992	12:50	6.8	152.34	Calibrated electric tape
12/9/1992	10:32	6.3	152.84	Calibrated electric tape
1/6/1993	12:09	6.39	152.75	Calibrated electric tape
2/3/1993	11:42	5.29	153.85	Calibrated electric tape
3/10/1993	11:15	5.08	154.06	Calibrated electric tape

4/15/1993	11:45	5.21	153.93	Calibrated electric tape
5/6/1993	12:15	5.2	153.94	Calibrated electric tape
6/10/1993	10:45	6.01	153.13	Calibrated electric tape
7/9/1993	11:30	6.59	152.55	Calibrated electric tape
8/12/1993	10:35	7.13	152.01	Calibrated electric tape
9/3/1993	11:56	7.29	151.85	Calibrated electric tape
9/7/1993	11:47	7.19	151.95	Calibrated electric tape

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
8/14/1990	23:59	SKC_historic_R1	Normal Environmental	36

Analyte Name	Analyte Type	Detected	Result	Qualifiers
ALKALINITY, TOTAL (AS CACO3)	Conv	Yes	62 mg/L MDL: 1 mg/L	
ANTIMONY	Metal	No	0.02 mg/l MDL: 0.02 mg/l	
ARSENIC	Metal	Yes	0.001 mg/l MDL: 0.001 mg/l	
BARIUM	Metal	Yes	0.01 mg/l MDL: 0.003 mg/l	
BERYLLIUM	Metal	No	0.007 mg/l MDL: 0.007 mg/l	
Bicarbonate as CaCO3	Conv	Yes	62 mg/L MDL: 1 mg/L	
CADMIUM	Metal	No	0.002 mg/l MDL: 0.002 mg/l	
CALCIUM METAL	Metal	Yes	19 mg/l MDL: 0.01 mg/l	
Carbonate as CaCO3	Conv	No	1 mg/L MDL: 1 mg/L	
CHLORIDE	Conv	Yes	19 mg/l MDL: 0.5 mg/l	
CHROMIUM	Metal	No	0.006 mg/l MDL: 0.006 mg/l	
COLIFORMS, FECAL	Micro	No	1 mpn/100ml MDL: 1 mpn/100ml	
COLIFORMS, TOTAL	Micro	No	1 mpn/100ml MDL: 1 mpn/100ml	
COPPER	Metal	Yes	0.027 mg/l MDL: 0.002 mg/l	
FLUORIDE	Conv	No	0.2 mg/l MDL: 0.2 mg/l	
			68 mg/L	

HARDNESS	Conv	Yes	MDL: 1 mg/L
Hydroxide as CaCO3	Conv	No	1 mg/L MDL: 1 mg/L
IRON	Metal	Yes	0.41 mg/l MDL: 0.01 mg/l
LEAD	Metal	No	0.001 mg/l MDL: 0.001 mg/l
MAGNESIUM	Metal	Yes	5 mg/l MDL: 0.01 mg/l
MANGANESE	Metal	Yes	0.014 mg/l MDL: 0.002 mg/l
MERCURY	Metal	Yes	0.0002 mg/l MDL: 0.0002 mg/l
NICKEL	Metal	Yes	0.02 mg/l MDL: 0.01 mg/l
NITRATE-N	Conv	No	0.2 mg/l MDL: 0.2 mg/l
NITRITE	Conv	No	0.5 mg/l MDL: 0.5 mg/l
pH, FIELD	Field	Yes	6.4 pH units MDL: 0.1 pH units
POTASSIUM	Metal	Yes	0.76 mg/l MDL: 1 mg/l
SELENIUM	Metal	No	0.001 mg/l MDL: 0.001 mg/l
SILICA	Conv	Yes	21 mg/l MDL: 0.04 mg/l
SILVER	Metal	No	0.01 mg/l MDL: 0.01 mg/l
SODIUM	Metal	Yes	23 mg/l MDL: 0.02 mg/l
SULFATE	Conv	Yes	8.2 mg/l MDL: 0.5 mg/l
TEMPERATURE	Field	Yes	12.2 deg C MDL: 0.1 deg C
THALLIUM	Metal	No	0.03 mg/l MDL: 0.03 mg/l
TOTAL DISSOLVED SOLIDS	Conv	Yes	140 mg/l MDL: 1 mg/l
ZINC	Metal	Yes	0.11 mg/l MDL: 0.02 mg/l

4/2/1991 23:59 SKC_historic_R2 Normal Environmental 91

Analyte Name	Analyte Type	Detected	Result	Qualifiers
1,1,1,2-TETRACHLORROETHANE	SOC	No	0.50 ug/l MDL: 0.50 ug/l	
1,1,1-TRICHLOROETHANE	VOA	No	0.50 ug/l MDL: 0.50 ug/l	

1,1,2,2-TETRACHLOROETHANE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
1,1,2-TRICHLOROETHANE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
1,1-DICHLOROETHANE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
1,1-DICHLOROETHYLENE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
1,1-DICHLOROPROPENE	SOC	No	0.50 ug/l MDL: 0.50 ug/l
1,2,3-TRICHLOROBENZENE	SOC	No	0.50 ug/l MDL: 0.50 ug/l
1,2,3-TRICHLOROPROPANE	SOC	No	0.80 ug/l MDL: 0.80 ug/l
1,2,4-TRICHLOROBENZENE	EDC_BnA	No	0.50 ug/l MDL: 0.50 ug/l
1,2,4-TRIMETHYLBENZENE	SOC	No	0.50 ug/l MDL: 0.50 ug/l
1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	SOC	No	2.00 ug/l MDL: 2.00 ug/l
1,2-DICHLOROETHANE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
1,2-DICHLOROPROPANE	VOA	No	0.80 ug/l MDL: 0.80 ug/l
1,3,5-TRIMETHYLBENZENE	SOC	No	0.50 ug/l MDL: 0.50 ug/l
1,3-DICHLOROPROPANE	Organic	No	0.50 ug/l MDL: 0.50 ug/l
2,2-DICHLOROPROPANE	Organic	No	0.50 ug/l MDL: 0.50 ug/l
2-CHLOROTOLUENE	SOC	No	0.50 ug/l MDL: 0.50 ug/l
2-PHENYLBUTANE	SOC	No	0.50 ug/l MDL: 0.50 ug/l
4-CHLOROTOLUENE	SOC	No	0.80 ug/l MDL: 0.80 ug/l
ALKALINITY, TOTAL (AS CACO3)	Conv	Yes	70 mg/L MDL: 1 mg/L
ANTIMONY	Metal	No	0.01 mg/l MDL: 0.01 mg/l
ARSENIC	Metal	No	0.001 mg/l MDL: 0.001 mg/l
BARIUM	Metal	Yes	0.059 mg/l MDL: 0.003 mg/l
BENZENE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
BENZENE, (1,1-DIMETHYLETHYL)-	SOC	No	0.50 ug/l MDL: 0.50 ug/l
			0.005 mg/l

BERYLLIUM	Metal	No	MDL: 0.005 mg/l
Bicarbonate as CaCO3	Conv	Yes	70 mg/L MDL: 1 mg/L
BROMOBENZENE	SOC	No	0.50 ug/l MDL: 0.50 ug/l
BROMODICHLOROMETHANE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
BROMOMETHANE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
BUTYLBENZENE,n-	SOC	No	0.50 ug/l MDL: 0.50 ug/l
CADMIUM	Metal	No	0.002 mg/l MDL: 0.002 mg/l
CALCIUM METAL	Metal	Yes	26 mg/l MDL: 0.01 mg/l
CARBON TETRACHLORIDE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
Carbonate as CaCO3	Conv	No	1 mg/L MDL: 1 mg/L
CFC-11	VOA	No	0.50 ug/l MDL: 0.50 ug/l
CFC-12	SOC	No	0.80 ug/l MDL: 0.80 ug/l
CHLORIDE	Conv	Yes	13 mg/l MDL: 0.5 mg/l
CHLOROBENZENE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
CHLOROBROMOMETHANE	SOC	No	0.50 ug/l MDL: 0.50 ug/l
CHLORODIBROMOMETHANE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
CHLOROETHANE	VOA	No	1.00 ug/l MDL: 1.00 ug/l
CHLOROFORM	VOA	No	0.50 ug/l MDL: 0.50 ug/l
CHLOROMETHANE	VOA	No	1.00 ug/l MDL: 1.00 ug/l
CHROMIUM	Metal	No	0.006 mg/l MDL: 0.006 mg/l
CIS-1,2-DICHLOROETHENE	SOC	No	0.50 ug/l MDL: 0.50 ug/l
CIS-1,3-DICHLOROPROPENE	VOA	No	0.80 ug/l MDL: 0.80 ug/l
COLIFORMS, FECAL	Micro	No	1 mpn/100ml MDL: 1 mpn/100ml
COLIFORMS, TOTAL	Micro	No	1 mpn/100ml MDL: 1 mpn/100ml
COPPER	Metal	No	0.002 mg/l MDL: 0.002 mg/l

CUMENE	SOC	No	0.50 ug/l MDL: 0.50 ug/l	
DICHLOROMETHANE	VOA	Yes	0.80 ug/l MDL: 0.50 ug/l	B
ETHYLBENZENE	VOA	No	0.50 ug/l MDL: 0.50 ug/l	
ETHYLENE DIBROMIDE	SOC	No	0.50 ug/l MDL: 0.50 ug/l	
FLUORIDE	Conv	No	0.2 mg/l MDL: 0.2 mg/l	
HARDNESS	Conv	Yes	96 mg/L MDL: 1 mg/L	
HEXACHLORO-1,3-BUTADIENE	EDC_BnA	No	0.50 ug/l MDL: 0.50 ug/l	
Hydroxide as CaCO3	Conv	No	1 mg/L MDL: 1 mg/L	
IRON	Metal	Yes	0.82 mg/l MDL: 0.01 mg/l	
LEAD	Metal	Yes	0.005 mg/l MDL: 0.001 mg/l	
M & P XYLENE	SOC	No	0.50 ug/l MDL: 0.50 ug/l	
M-DICHLOROBENZENE	EDC_BnA	No	0.50 ug/l MDL: 0.50 ug/l	
MAGNESIUM	Metal	Yes	7.5 mg/l MDL: 0.01 mg/l	
MANGANESE	Metal	Yes	0.023 mg/l MDL: 0.002 mg/l	
MERCURY	Metal	No	0.0002 mg/l MDL: 0.0002 mg/l	
NAPHTHALENE	EDC_BnA	No	0.50 ug/l MDL: 0.50 ug/l	
NICKEL	Metal	No	0.02 mg/l MDL: 0.02 mg/l	
NITRATE-N	Conv	Yes	1.2 mg/l MDL: 0.2 mg/l	
NITRITE	Conv	No	0.5 mg/l MDL: 0.5 mg/l	
pH, FIELD	Field	Yes	6.35 pH units MDL: 0.1 pH units	
POTASSIUM	Metal	No	1 mg/l MDL: 1 mg/l	
PROPYLBENZENE,n-	SOC	No	0.80 ug/l MDL: 0.80 ug/l	
SELENIUM	Metal	No	0.001 mg/l MDL: 0.001 mg/l	
SILICA	Conv	Yes	8.3 mg/l MDL: 0.04 mg/l	
			0.01 mg/l	

SILVER	Metal	No	MDL: 0.01 mg/l
SODIUM	Metal	Yes	34 mg/l MDL: 0.02 mg/l
STYRENE (MONOMER)	VOA	No	0.50 ug/l MDL: 0.50 ug/l
SULFATE	Conv	Yes	5.9 mg/l MDL: 0.5 mg/l
TEMPERATURE	Field	Yes	10.15 deg C MDL: 0.1 deg C
TETRACHLOROETHENE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
THALLIUM	Metal	No	0.001 mg/l MDL: 0.001 mg/l
TOLUENE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
TOTAL DISSOLVED SOLIDS	Conv	Yes	100 mg/l MDL: 1 mg/l
TRANS-1,2-DICHLOROETHENE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
TRANS-1,3-DICHLOROPROPENE	VOA	No	1.00 ug/l MDL: 1.00 ug/l
TRIBOMOMETHANE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
TRICHLOROETHYLENE	VOA	No	0.50 ug/l MDL: 0.50 ug/l
VINYL CHLORIDE	VOA	No	1.00 ug/l MDL: 1.00 ug/l
XYLENE,o-	SOC	No	0.50 ug/l MDL: 0.50 ug/l
ZINC	Metal	Yes	0.02 mg/l MDL: 0.02 mg/l

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land Resources Web site, please contact Fred Bentler, webmaster.

Related Information:

Water and Land Resources Topics

Groundwater Management

21/06-204

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 012127

Water Right Permit No. [illegible]

(1) OWNER: Name Gordon Lewis Address 26717 191st Pl SE Kent, 98031

(2) LOCATION OF WELL: County King SW ¼ SE ¼ Sec 20 T 21 N., R 6E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 20545- Green Valley Rd. Auburn

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater Industrial [ ] Test Well [ ] Municipal [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned [ ] New well [X] Deepened [ ] Reconditioned [ ]
Method: Dug [ ] Cable [ ] Rotary [X] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 43 feet. Depth of completed well 40 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from +1 ft. to 40 ft.
Welded [X] " Diam. from ft. to ft.
Liner installed [ ] " Diam. from ft. to ft.
Threaded [ ]

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name N/A
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 5 ft. below top of well Date 6/14/88
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [X] No [ ] If yes, by whom? Driller
Yield: 30 gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water 56 Was a chemical analysis made? Yes [X] No [ ]
iron: 1.7 ppm

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Brn silty sand	0	2
Loose brn till	2	15
Brn silty wet sand	15	37
Coarse gravel/ water	37	40
Clay	40	43

JUN 28 1988

Work started 6/14/88, 19. Completed 6/14, 1988

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME OELKE DRILLING, INC. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 4312 166th Ave. E. Sumner 98390

(Signed) [signature] (WELL DRILLER) License No. 0837

Contractor's Registration No. OELKEDI 136QC Date 6/20, 1988

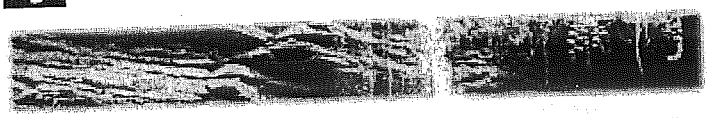
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

20-Q-2

The Department of Ecology does NOT Warr[illegible] the Data and/or the Information on this Well R[illegible]rt.

King County | Home | News | Services | Comments | Search



Natural Resources and Parks »
Water and Land Resources Division »

GW Home | New iMAP Search | New Text Search

Groundwater Data Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471720122040001

General Location Details:

Name: Higgins

Unique Well ID: S_471720122040001
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/SE
Local Number: 21N/06E-20Q04
City: King County
Data Source: Historic - unknown source
Location Type: Well
Surface Elevation: 172.7 Feet
Location Accuracy: QTRQTRSEC

Zipcode: 98092
Who are these data sources?
Well Depth: 348 Feet
What is surface elevation?
What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
3/5/1980	23:59	5.42	167.28	Steel tape
4/2/1980	23:59	5.91	166.79	Steel tape
5/12/1980	23:59	5.86	166.84	Steel tape

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web

Related Information:

20-Q-3

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471718122040101

General Location Details:

Name: Higgins

Unique Well ID: S_471718122040101
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/SE
Local Number: 21N/06E-20Q02
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 37 Feet
Surface Elevation: 159.5 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
12/31/1979	23:59	7	152.5	Electric tape
5/1/1980	23:59	9	150.5	Steel tape
5/7/1980	23:59	9.1	150.4	Electric tape
5/12/1980	23:59	7.13	152.37	Steel tape
3/12/1981	23:59	7.37	152.13	Steel tape
4/16/1981	23:59	7.09	152.41	Steel tape
5/12/1981	23:59	6.95	152.55	Steel tape

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

20-Q-4

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471712122041002

General Location Details:

Unique Well ID: S_471712122041002
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/SE
Local Number: 21N/06E-20Q08
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 21 Feet
Surface Elevation: 158.8 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: USGS

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
11/8/1979	23:59	8.6	150.2	Electric tape
11/13/1979	23:59	8.8	150	Electric tape
11/20/1979	23:59	9	149.8	Electric tape
11/26/1979	23:59	8.9	149.9	Electric tape
12/31/1979	23:59	7.6	151.2	Electric tape
1/25/1980	23:59	6.8	152	Electric tape
3/5/1980	23:59	6.74	152.06	Steel tape
4/2/1980	23:59	7.55	151.25	Steel tape
5/12/1980	23:59	7.81	150.99	Steel tape
1/9/1981	23:59	7.38	151.42	Steel tape
3/12/1981	23:59	7.94	150.86	Steel tape

20-Q-5

4/16/1981	23:59	7.79	151.01	Steel tape
5/12/1981	23:59	7.55	151.25	Steel tape
6/24/1981	23:59	7.26	151.54	Steel tape
6/29/1981	23:59	7.65	151.15	Steel tape
7/14/1981	23:59	8.33	150.47	Steel tape

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land Resources Web site, please contact Fred Bentler, webmaster.

Department of Natural Resources and Parks
Water and Land Resources Division

Related Information:

Water and Land Resources Topics

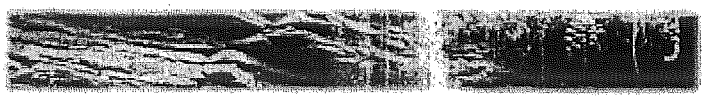
Groundwater Management

Updated: 03/11/2008 13:22:24

King County | Natural Resources and Parks | Water and Land Resources | News | Services | Comments | Search

Links to external sites do not constitute endorsements by King County.
By visiting this and other King County web pages,
you expressly agree to be bound by terms and conditions of the site.
The details.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471712122041001

General Location Details:

Unique Well ID: N_471712122041001
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/SE
Local Number: 21N/06E-20Q07
City: King County Zipcode: 98092
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Well Well Depth: 52 Feet
Surface Elevation: 158.8 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: "Not given"

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

20-Q-6

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471711122040201

General Location Details:

Name: Not Given

Unique Well ID: N_471711122040201
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/SE
Local Number: 21N/06E-20Q06
City: King County Zipcode: 98092
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Well Well Depth:
Surface Elevation: 155 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

20-Q-7

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) **OWNER:** Name CAROL WADDELL Address 34817 215th S.E., Auburn, WA 98002

(2) **LOCATION OF WELL:** County KING SE 1/4 SE 1/4 Sec. 20 T. 21 N., R. 6 E. W.M.

Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) **TYPE OF WORK:** Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 20 ft. Depth of completed well 20 ft.

(6) **CONSTRUCTION DETAILS:**
Casing installed: 6 " Diam. from 0 ft. to 20 ft.
Threaded [ ] ..... " Diam. from ..... ft. to ..... ft.
Welded [X] ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes [ ] No [X]
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal bentonite & cement
Did any strata contain unusable water? Yes [ ] No [ ]
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) **PUMP:** Manufacturer's Name .....
Type: ..... H.P. .....

(8) **WATER LEVELS:** Land-surface elevation above mean sea level .... ft.
Static level 8 ft. below top of well Date 5/21/80
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 25 gal./min. with 6 ft. drawdown after 1 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes [ ] No [ ]

(10) **WELL LOG:**
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
TOPSOIL, BROWN	0	2
CEMENTED SAND & GRAVEL, BROWN	2	16
WATER BEARING SAND & GRAVEL, BROWN	16	20

Work started 5/21/80, 19 Completed 5/21/80, 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NORTHWEST PUMP & DRILLING COMPANY
(Person, firm, or corporation) (Type or print)
Address 3245 Auburn Way South, Auburn, WA
[Signed] R. B. DeLamar
(Well Driller)
License No. 0097 Date 5/21/80, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

20-R-1

The Department of Ecology does NOT Warr... the Data and/or the Information on this Well R...rt.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☒ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☐ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
March 30, 1981	S1-23839	S1-23839P	S1-23839C

NAME
MUCKLESHOOT INDIAN TRIBE Attn: Dennis Moore

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
39015 - 172nd Ave. S. E.	Auburn	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Crisp Creek

TRIBUTARY OF (IF SURFACE WATERS)
Green River

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
2.0		non-consumptive

QUANTITY, TYPE OF USE, PERIOD OF USE
Fish propagation - continuously, non-consumptive

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
1300 feet south and 150 feet west of E¼ corner of Sec. 20

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
NE¼SE¼	20	21	6 E	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

That portion of the E½E½SE¼ of Sec. 20, T. 21N., R. 6 E.W.M., lying northerly of the centerline of Crisp Creek.

20-R-2

(SEE REVERSE SIDE)

CERTIFICATE

PROVISIONS

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond *Washington, this* 13th *day of* May, *19* 83.

Department of Ecology

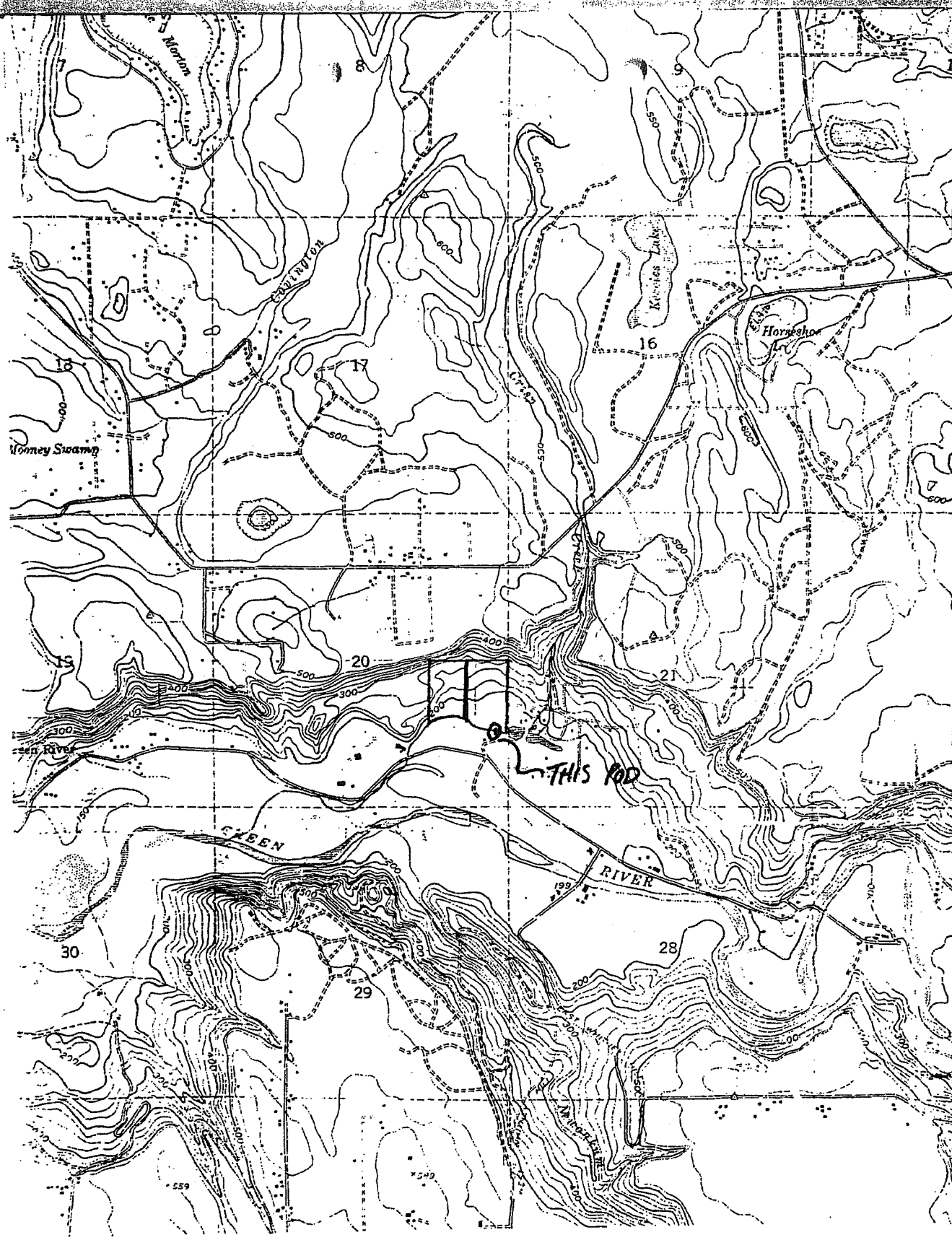
by Robert K. McCormick

ROBERT K. McCORMICK, Regional Manager

ENGINEERING DATA

OK XX

FOR COUNTY USE ONLY



Morton
Covington
Kennies Lake
Horseshoe
Mooney Swamp
Green River
THIS POD
GREEN
RIVER
7
8
9
16
17
18
19
20
21
28
29
30

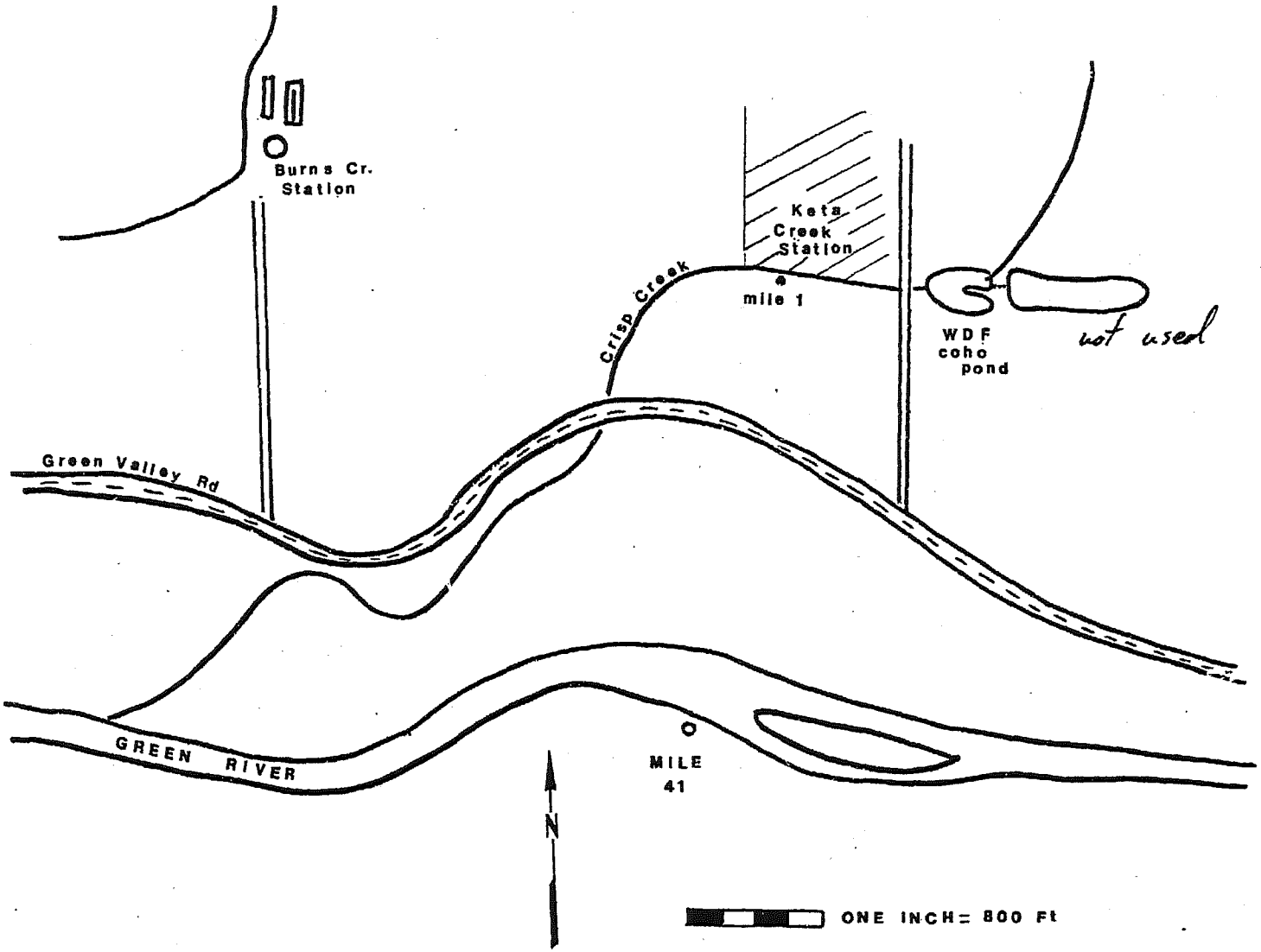
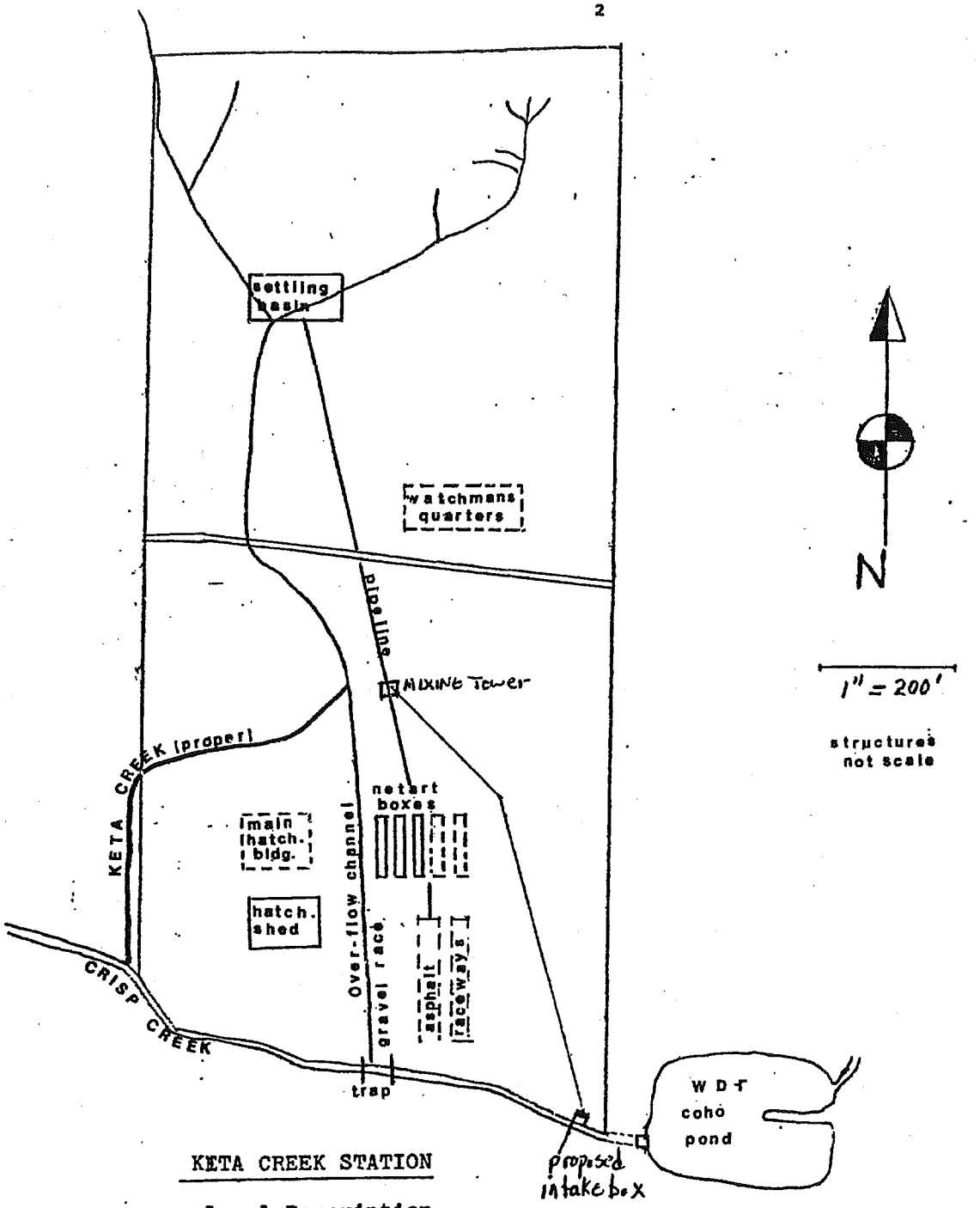

Burns Cr.
Station
Keta
Creek
Station
mile 1
Crisp Creek
WDF
coho
pond
not used
Green Valley Rd
GREEN RIVER
MILE
41
N
ONE INCH= 800 Ft

FIGURE 1

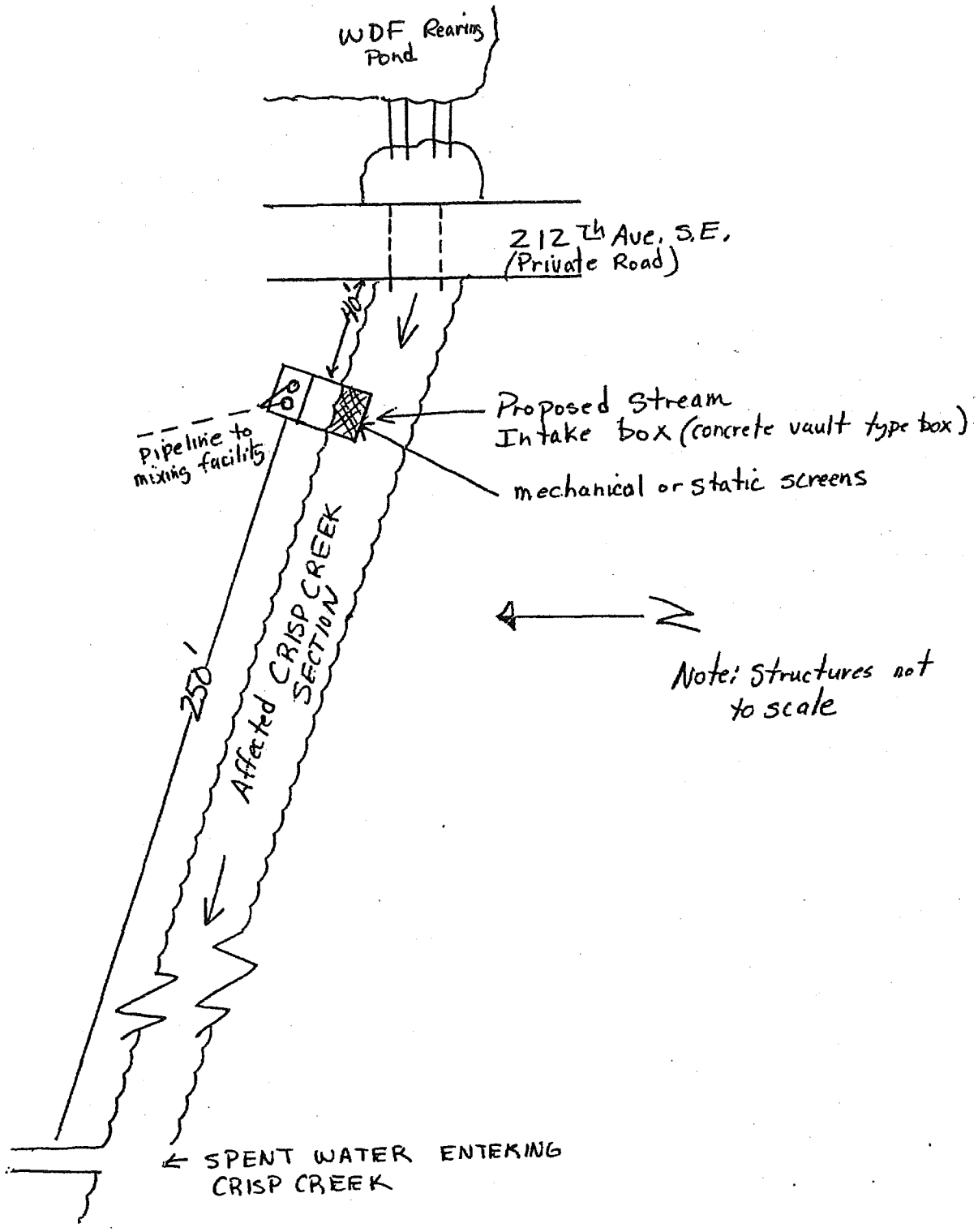
FIGURE
2



KETA CREEK STATION

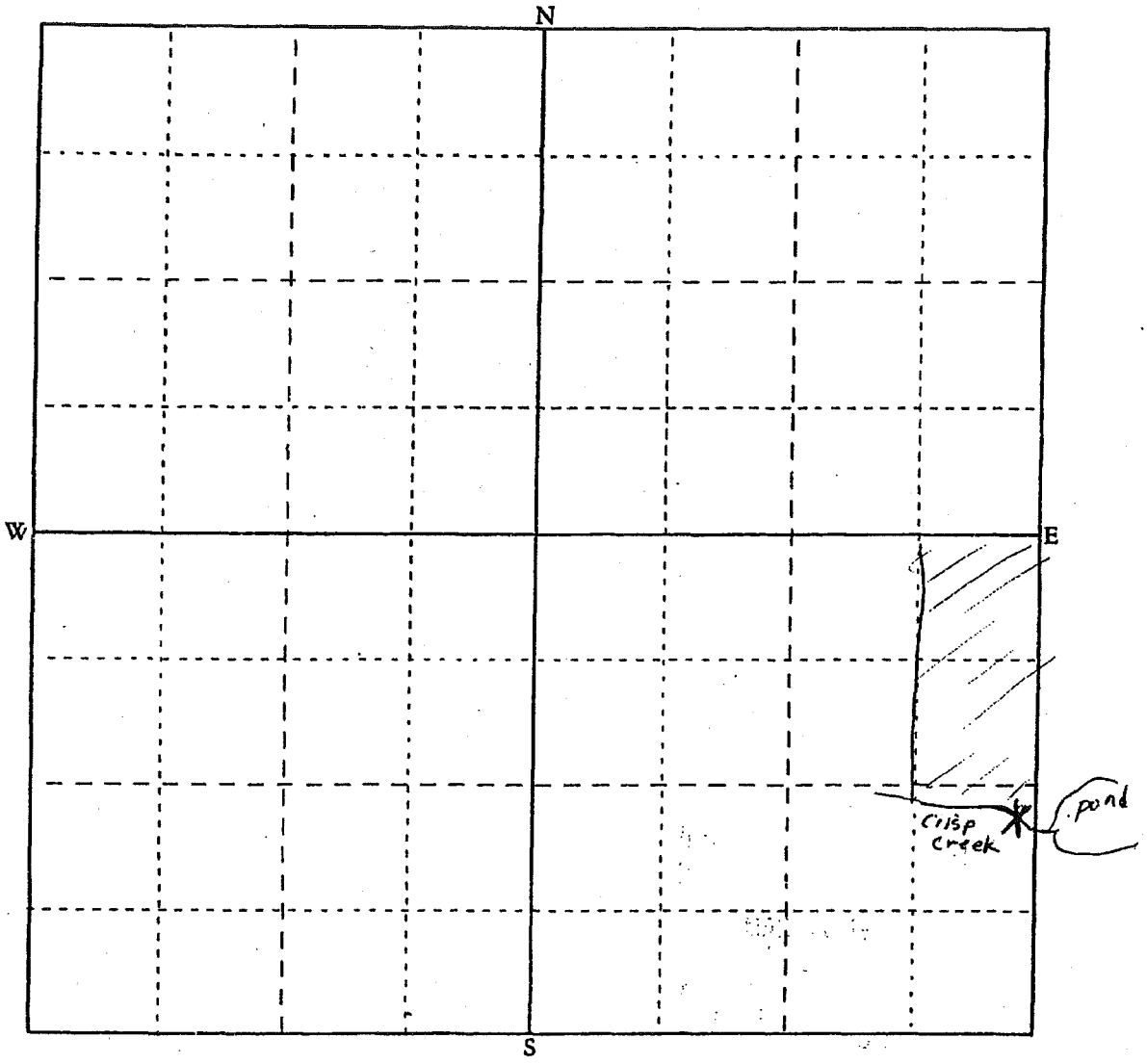
Legal Description
The East 1/2 of the East 1/2 of the S.E. 1/4 of Section 20 TWP 21 N. RGE 6 E.W.M. lying northerly of the centerline of Crisp Cr.

Figure 3


WDF Rearing Pond
212 Th Ave. S.E. (Private Road)
Proposed Stream Intake box (concrete vault type box)
mechanical or static screens
Pipeline to mixing facility
250'
Affected CRISP CREEK SECTION
Note: Structures not to scale
SPENT WATER ENTERING CRISP CREEK

SECTION MAP

Sec. 20 Twp. 21 N. R. 6E. W.M.



S123839

Scale: 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.

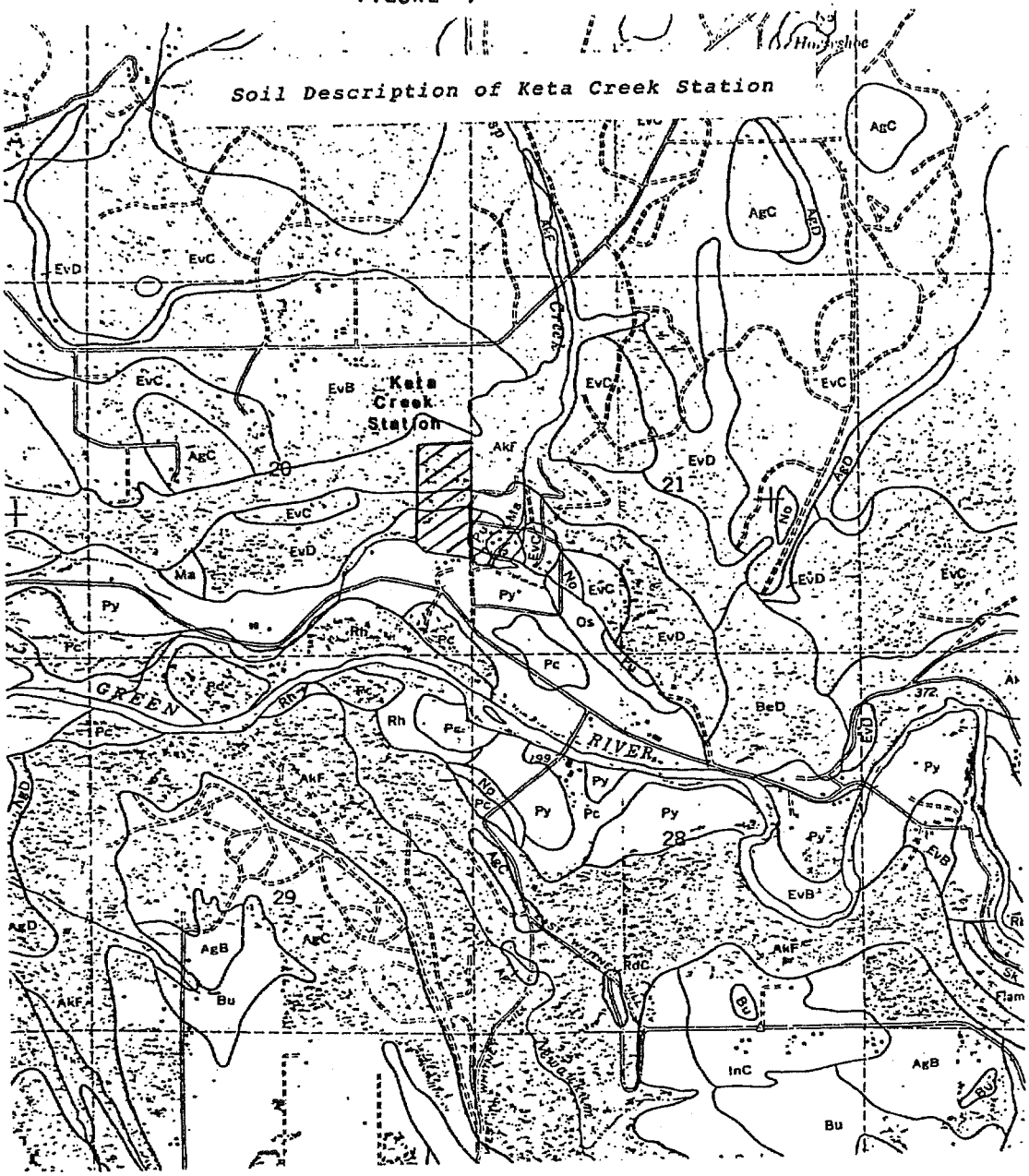
Indicate traveling directions from nearest town in space below.

Approximately 6.5 miles East of Auburn up Green Valley Road

Detach here

FIGURE 4

Soil Description of Keta Creek Station



EvD - Everett gravelly sandy loam - terrace

AkF - Alderwood & Kitsap soils - very steep

Ma - Mixed alluvial land - gravelly sandy loam to silty clay loam

Py - Puyallup fine sandy loam - this nearly level soil is on natural levees in the valley bottoms

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☒ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☐ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
July 27, 1984	S1-24508	S1-24508P	S1-24508C

NAME
Muckleshoot Indian Tribe Attn: Dennis Moore

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
24900 212th Avenue S.E.	Auburn	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Crisp Creek

TRIBUTARY OF (IF SURFACE WATERS)
Green River - King County

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
0.55		Non-consumptive

QUANTITY, TYPE OF USE, PERIOD OF USE
Fish propagation - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION-WITHDRAWAL
1500 feet south and 150 feet west of east quarter of Section 20

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
E½E½SE¼	20	21	6E	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

That portion of the E½E½SE¼ of Section 20, T. 21N., R.6E.W.M., lying northerly of the center line of Crisp Creek

3
20-R-~~4~~

PROVISIONS

The total withdrawal from S1-24508 and existing right S1-23839C shall not exceed 2.55 cfs.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond, *Washington, this* 14th *day of* February, *19*86.

Department of Ecology

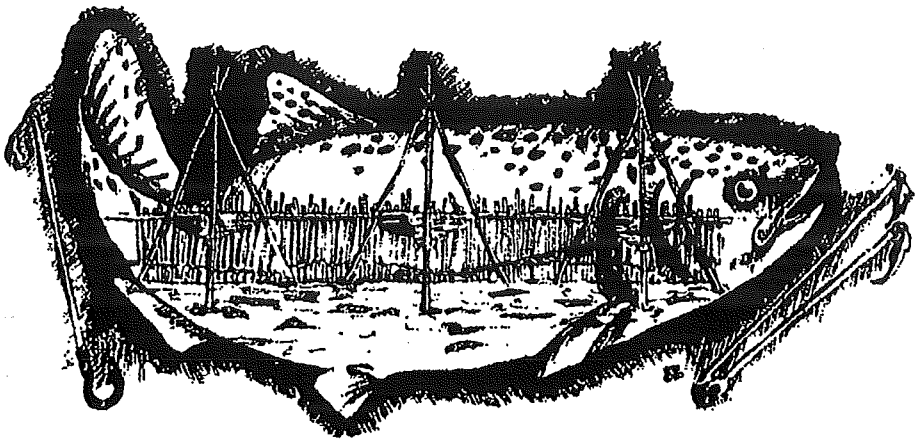
ENGINEERING DATA

OK.....

by Joan K. Thomas

Joan K. Thomas, Regional Manager

FOR COUNTY USE ONLY



MUCKLESHOOT INDIAN TRIBE
FISHERIES DEPARTMENT

39015 172ND AVENUE S.E. - AUBURN, WASHINGTON 98002 - (206) 939-3311

23 September 1985

Talked to Dug Brown 10/14/85 advised we had report written and in Typing Backlog we had no objection to use water per request Ron

Mr. Roy Bishop
Department of Ecology
4350 - 150th Avenue N.E.
Redmond, WA 98052

RE: S1-24508

Dear Mr. Bishop,

Exactly one year ago today our last permit notice appeared in the Auburn Globe News. With a one month public review period, you've had eleven (11) months to process our permit application.

On 29 November 1984, I spoke with Ms. Janet George of your office and was assured someone would process the application. On 28 May of this year you informed me our application was being held up along with Puyallup Indian Tribal permits by mistake, and you would now act on Muckleshoots' application.

I've talked to you since May on the permit and again I must express concern that we're about to enter another hatchery season and have planned our production around the water permit in question.

I hope to hear from you very soon.

RECEIVED
SEP 27 1985
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Sincerely,

Dennis Moore
Tribal Fisheries

cc: Sonny Bargala, Chairman
Walter Pacheco, Fisheries Manager

JOHN SPELLMAN
Governor

WILLIAM R. WILKERSON
Director

STATE OF WASHINGTON
DEPARTMENT OF FISHERIES
115 General Administration Building • Olympia, Washington 98504 • (206) 753-6600 • (SCAN) 234-6600

October 3, 1984

Department of Ecology
Northwest Regional Office
4350-150th Avenue
Redmond, Washington 98052

Gentlemen:

Water Right Application No. S-124508
Applied for by Muckleshoot Indian Tribe

The Department of Fisheries has reviewed the above-referenced Water Right Application and would like to submit the following recommendations.

No dam shall be allowed.

(Screening Criteria)

Screening: Same intake as existing right.

Thank you for the opportunity to review and comment.

Sincerely,

Rick A. Trosper, Regional Habitat Manager
Habitat Management Division

RAT:cp

Attachment

cc: Water Right File

RECEIVED
OCT 5 1984

SCREENING CRITERIA

The following technical provisions may apply to water diversions where fish screens are required. General fish screening criteria are applicable to rotary drum screens, traveling screens, belt screens and stationary flat plate screens.

Screens shall be designed, constructed and located as follows:

1. Structure placement--flowing waters (rivers and creeks):

   a. Where physically practical, the screen shall be constructed at the diversion entrance parallel to the flow with the screen face continuous with the adjacent bankline. The bankline shall be altered, if necessary, to prevent eddies and maintain parallel velocities past the screen; or
   b. Where site or hydraulic conditions make installation of fish screens at the diversion entrance physically impractical, screens may be located in the conduit or diversion canal at a more suitable location. Such screens shall be provided with bypass systems to efficiently collect juvenile fish and safely transport them back to the flowing water body. Such screens shall also be constructed at an angle not to exceed 45^{0} (degrees) from the approaching flow with the downstream end of the screen terminating at the bypass system entrance.

2. Structure placement--non-flowing waters (lakes and reservoirs): In non-flowing waters, diversion structures and associated fish screens will be constructed offshore to minimize fish contact.

3. Approach velocity (local velocity component perpendicular to the screen face) shall not exceed:

   a. 0.5 feet/second for chinook and coho salmon fry and all fingerling salmon (fingerling minimum length: 60 mm); or
   b. 0.2 feet/second for pink, chum and sockeye salmon and game fish fry;
   c. When screens are not readily accessible for cleaning, the screens shall be designed with an approach velocity of 0.05 feet/second.

4. Wetted screen area, excluding area blocked to flow by structural components, required at ordinary low water shall be calculated by dividing maximum diverted flow by the allowable approach velocity.

5. In flowing water, the velocity component parallel and adjacent to the screen face shall be at least two times the approach velocity. Screen faces shall be placed flush with adjacent screen bay piers or walls.

6. Screen openings shall not exceed 1/4 (0.25) inch measured horizontally. Where fish less than 60 mm in length are present the screen openings shall not exceed 1/8 (0.125) inch.

7. The long axis of slot or rectangular screen openings shall be vertical.

8. Screens may be constructed of any rigid material, woven or perforated, that physically excludes fish provided that structural integrity and cleaning effectiveness are not impaired.

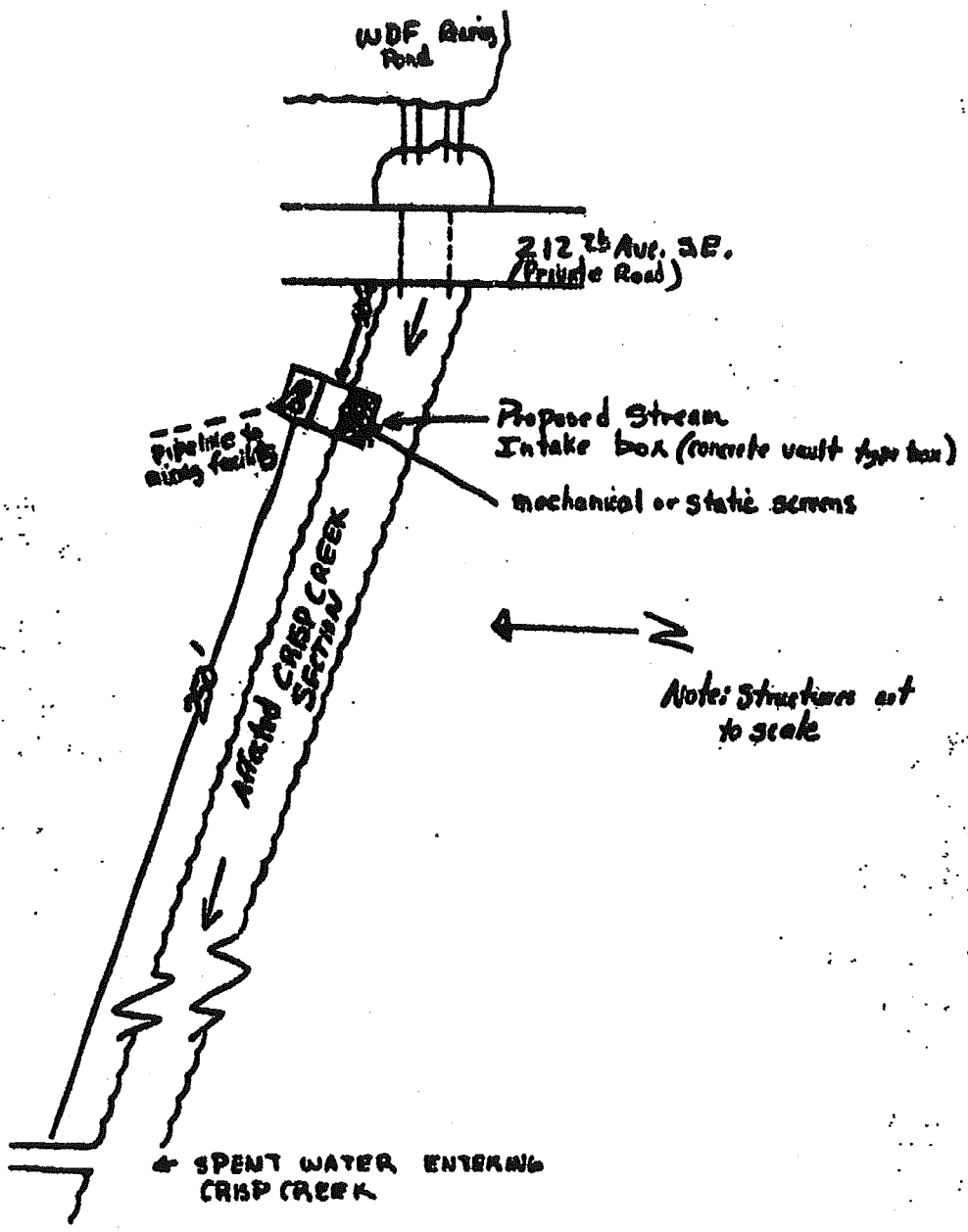
OCT 5 1984

Screening Criteria Continued

9. Screens shall be removed only by written permission of the departments.

10. Alterations or disturbance of banks or bank vegetation shall be held to a minimum, and all disturbed slopes shall be revegetated or otherwise protected from erosion.

Figure 3


WDF Rearing Pond
212 Th Ave. S.E. (Private Road)
Proposed Stream Intake box (concrete vault type box)
mechanical or static screens
Pipeline to mining facility
250'
Affected CRISP CREEK SECTION
N
Note: Structures not to scale
SPENT WATER ENTERING CRISP CREEK

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471725122033601

General Location Details:

Unique Well ID: N_471725122033601
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: NE/SE
Local Number: 21N/06E-20J02
City: King County Zipcode: 98092
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Well Well Depth: 12 Feet
Surface Elevation: 162.3 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: Not Given

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

20-R-4

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471719122033801

General Location Details:

Unique Well ID: N_471719122033801
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SE/SE
Local Number: 21N/06E-20R02
City: King County Zipcode: 98092
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Well Well Depth: 11 Feet
Surface Elevation: 164.8 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: "not given"

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

20-R-5

21/06 - 20 R

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name D.E. Sears Address 21019 SE Green Valley Rd Auburn

(2) LOCATION OF WELL: County King Subdivided SE ¼ S.E. ¼ Sec 20 T. 21 N., R 6 E W.M.

Bearing and distance from section or subdivision corner Parcel A Govt Lot 1, 29-21-6E - Brdr 20-21-6E

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches.
Drilled 23 ft. Depth of completed well 23 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 8 " Diam. from 0 ft. to 23 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 11 ft. below top of well Date 10/2/79
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 20 gal./min. with 6 ft. drawdown after 3½ hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown sand & gravel	3	13
Brown hardpan	13	18
Brown water sand & gravel	18	23
Gray clay	23	—

RECEIVED
OCT 13 1979
DEPT. OF ECOLOGY

Work started 10/2, 19 79 Completed 10/2, 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 10/2, 19 79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

20-R

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

G. P. No. 125—3-31—75C. 27753.

CERTIFICATE RECORD NO. 10, PAGE NO. 4923

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF SURFACE WATER RIGHT

(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.)

This is to certify that ARNOLD H. JENSEN

of Auburn, State of Washington, has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the waters of Green River, a tributary of White River, with point or points of diversion within the SE¼ of SW¼ of Sec. 29, Twp. 21 N., R. 6 E., W. M., under and subject to provisions contained in Appropriation Permit No. 5591 issued by the State Supervisor of Water Resources, and that said right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume 10, at Page 4923, on the 27th day of October, 19 52 that the priority date of the right hereby confirmed is November 30, 1945; that the amount of water under the right hereby confirmed, for the following purposes is limited to an amount actually beneficially used and shall not exceed

0.10 of a cubic per second for the purpose of the irrigation of 10 acres.

A description of the lands under such right to which the water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

SW¼ of SE¼ of Sec. 29, Twp. 21 N., Rge. 6 E.W.M.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

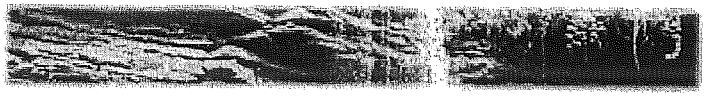
WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 27th day of October, 19 52.

Chas. Luetkemeyer
State Supervisor of Water Resources.

ENGINEERING DATA
O.K. [illegible]

20-R 7

King County | Home | News | Services | Comments | Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471720122035101

General Location Details:

Unique Well ID: S_471720122035101
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: SW/SE
Local Number: 21N/06E-20Q03
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 11 Feet
Surface Elevation: 162.4 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: Higgins

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
12/31/1979	23:59	7.2	155.2	Electric tape
3/5/1980	23:59	6.55	155.85	Steel tape
4/2/1980	23:59	7.61	154.79	Steel tape
5/12/1980	23:59	7.71	154.69	Steel tape
3/12/1981	23:59	7.93	154.47	Steel tape
4/16/1981	23:59	7.72	154.68	Steel tape
5/12/1981	23:59	7.57	154.83	Steel tape
6/24/1981	23:59	7.14	155.26	Steel tape
6/29/1981	23:59	7.51	154.89	Steel tape
7/14/1981	23:59	8.37	154.03	Steel tape

Water Quality Data:

None available

20-R-8

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

DEPARTMENT OF ECOLOGY
OCT 17 73 054903
CASH OTHER / NONE

1. NAME DIAMOND SPRINGS WATER ASSOC.
ADDRESS 34601 215TH AVE. S.E.
AUBURN, WASH. ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: SURFACE WATER (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS

B. IF SURFACE WATER, THE SOURCE IS SPRING

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 45 GPM PRESENTLY USED 45 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED ALL PRESENTLY USED ALL (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED — PRESENTLY IRRIGATED —

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: CONTINUOUSLY

4. DATE OF FIRST PUTTING WATER TO USE: MONTH YEAR 1915

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 483 E FEET EAST AND 200 FEET SOUTH FROM THE NW CORNER OF SECTION 21
BEING WITHIN NW 1/4 & SW 1/4 OF SECTION 21 T 21 N., R. 6 (E.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
THE WEST HALF & THE EAST HALF OF THE N 1/4 OF SECT. 21 T 21 N R 6 E OF WM

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: COMMUNITY WATER SYSTEM - DOMESTIC SUPPLY

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: GRANDFATHER RIGHTS APPROPRIATION & REPARIAN

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED: THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
[illegible]043364
DIRECTOR, DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF
X DIAMOND SPRINGS WATER ASSOC.
DATE 10-12-73
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW
ROBERT A SCHMIDT
34601 215TH AVE. S.E. AUBURN 98002
☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

21-M-1

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpA_19215_01

General Location Details:

Unique Well ID: GrpA_19215_01
Parcel ID Number: 2121069024
Washington Dept. of Ecology Well Tag: N/A
Critical Acquifer Recharge Area Code: 1
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 21 QS: NW/SW
Local Number: 21N/06E-21M
City: King County Zipcode: 98092
Data Source: King County DNRP Who are these data sources?
Location Type: Spring Well Depth: 0 Feet
Surface Elevation: 365.93 Feet What is surface elevation?
Location Accuracy: GPS What are these location accuracies?

Name: Diamond Springs Water Association

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
12/17/1990	23:59	WA_DoH_WQ_testing	Normal Environmental	3

Analyte Name	Analyte Type	Detected	Result	Qualifiers
ARSENIC	Metal	No	0.01 mg/L MDL:	<
CHLORIDE	Conv	No	5 mg/L MDL:	<
NITRATE-N	Conv		1.3 mg/L MDL:	

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
9/21/1993	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte	Detected	Result	Qualifiers

21-M-1

		Type		
NITRATE-N		Conv	1.4 mg/L MDL:	

12/7/1993 23:59 WA_DoH_WQ_testing Normal Environmental 3

Analyte Name	Analyte Type	Detected	Result	Qualifiers
ARSENIC	Metal	No	0.01 mg/L MDL:	<
CHLORIDE	Conv		4 mg/L MDL:	
NITRATE-N	Conv		1.8 mg/L MDL:	

6/16/1994 23:59 WA_DoH_WQ_testing Normal Environmental 1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.6 mg/L MDL:	

4/26/1995 23:59 WA_DoH_WQ_testing Normal Environmental 1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.8 mg/L MDL:	

4/22/1996 23:59 WA_DoH_WQ_testing Normal Environmental 3

Analyte Name	Analyte Type	Detected	Result	Qualifiers
ARSENIC	Metal	No	0.01 mg/L MDL:	<
CHLORIDE	Conv		3 mg/L MDL:	
NITRATE-N	Conv		1.5 mg/L MDL:	

4/22/1997 23:59 WA_DoH_WQ_testing Normal Environmental 1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.5 mg/L MDL:	

6/15/1998 23:59 WA_DoH_WQ_testing Normal Environmental 1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.3 mg/L MDL:	

8/4/1999 23:59 WA_DoH_WQ_testing Normal Environmental 4

Analyte Name	Analyte	Detected	Result	Qualifiers

Analyte Name	Analyte Type	Detected	Result	Qualifiers
ARSENIC	Metal	No	0.01 mg/L MDL:	<
CHLORIDE	Conv		2 mg/L MDL:	
NITRATE + NITRITE AS N	Conv		1.3 mg/L MDL:	
NITRATE-N	Conv		1.3 mg/L MDL:	

5/30/2000	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.3 mg/L MDL:	

5/8/2001	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.3 mg/L MDL:	

5/14/2002	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.4 mg/L MDL:	

8/13/2002	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
ARSENIC	Metal	No	0.002 mg/L MDL:	<

5/13/2003	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.4 mg/L MDL:	

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical

Related Information:

Water and Land Resources Topics

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
OCT 17 73 054904
CASH ___ OTHER / NONE

1. NAME DIAMOND SPRINGS WATER ASSOC.
ADDRESS 34601 215TH AVE SE.
AUBURN, WASH. ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: SURFACE WATER (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS ___

B. IF SURFACE WATER, THE SOURCE IS SPRING

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 60 GPM. PRESENTLY USED 60 GPM. (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED ALL PRESENTLY USED ALL (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED — PRESENTLY IRRIGATED —

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: CONTINUOUSLY

4. DATE OF FIRST PUTTING WATER TO USE: MONTH ___ YEAR 1915

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL 50 FEET EAST AND 250 FEET SOUTH FROM THE NORTH WEST CORNER OF SECTION 21
BEING WITHIN NW¼ SW¼ OF SECTION 21 T. 21 N., R. 6 (E.[illegible]) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF ___
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
THE WEST HALF & THE EAST HALF OF THE SW¼ OF SECT. 21 T21N. R6E. WM.

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED COMMUNITY WATER SYSTEM-DOMESTIC SUPPLY

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: GRANDFATHER RIGHTS APPROPRIATION & REPARIAN.

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED: THIS HAS BEEN ASSIGNED
WATER RIGHT CLAIM REGISTRY NO.
[illegible]
DIRECTOR, DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF
X DIAMOND SPRINGS WATER ASSOC.
DATE 10-12-73
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW
ROBERT A. SCHMIDT
34601 215TH AVE SE. AUBURN
☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE 98002

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
[illegible]

ORIGINAL DWR

21-M-2

King County Home News Services Comments Search

Natural Resources and Parks » Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpA_19215_02

General Location Details:

Name: Diamond Springs Water Association

Unique Well ID: GrpA_19215_02
Parcel ID Number: 2121069030
Washington Dept. of Ecology Well Tag: N/A
Critical Acquifer Recharge Area Code: 1
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 21 QS: NW/SW
Local Number: 21N/06E-21M
City: King County Zipcode: 98092
Data Source: King County DNRP Who are these data sources?
Location Type: Spring Well Depth: 0 Feet
Surface Elevation: 335.42 Feet What is surface elevation?
Location Accuracy: GPS What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
12/17/1990	23:59	WA_DoH_WQ_testing	Normal Environmental	3

Analyte Name	Analyte Type	Detected	Result	Qualifiers
ARSENIC	Metal	No	0.01 mg/L MDL:	<
CHLORIDE	Conv		5 mg/L MDL:	
NITRATE-N	Conv		1.2 mg/L MDL:	

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
12/7/1993	23:59	WA_DoH_WQ_testing	Normal Environmental	3

Analyte Name	Analyte	Detected	Result	Qualifiers

R1-M-2

	Type			
ARSENIC	Metal	No	0.01 mg/L MDL:	<
CHLORIDE	Conv		4 mg/L MDL:	
NITRATE-N	Conv		2.3 mg/L MDL:	

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land Resources Web site, please contact Fred Bentler, webmaster.

Department of Natural Resources and Parks
Water and Land Resources Division

Related Information:

Water and Land Resources Topics

Groundwater Management

Updated: 03/13/2008 08:46:46

Links to external sites do not constitute endorsements by King County.
By visiting this and other King County web pages,
you expressly agree to be bound by terms and conditions of the site.
The details.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 2
Updated: 03/20/2007
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Annual Update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
19215 P	DIAMOND SPRINGS WATER ASSOCIATION	KING	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS

MIKE TALL [PRESIDENT]
PO BOX 694
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 001524

DIAMOND SPRING WATER ASSOC
NEED PRIMARY CONTACT O TITLE: OWNER ORG - PRI
PO BOX 694
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (253) 261-4532		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone: (360) 886-8177		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [X] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [X] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [X] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

35,000

15	16	17	18											19			20	21						22	23	24			
	SOURCE NAME	INTERTIE	SOURCE CATEGORY											USE				TREATMENT						DEPTH		SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	DIAMOND SPRINGS # 1					X							X				X							0	NW SW	21	21N	06E
02	DIAMOND SPRINGS #2					X									X		X							0	NW SW	21	21N	06E

21-M-1.2

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
19215 P	DIAMOND SPRINGS WATER ASSOCIATION	KING	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	43	50
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	43		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		43	50

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 138

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
May 27, 1980	G1-23628	G1-23628P	G1-23628C

NAME
DIAMOND SPRINGS WATER ASSOCIATION

ADDRESS (STREET) c/o Victor R. Trott, 34817 - 215th S. E., (CITY) Auburn (STATE) Washington (ZIP CODE) 98002

This is to certify that the herein-named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Infiltration Trench

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	40	24.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Community domestic supply - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION/WITHDRAWAL
600 feet east and 100 feet south of W¼ corner Section 21

LOCATED WITHIN SMALLEST LEGAL SUBDIVISION	SECTION	TOWNSHIP N.	RANGE E. OR W. W.M.	W.R.I.A.	COUNTY
NW¼SW¼	21	21	6 E	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Legal description attached.

ECY 040-17 (Rev 4-77) (SEE REVERSE SIDE) CERTIFICATE

21-M-3

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That DIAMOND SPRINGS WATER ASSOCIATION

of AUBURN, WASHINGTON on MAY 27, 1980 under

Application No. G1-23628 filed for permit to appropriate public waters, subject to existing rights,

from INFILTRATION TRENCH

in the amount of 60 GALLONS PER MINUTE

each year, for COMMUNITY DOMESTIC SUPPLY CONTINUOUSLY

The source of the proposed appropriation is located within NW 1/4 SW 1/4

of Section 21 Township 21 N., Range 6E W.M., in KING County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, at the address shown below, within thirty (30) days from

Department of Ecology
Northwest Regional Office
4350 - 150 Ave. N. E.
Redmond, Washington 98052

(Last date of publication to be entered by publisher)

NOTICE

Commencing at the northwest corner of said subdivision; thence south 88°39'56" east on north line thereof 483.8 feet; thence south 19°59' east 173.76 feet to the true point of beginning of this description; thence north 88°39'56" west 15.0 feet; thence south 13°35' east 80.0 feet; thence south 39°17' east 68.70 feet; thence south 5°19' east 55 feet, more or less, to the westerly edge of a 20-foot easement which is included in and made a part of this description; thence northerly along the west line of said easement to a point which bears south 88°39'56" east 100.6 feet from the point of beginning; thence north 88°39'56" west to the true point of beginning.

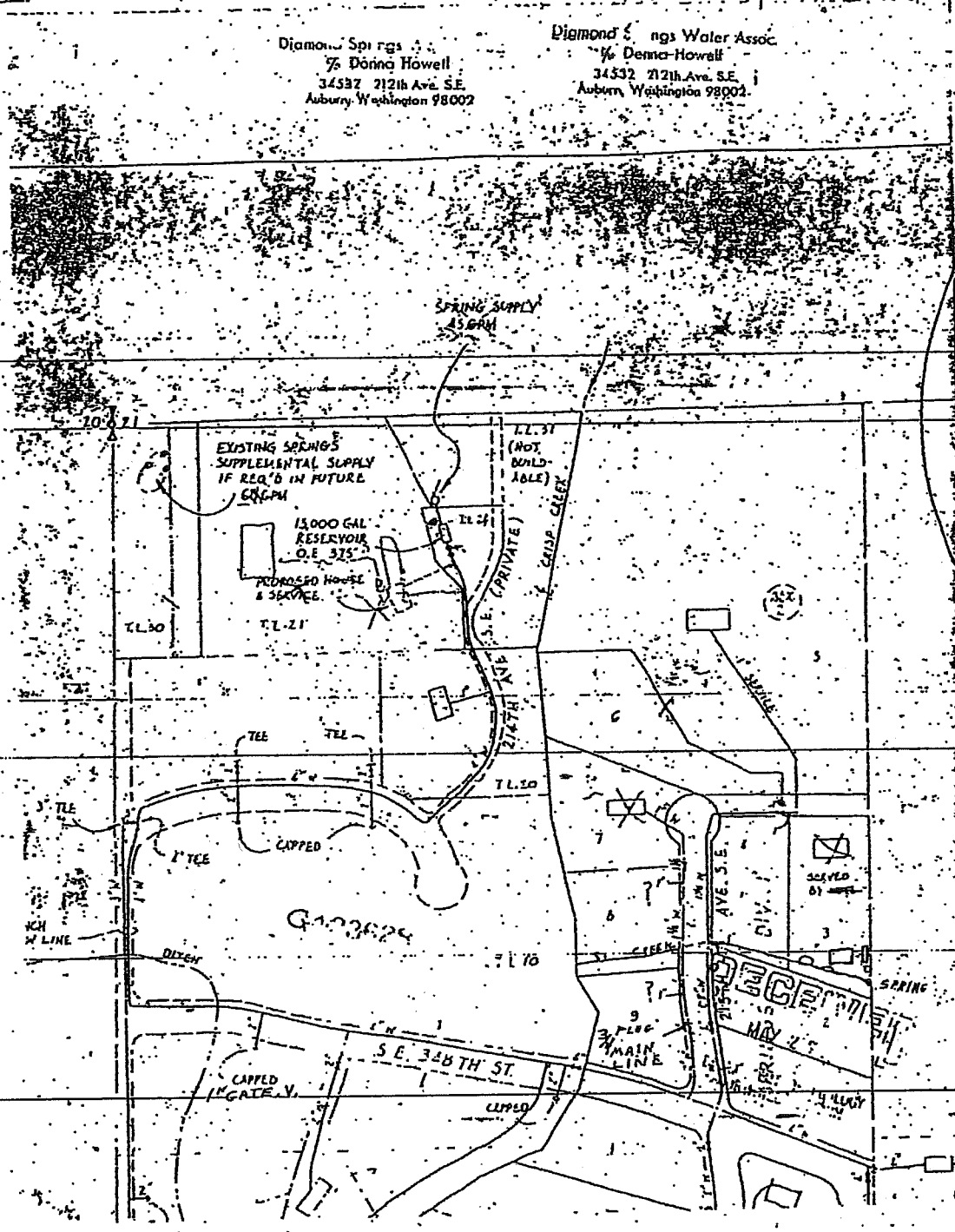
ALSO, the following strip of land 100 feet in width described as follows: Beginning at the northwest corner of the northwest quarter of the southwest quarter, section 21, township 21 north, range 6 east, W.M.; thence south along the west line of said subdivision 419.59 feet; thence south 88°39'56" east 100 feet; thence north parallel with the west line of said subdivision 419.59 feet, to the north line of said subdivision, thence north 88°39'56" west along the north line of said subdivision to the point of beginning.

TOGETHER with an easement for a roadway and to install and maintain water lines over and across a strip of land thirty feet (30 feet) in width lying along the west line of the northwest quarter of the southwest quarter of section 21, township 21 north, range 6 east W.M., described as follows: Beginning on the west line of said subidision 419.59 feet southerly from the northwest corner of said subdivision; thence southerly along said westerly line 328.15 feet, more or less, to the north line of an existing easement for a roadway; thence east 30 feet; thence northerly parallel with the west line of said subdivision to a point which is south 88°39'56" east 30 feet from the true point of beginning; thence west to the true point of beginning.

Diamond Springs Water Assoc.

Diamond Springs Water Assoc.
% Donna Howell
34537 212th Ave. S.E.
Auburn, Washington 98002

RECEIVED
MAY 27


Diamond Springs
% Donna Howell
34532 212th Ave. S.E.
Auburn, Washington 98002
Diamond Springs Water Assoc.
% Donna Howell
34532 212th Ave. S.E.
Auburn, Washington 98002
SPRING SUPPLY
45 GPM
EXISTING SPRINGS
SUPPLEMENTAL SUPPLY
IF REQ'D IN FUTURE
15,000 GAL
RESERVOIR
O.E. 375'
PROPOSED HOUSE
& SERVICE
T.L. 31
(NOT
BUILD-
ABLE)
CRISP CREEK
214TH AVE. S.E. (PRIVATE)
T.L. 30
T.L. 21
T.L. 20
T.L. 10
TEE
CAPPED
DITCH
S.E. 348TH ST.
CAPPED
GATE V.
MAIN
LINE
AVE. S.E.
SERVED
BY
SPRING
MAY 2

COMPLETE THIS FORM ONLY IF THIS APPLICATION INCLUDES IRRIGATION AS A USE.

In order to implement the provisions of Initiative Measure Number 59, the Family Farm Water Act which was passed by the voters on November 3, 1977, we must ask the following questions:

Does the total number of acres in which you have controlling interest in the State of Washington exceed 2000 acres for the following three categories:

1. Lands that are being irrigated under water rights acquired after December 8, 1977.
2. Lands that may be irrigated under applications now on file with the Department of Ecology.
3. Lands that may be irrigated under this application.

YES ☐

NO ☑

Please sign and return Diamond Spring Water Assn.
(signature of landowner)

c/o Norma Howell
Sec. Treas.

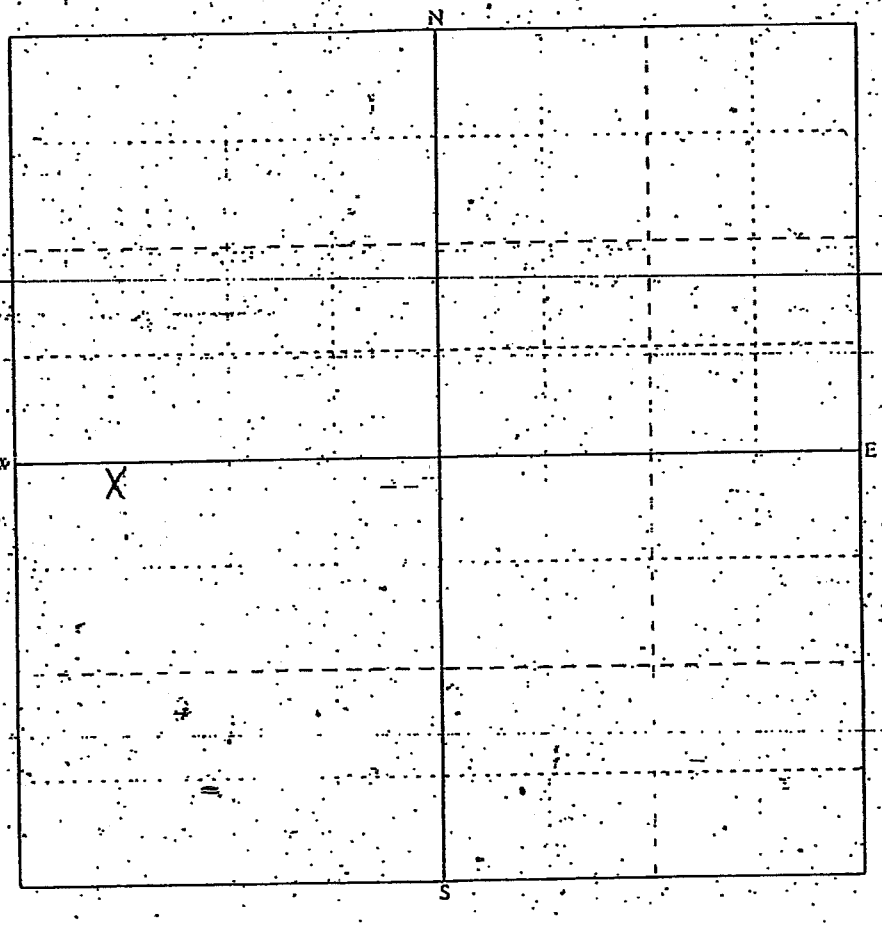
5-17-86
(date)

RECEIVED
MAY 2 [illegible]

ATTACHMENT TO APPLICATIONS

SECTION MAP

Sec. ..... Twp. ..... N. R. .....



Scale 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.

Indicate traveling directions from nearest town in space below

RECEIVED

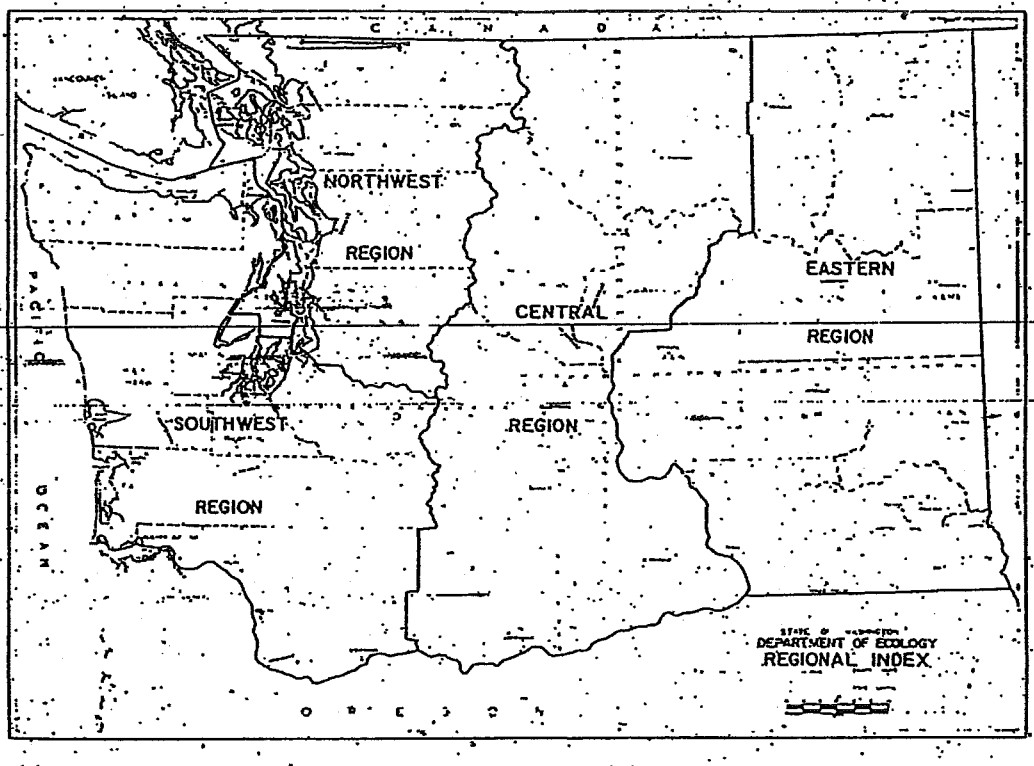
MAY

Detach here

Fold along scale

FEET 0 400 800 1,200 1,600 2,000 2,400 2,800 3,200 3,600 4,000 4,400 4,800 5,200

Detach this scale at the perforation, fold excess paper under or cut off excess by cutting along the scale line. This scale corresponds to the SECTION MAP above. You can read feet directly from this scale to outline property and locate points of diversion or withdrawal on the SECTION MAP. Enclose this map along with the application and $10.00 examination fee.



Your water right application will be processed by the Regional Office of the Department of Ecology having jurisdiction in the area in which your water works are located. Please submit your completed application form, maps, sketches and $40.00 examination fee to the appropriate Regional Office.

Northwest Regional Office
4350 150th Avenue N.E.
Redmond, Washington 98052
Tel. (206) 885-1900

Central Regional Office
2802 Main Street
Union Gap, Washington 98903
Tel. (509) 248-0393

Southwest Regional Office
7272 Cleanwater Lane
Olympia, Washington 98504
Tel. (206) 753-2970

Eastern Regional Office
N. 103 East Indiana Avenue
Spokane, Washington 99207
Tel. (509) 456-2926

The appropriate Regional Office will be happy to answer any further questions you may have.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
OCT 17 73 054903
CASH ___ OTHER ___ NONE ___

1. NAME ROBERT A SCHMIDT
ADDRESS 34601 215TH AVE SE
AUBURN, WASH. ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED SURFACE WATER (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS ___

B. IF SURFACE WATER, THE SOURCE IS CREEK

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 400 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 150 GPM.

B. ANNUAL QUANTITY CLAIMED 10 ACRE FT. (ACRE FEET PER YEAR) PRESENTLY USED 10 ACRE FT.

C. IF FOR IRRIGATION, ACRES CLAIMED 5 ACRS PRESENTLY IRRIGATED 5 ACRES

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: MAY THRU AUGUST

4. DATE OF FIRST PUTTING WATER TO USE: MONTH ___ YEAR 1915

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL 500 FEET EAST AND 550 FEET SOUTH FROM THE NORTHWEST CORNER OF SECTION 21 BEING WITHIN NW 1/4 SW 1/4 OF SECTION 21 T 21 N. R. 6 E (E ~~W~~) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 7 BLOCK 2 OF DIAMOND SPRINGS DIVISION #1 (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
WITHIN THE WEST HALF & THE EAST HALF OF SECT. 21 T 21 N R 6 E WM.

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: IRRIGATION

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: GRANDFATHER RIGHTS APPROPRIATION & REPARIAN

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

[illegible]

DIRECTOR, DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

Robert A Schmidt

DATE 10-12-73

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO DEPARTMENT OF ECOLOGY WATER RIGHT CLAIMS REGISTRATION

ORIGINAL DWR

21-M-4

DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
SEP 10 [illegible] 9981
C.F.I. ___ OTHER ___ NONE ___

1. NAME T. G. Spaight
ADDRESS P.O. Box 666
Auburn Wn ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: SURFACE (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS ___

B. IF SURFACE WATER, THE SOURCE IS SPAIGHT CRK. (CRISP CRK.)

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED ~~12 AF POND~~ ALL OF CREEK WATER PRESENTLY USED ___ (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 50 AF/YR PRESENTLY USED ___ (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED 15 PRESENTLY IRRIGATED ___

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: CONTINUOUSLY

4. DATE OF FIRST PUTTING WATER TO USE: MONTH ___ YEAR APPROX. 1911

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: See Attached. ___ FEET ___ AND ___ FEET ___ FROM THE ___ CORNER OF SECTION ___ BEING WITHIN ___ OF SECTION 21 T. 21 N., R. 6E (E.OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF ___ (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: See Copy.

SW 1/4 SW 1/4
S 21
T 21
R 6 E

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: PONDS - FISH PROP. & IRRIG. 15 ACRES

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: VESTED RIGHT GRANDFATHER

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED: THIS HAS BEEN ASSIGNED
WATER RIGHT CLAIM REGISTRY NO.

[redacted]

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X T. G. Spaight

DATE 9/6/73

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

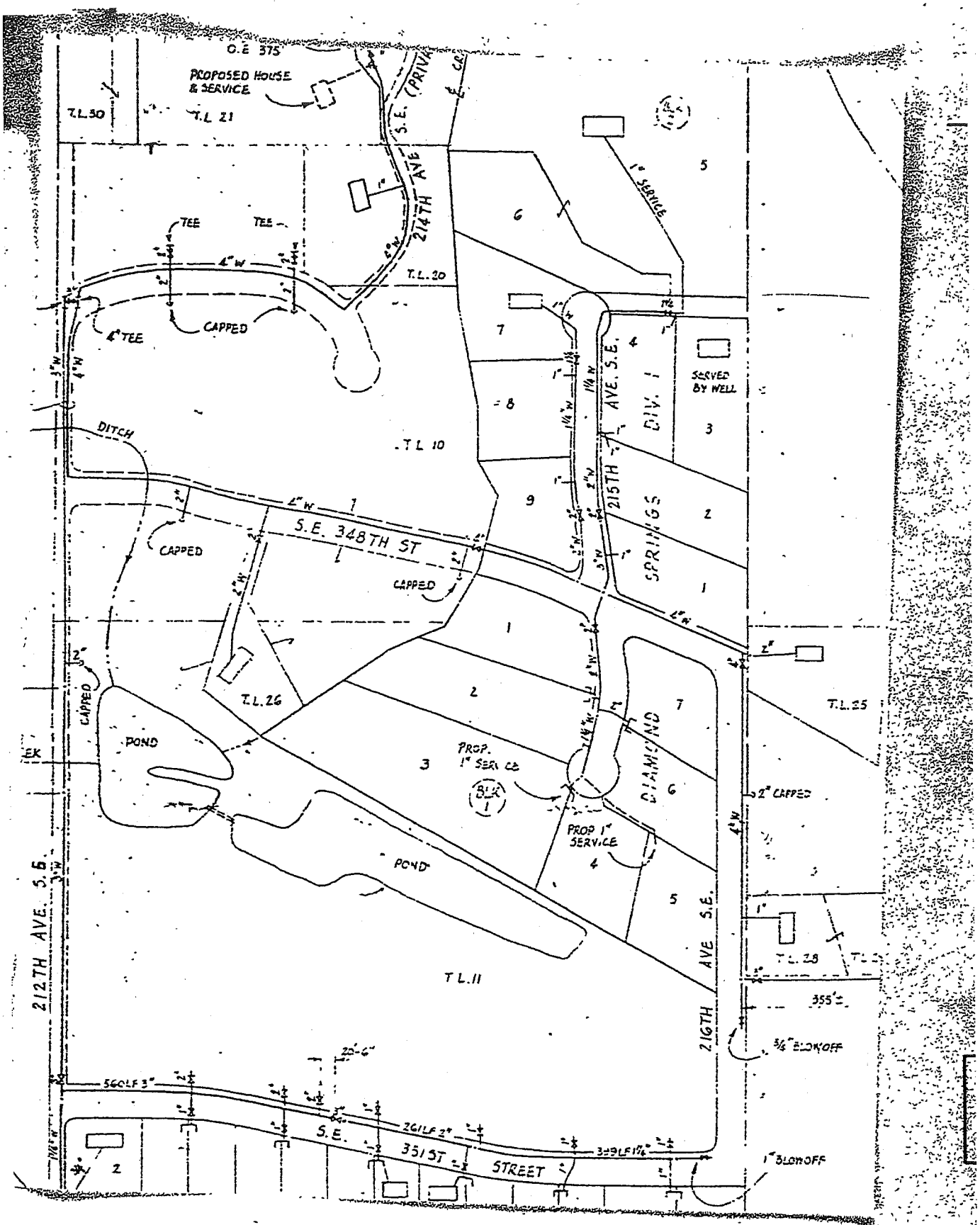
☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $[illegible] MUST ACCOMPANY THIS WATER RIGHT CLAIM

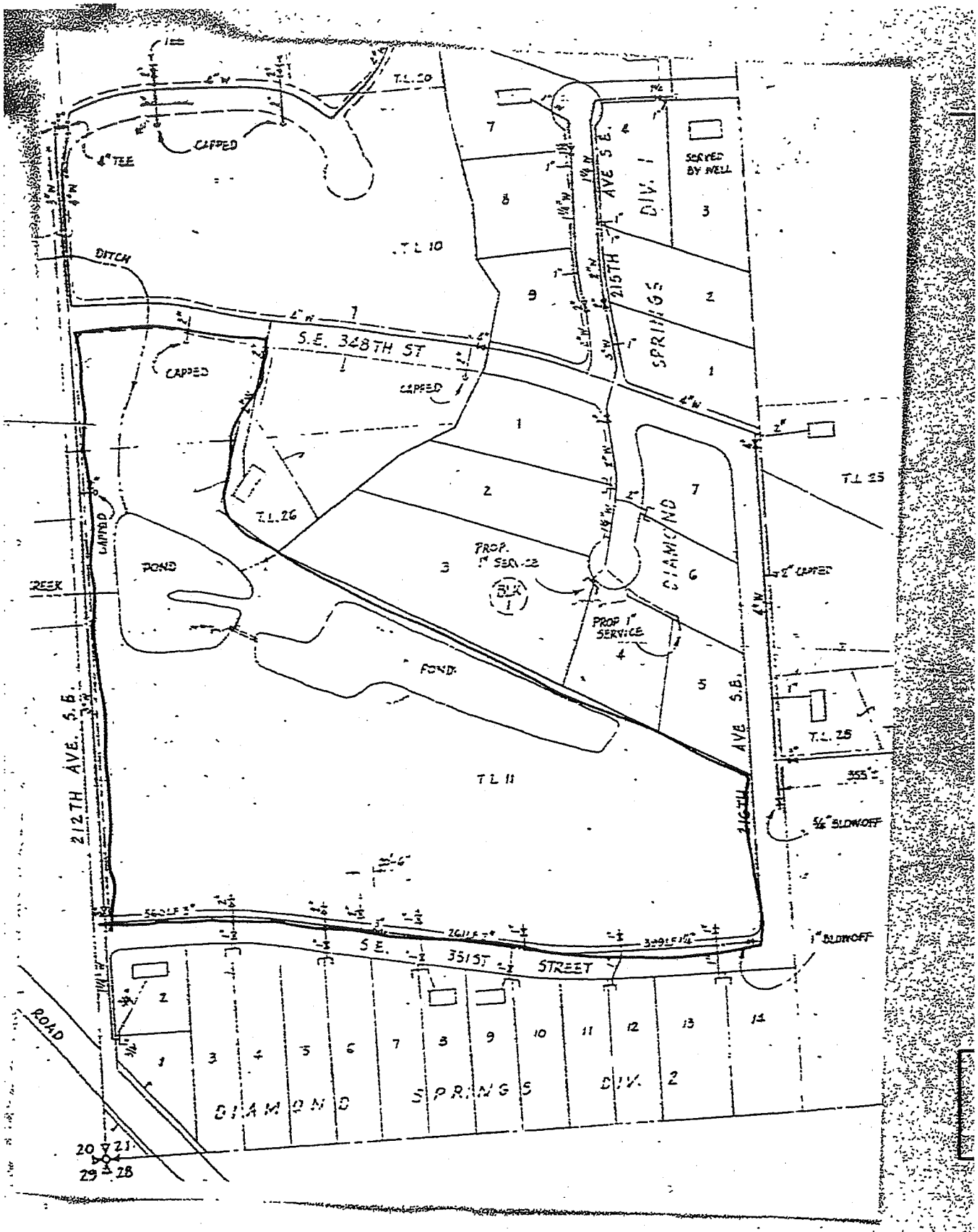
RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

21-M-5



O.E 375
PROPOSED HOUSE & SERVICE
T.L.30
T.L 21
214TH AVE S.E. (PRIVA
TEE
TEE
4" W
T.L.20
4" TEE
CAPPED
DITCH
T.L 10
S.E. 348TH ST
CAPPED
CAPPED
CAPPED
T.L.26
POND
PROP. 1" SERVICE
BLK 1
PROP 1" SERVICE
POND
T.L.11
212TH AVE. S.E.
216TH AVE S.E.
215TH AVE. S.E.
DIV. 1
SPRINGS
DIAMOND
1" SERVICE
SERVED BY WELL
T.L.25
2" CAPPED
T.L.28
355'±
3/4" BLOWOFF
1" BLOWOFF
560LF 3"
261LF 2"
S.E. 351ST STREET


T.L. 20
CAPPED
4" TEE
SERVED BY WELL
DIV. 1
215TH AVE S.E.
SPRINGS
DITCH
T.L. 10
S.E. 328TH ST
CAPPED
CAPPED
T.L. 25
T.L. 26
DIAMOND
PROP. 1" SERVICE
BLK 1
POND
CREEK
CAPPED
2" CAPPED
PROP 1" SERVICE
POND
212TH AVE. S.E.
T.L. 11
346TH AVE S.E.
T.L. 25
355'
5/8" BLOWOFF
1" BLOWOFF
S.E. 351ST STREET
ROAD
DIAMOND SPRINGS DIV. 2
20
21
29
28

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471727122033401

General Location Details:

Unique Well ID: S_471727122033401
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 1
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 20 QS: NE/SE
Local Number: 21N/06E-20J04
City: King County
Data Source: Historic - unknown source
Location Type: Other
Surface Elevation: 165.62 Feet
Location Accuracy: QTRQTRSEC

Name: USGS

Zipcode: 98092
Who are these data sources?
Well Depth: 12 Feet
What is surface elevation?
What are these location accuracies?

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
7/2/1981	23:59	4.4	161.22	Steel tape

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

- No log but IMap indicates there should be.
- Could not find one in DOE well log database or WSB-28

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact

Related Information:

Water and Land Resources Topics

21-M-6

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471734122032201

General Location Details:

Unique Well ID: N_471734122032201
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 1
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 21 QS: NW/SW
Local Number: 21N/06E-21M02S
City: King County Zipcode: 98092
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Spring Well Depth:
Surface Elevation: 300 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: "not given"

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

21-M-8

Parcel 4026

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No. ....

348th?

(1) OWNER: Name TOM SPAIGHT Address 21315 S.E. 34th, Auburn, WA 98002

(2) LOCATION OF WELL: County KING — SW ¼ SW ¼ Sec. 21 T. 21 N., R. 6 E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 100 ft. Depth of completed well 100 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 80 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☒ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal .....
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level ..... ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
sand, brown dry	0	15
silty sand, brown	15	16
sand & gravel, brown, damp	16	17
sand, occ. gravel, brown dry	17	18
silty sand, brown dry	18	23
sand & gravel, blue, damp, silty	23	42
clay, color changes from blue to yellow to grey	42	100

DRY HOLE-------NO WATER
CAP WELDED ON.

WILL PROBABLY GO BACK AT LATER DATE.

Work started 5/20/80, 19..... Completed 5/20/80, 19.....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NORTHWEST PUMP & DRILLING COMPANY
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn, WA

[Signed] R. B. DeCamp
(Well Driller)

License No. 0097 Date 5/21/80, 19.....

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

21-N-1

The Department of Ecology does NOT Warr[illegible] [illegible]y the Data and/or the Information on this Well P[illegible]ort.

21/6 - 21M

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Thomas G. Speight Address 21315 SE 348th ST Auburn 98002

(2) LOCATION OF WELL: County King NW¼ SW¼ Sec. 21 T 21 N., R 06 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 60 ft. Depth of completed well 20 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 20 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☒ ." Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 8 ft. below top of well Date 1/12/81
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 20 gal./min. with 5 ft. drawdown after 3 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface brown sandy loam	0	8
Brown hardpan	8	18
Gray water sand & gravel	18	20
Gray clay	20	60

Work started 1/12 19 81 Completed 1/12 19 81

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson
(Well Driller)

License No. 0233 Date 1/12/81 19 81

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

21-N-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

[X] *Surface Water* (issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

[ ] *Ground Water* (issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

CERTIFICATE NUMBER	PERMIT NUMBER	APPLICATION NUMBER	PRIORITY DATE
S1-22503C	S1-22503P	S1-22503	May 29, 1975

NAME
STATE OF WASHINGTON, DEPARTMENT OF FISHERIES

ADDRESS (STREET) 115 General Administration Building (CITY) Olympia, (STATE) Washington (ZIP CODE) 98504

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and spectfically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Crisp (Spaight) Creek

TRIBUTARY OF (IF SURFACE WATERS)
Green River

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
8.0		

QUANTITY, TYPE OF USE, PERIOD OF USE
Fish Propagation - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION/WITHDRAWAL
400 feet East and 1050 feet North of the Southwest corner of Sec. 21

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SW 1/4 SW 1/4	21	21	6 E.	09	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY WATER TO BE USED ON

See attached legal description.

21-N-3

PROVISIONS

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Olympia, Washington, this 30th *day of* September, *19* 76.

JOHN A. BIGGS, *Director*
Department of Ecology

ENGINEERING DATA
OR.....

by Robert K. McCormick
ROBERT K. McCORMICK, Regional Manager

FOR COUNTY USE ONLY

CRISP (SPAIGHT) CREEK

That portion of the Southwest quarter of the Southwest quarter of Section 21, Township 21 North, Range 6 East, W.M., described as follows:

Beginning at a point which lies North 455 feet, more or less, from the Southwest corner of Section 21, Township 21 North, Range 6 East, W.M., which point is the intersection of a 60 foot road (SE 351st Street) and the West section line of Section 21, Township 21 North, Range 6 East, W.M. Thence along the center line of a 60 foot road (SE 351st Street) right of way East a distance of 200 feet; thence on a curve to the right with a radius of 1092.87 feet a distance of 199.44 feet; thence South 79°30' East a distance of 429.39 feet; thence on a curve to the left with a radius of 1025.25 feet a distance of 199.37 feet; thence North 89°21'30" East a distance of 293.44 feet to intersection with center line of 216th Avenue SE; thence North 0°24'43" West along said center line of 216th Avenue SE, a distance of 314.57 feet; thence North 62°04'10" West along the south boundary of lots 5, 4, and 3 in Block 1, Diamond Springs Division No. 1, a distance of 1040.66 feet to the Southwest corner of said lot 3; thence North 54°51'00" West a distance of 149.10 feet; thence North 71°31'00" West, more or less, a distance of 284.1 feet, more or less, to the Northwest corner of Southwest quarter of the Southwest quarter of Section 21, Township 21 North, Range 6 East, W.M.; thence South along said section line, a distance of 867.53 feet to the point of beginning, excepting therefrom the county roads.

S 1-22803

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That STATE OF WASHINGTON, DEPARTMENT OF FISHERIES

of Olympia, Washington on May 29, 1975 under

Application No. S1-22503 filed for permit to appropriate public waters, subject to existing rights,

from Crisp (Spaight) Creek tributary of Green River

in the amount of 8.0 cubic feet per second

each year, for fish propagation - continuously

The source of the proposed appropriation is located within SW¼SW¼

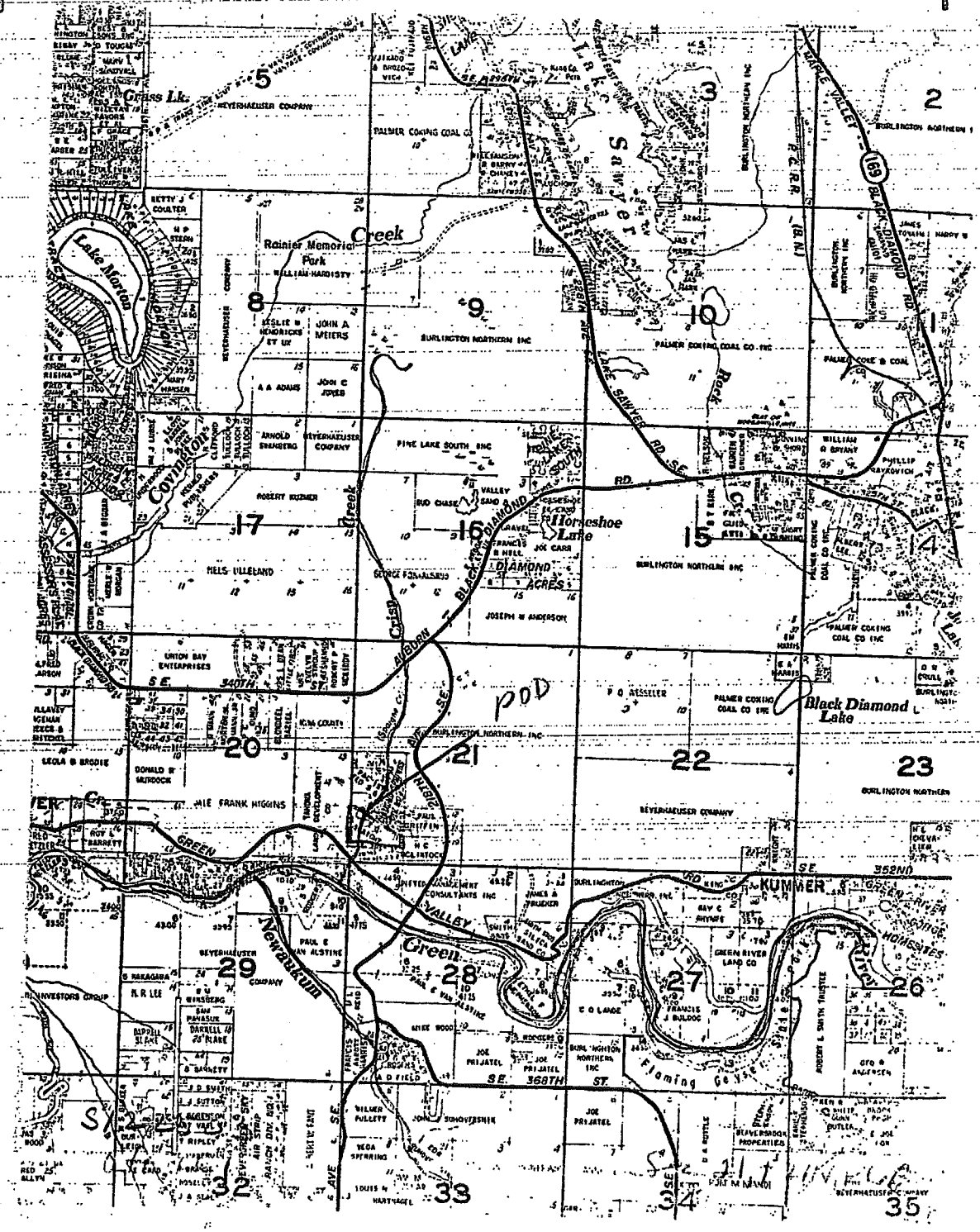
of Section 21, Township 21 N., Range 6 E W.M., in King County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, Northwest Regional Office, ~~15345 N.E. 36th~~ Redmond, WA. 98052

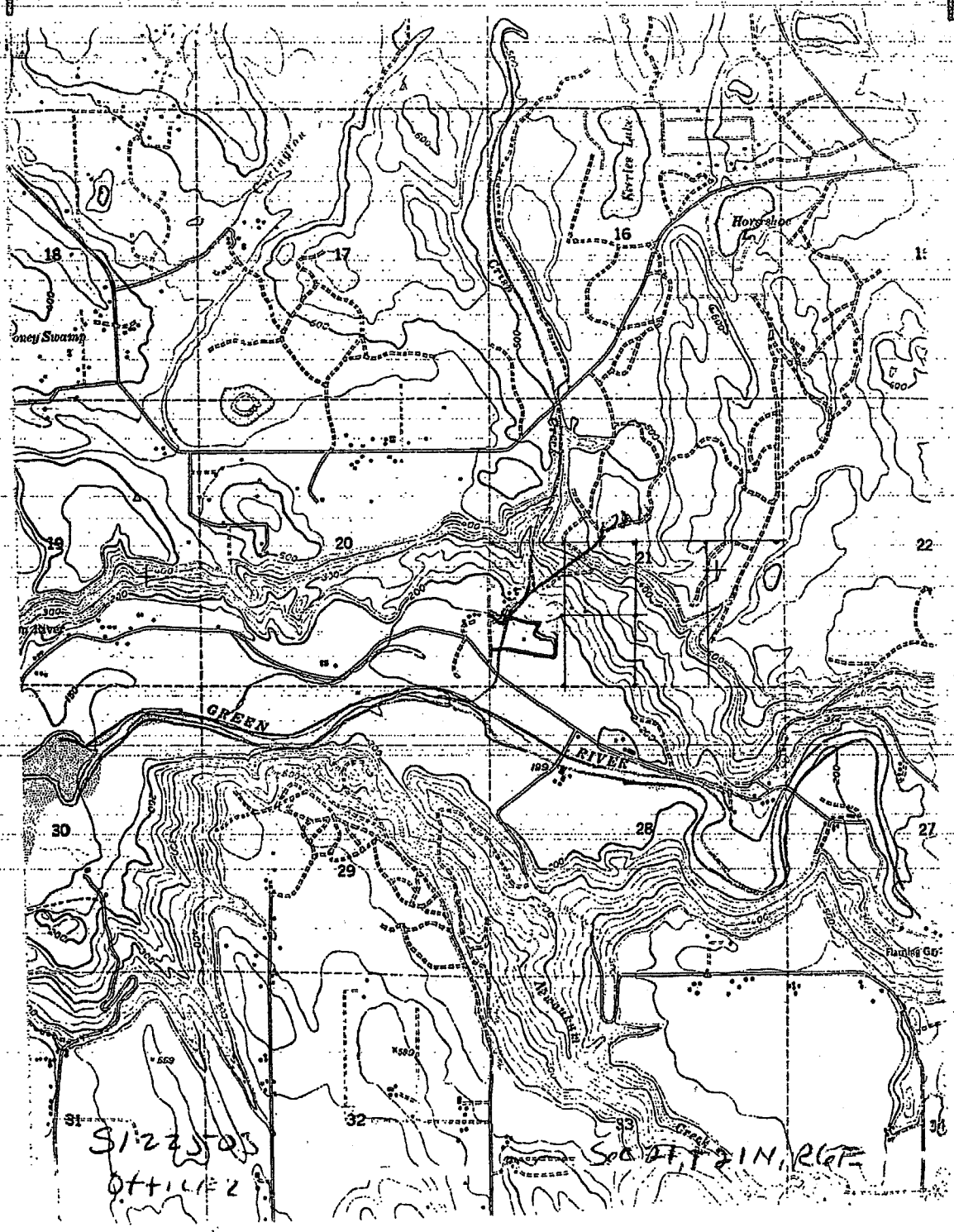
[redacted] 4350 150th Avenue N. E.

within thirty (30) days from (Last date of publication to be entered above by publisher)

NOTICE



Grass Lk.
Lake Morton
Rainier Memorial Park
Creek
Lake Sawyer
Covington
Horseshoe Lake
Black Diamond Lake
Newaukum
Green
KUMMER
Flaming Geyser
POD



S122503
OFFICE 2

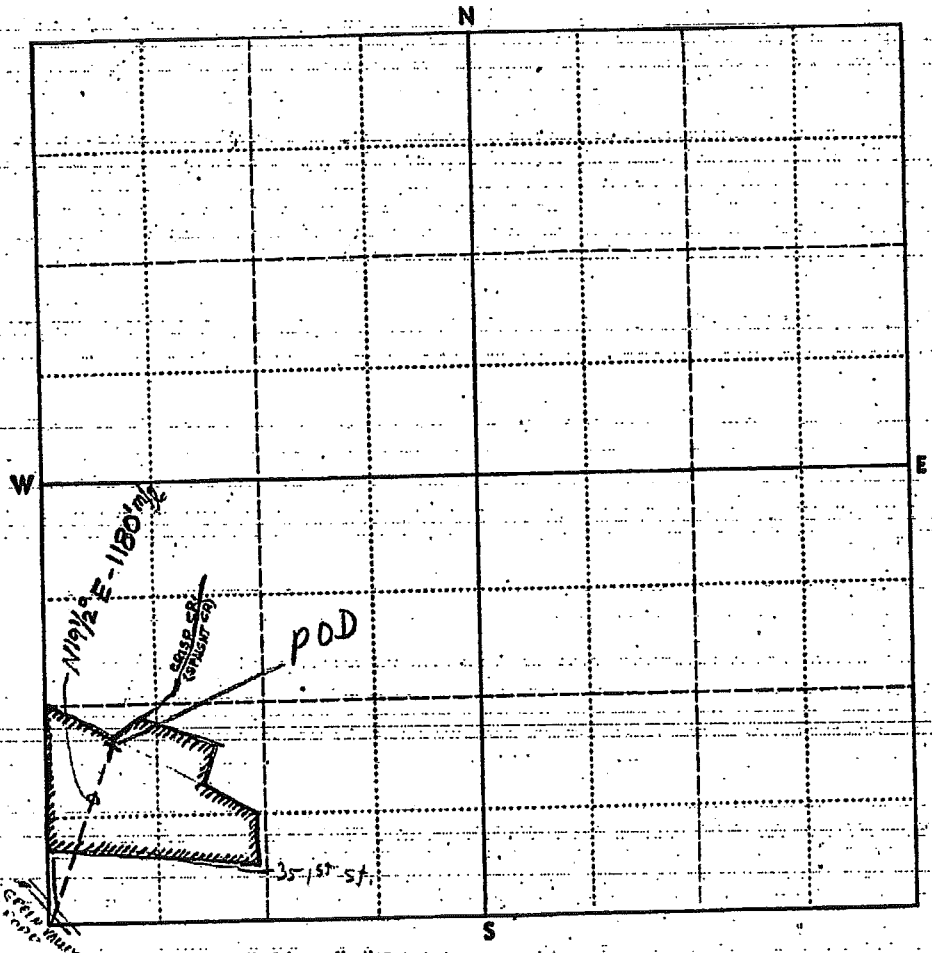
SC 21, T 21 N, R 6 E

S. E. No. 1554-A.—OS

SECTION PLAT

5-22-75

Sec. 21 Twp. 21 N. R. 6 E. W.M.



1. Outline property described in application.
2. Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.
3. Indicate traveling directions from nearest town.

Scale: 1 inch = 800 feet (each small square = 10 acres)

OFFICE

Sec 21, T 21 N, R 6 E

S122503

CRISP (SPAIGHT) CREEK

Surface Water Application

Supplemental Data Sheet

The State of Washington, Department of Fisheries, is making application to appropriate 8.0 cfs of water for the operation of fish rearing facilities on lands to which the applied for appropriation will become an appurtenance.

This application is being made under the following conditions:

1. The Department of Fisheries is planning to acquire the lands on which the applied for appropriation will become an appurtenance and it is understood the legal land owner will convey and assign the rights as applied for herein to the Department of Fisheries if it acquires the property.

2. This appropriation request includes the claimed right set forth in Claim No. 040920

3. The Department of Fisheries reserves the right to cancel any rights granted under this application in the event it does not acquire the land to which the appropriation will become an appurtenance.

4. The Department of Fisheries will pay all costs for the requested water right.

S122503

July 26, 1975

Department of Fisheries
Engineering and Construction
6015 Capitol Boulevard
Tumwater, Washington 98501

Attention: Fay Conroy

Gentlemen:

SUBJECT: WATER RIGHTS AND CLAIMS ON CRISP CREEK (SPAIGHT CREEK) AND IN SECTIONS 16 & 21, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M.

Surface Water Application No. S1-20988 issued to Small Tribes of Western Washington, SW¼SW¼, Section 21, T. 21 N., R. 6 E.W.M. for Fish Propagation. This application is being held for cancellation.

Surface Water Claim No. 040920 filed by T.G. Spaight for the irrigation of 15 acres and other uses from Spaight Creek. Filed as of 1911.

Surface Water Claims Nos. 043383 and 043384 filed by the Diamond Springs Water Association for Domestic Supplies from Springs in Sec. 21, T. 21 N., R. 6 E.W.M. These springs may or may not be tributary to Spaight Creek. Filed as of 1915.

Surface Water Claim No. 043382 filed by Robert A. Schwidt for the irrigation of 5 acres from a creek located in Sec. 21, T. 21 N., R. 6 E.W.M. Filed as of 1915. As the claim listing states creek, we do not know if this is Spaight Creek or tributary thereto.

Sincerely,

ROBERT P. BURRELL
Resources Management

RPB:ll

COPY

MEMORANDUM REPORT

TO: H. A. Harrison DATE: August 13, 1975

FROM: Fay Conroy, P.E.

SUBJECT: Certification of Availability and an Environmental Assessment of Use for the Water Applied for under Surface Water Application S1-22503

Introduction

Your memo dated July 21, 1975 requested that the subject Certification of Availability and Environmental Assessment be prepared relating to Surface Water Application S1-22503.

This Memorandum Report is in response to your request. A complete Environmental Assessment has not been made; only water related aspects have been considered.

Proposed Action

The Washington Department of Fisheries (WDF) has filed application with the Washington Department of Ecology to continuously appropriate 8.0 cfs from Crisp (Spaight) Creek, tributary to the Green River, WRIA 9, for the purpose of fish propagation.

WDF has an option to purchase the site from Thomas G. and Gladys Spaight contingent upon the water permit being granted. The site is a portion of the SW¼, SW¼, Section 21, Township 21 North, Range 6 East, W.M., King County, Washington; more fully described in the application.

There is an existing pond, which Crisp Creek flows through, on the site having a surface area of approximately 1.1 acres and a volume of approximately 4 acre-feet.

WDF proposes to use the pond as a rearing facility with a maximum population of 40,000 pounds of yearling chinook or coho salmon. They will be fed at a rate of 1 percent of their weight daily for a maximum feeding of 400 pounds per day.

Water Source

Crisp Creek lies entirely in Township 21 North, Range 6 East. Headwaters are in Sections 8 and 9; the stream flows southerly in the western portions of Sections 16 and 21, thence southwesterly through Sections 20 and 29 to its confluence with the Green River. It is approximately 3/4 of a mile from the pond outlet to the Green River.

Prior Rights. The Department of Ecology informed us by letter dated July 26, 1975 that their records showed one Surface Water Application and four surface Water Claims possibly related to Crisp Creek. A staff member has said they could find no records other than those listed in the letter and copied below:

SUBJECT: WATER RIGHTS AND CLAIMS ON CRISP CREEK (SPAIGHT CREEK) AND IN SECTIONS 16 and 21, TOWNSHIP 21 NORTH, RANGE 6 EAST, W.M.

Surface Water Application No. S1-20988 issued to Small Tribes of Western Washington, SW¼ SW¼, Section 21, Township 21 North, Range 6 East, W.M. for Fish Propagation. This application is being held for cancellation.

Surface Water Claim No. 040920 filed by T. G. Spaight for the irrigation of 15 acres and other uses from Spaight Creek. Filed as of 1911.

Surface Water Claims Nos. 043383 and 043384 filed by the Diamond Springs Water Association for Domestic Supplies from Springs in Section 21, Township 21 North, Range 6 East, W.M. These springs may or may not be tributary to Spaight Creek. Filed as of 1915.

Surface Water Claim No. 043382 filed by Robert A. Schmidt for the irrigation of 5 acres from a creek located in Section 21, Township 21 North, Range 6 East, W.M. Filed as of 1915. As the claim listing states creek, we do not know if this is Spaight Creek or tributary thereto.

The Small Tribes of Western Washington formerly leased the facility being purchased by WDF. A condition of the purchase agreement is that their application S1-20988 be cancelled.

The application by WDF includes the right claimed in No. 040920.

The Diamond Springs Water Association was formed by Mr. and Mrs. Spaight to provide water service to the community being developed upon their property. He said title has been transferred to the community. One spring currently serves the existing community and a second spring is supplemental should it be required in the future. A drawing prepared by the Association engineer, Richard C. T. Li, P.E., indicates the second spring produces 60 gpm (0.134 cfs) and at present discharges into the pond.

The Schmidt property was purchased from Mr. and Mrs. Spaight, according to Mrs. Schmidt, about eight years ago. Diversion will be from Crisp Creek upstream of the pond. It is not known whether Claim No. 043382 is based upon the same vested right as No. 040920 or not.

There are no recorded rights downstream of the pond and no readily apparent diversion facilities. The creek flows through pasture land containing livestock that undoubtedly drink from it.

Streamflow. A search of available publications failed to find any continuous or miscellaneous flow records for Crisp Creek.

WDF hatchery personnel measured outflow from the pond at approximately 8 cfs in March, 1975.

On July 30, 1975 a malfunctioning velocity meter prevented the flow being measured but this writer estimated it to be 9 cfs; surprisingly high for mid-summer but it had recently rained.

Water Quality. WDF hatchery personnel measured dissolved oxygen content of Crisp Creek flowing into and from the pond on July 15, 1975. There were 431,000 coho fry weighing 39,000 pounds rearing in the pond.

Inlet temperature	54°F
Inlet dissolved oxygen	10 ppm
Outlet dissolved oxygen	7.5 ppm

Effect of Proposed Action

Streamflow and Prior Rights. The proposed use is non-consumptive. Minor losses to evaporation and infiltration will not be increased as an existing pond will be utilized. There are no known prior rights or uses other than stockwatering to be interfered with. Streamflow will not be reduced and will remain adequate for stockwatering.

Claimed rights upstream of the pond may reduce streamflow approximately 0.25 cfs. This will not reduce rearing potential of the pond a significant amount.

Water Quality. A report entitled "A Study of the Pollutional Effects of Salmonid Hatcheries" by Kramer, Chin and Mayo, (KCM) Consulting Engineers, June 1969, reported the results of a series of tests conducted at the Green River Salmon Hatchery and Cowlitz Trout Hatchery to determine the pollutional effects of salmonid hatcheries. The following table gives their average daily loadings in pounds per 100 pounds of fish (lb/d/cwt). The pollutional loading to be expected from 40,000 pounds of fish has been calculated and is also given in the table as pounds per day (lb/d)and as parts per million (ppm).

	lb/d/cwt	lb/d	ppm
Reduction in dissolved oxygen	0.727	291	6.8
Increase in biological oxygen demand	1.342	537	12.5
Increase in ammonia	0.166	66	1.5
Increase in nitrate	0.401	160	3.7
Increase in phosphate	0.033	13	0.3

The reduction in dissolved oxygen content calculated above is 2.7 times the 2.5 ppm reduction measured at the pond July 15th. This writer has no ready explanation for the difference but notes that individual samplings reported by KCM vary considerably and include reductions in dissolved oxygen less than those measured by WDF at the pond. The KCM results are controversial and not accepted by many involved in fish propagation but were included because they were the only published test data at hand.

Water quality downstream from the pond should remain adequate for stockwatering and irrigation, the only two foreseeable uses.

Water quality in the pond should remain adequate for fish rearing and will not be significantly impaired by any foreseeable activity upstream. Large scale development could be detrimental by causing siltation but there is no reason to believe it is likely to occur.

Conclusion

The Crisp (Spaight) Creek salmon rearing facility will not have adverse effect upon any known or foreseeable alternate use of the water, nor will any known or probable upstream use have significant adverse effect upon the rearing capacity of the facility.

Fay Conroy

Fay E. Conroy
Professional Engineer
Certificate 9138

FEC:es

cc: Harry Senn
Bob Burrell

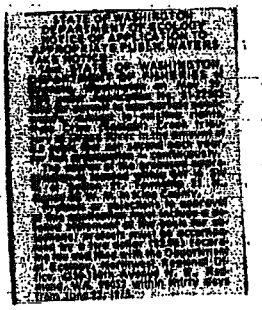
Form 61

Affidavit of Publication

STATE OF WASHINGTON, }ss.
COUNTY OF KING,

L. G. FINLAYSON being duly sworn, says that he is the principal Clerk of Seattle Times Company, publisher of THE SEATTLE TIMES, a daily newspaper, printed and published in Seattle, King County, State of Washington; that it is a newspaper of general circulation in said County and State; that it has been approved as a legal newspaper by order of the Superior Court of King County; that the annexed, being a classified ad, was published in said newspaper, and not in a supplement thereof, and is a true copy of the notice as it was printed in the regular and entire issue of said paper on the following day or days June 16 and 23, 1975;

and that the said newspaper was regularly distributed to its subscribers during all of said period.



L. G. Finlayson

Subscribed and sworn to before me this twenty-seventh day of June, 1975

Patricia J. Audsdell
Notary Public in and for the State of Washington residing at Seattle

OK mp
7-8-75

WASHINGTON
Department of
FISHERIES

DANIEL J. EVANS
GOVERNOR

ROOM 115, GENERAL ADMINISTRATION BUILDING ● PHONE 753-6600
OLYMPIA, WASHINGTON 98504

DONALD W. MOOS
DIRECTOR

July 3, 1975

Department of Ecology
Northwest Regional Office
15345 NE 36th Street
Redmond, Washington 98052

Gentlemen:

Re: Crisp (Spaight) Creek

Enclosed is the Affidavit of Publication for appropriating 8.0 cfs of water from Application No. S1-22503 from Crisp (Spaight) Creek for the purpose of fish propagation.

Very truly yours,

DEPARTMENT OF FISHERIES
Donald W. Moos, Director

Kathleen K. Journey

Kathleen K. Journey
Operations Assistant

KKJ:dlt

Enclosure

June 11, 1975

State of Washington
Department of Fisheries
115 General Administration Bldg.
Olympia, Washington 98504

State of Washington
Department of Ecology

Re./Mr.:

SUBJECT: SURFACE WATER APPLICATION NO. S1-22503

We have received your application for the appropriation of water and it has been assigned the above number. Will you please refer to it by number in future correspondence. We are enclosing a receipt for your application fee.

Enclosed is a notice of your application which must be published once a week for two consecutive weeks in a newspaper of general circulation within King County as provided in RCW 90.03.280. Such a paper should have general circulation in the locality where the water is to be diverted and used and must be qualified as a legal newspaper as provided in RCW 65.16. Please draw to the publisher's attention that the actual date of the second publication must appear in the space in the notice over the caption "last date of publication."

To assure accuracy, it is the responsibility of the applicant to check the notice carefully before having it published. If an error is detected, do not submit the notice for publication, but refer the error to this office for correction and/or resolution.

After publication, send the affidavit of publication to this office. Publication should start within thirty (30) days and the affidavit must be received in this office within sixty (60) days from date of letter or cancellation proceedings will be initiated.

You should also be advised that a permit may be required for your proposed project under the Shoreline Management Act of 1971, Chapter 286, Laws of 1971 Extraordinary Session, before construction may proceed. That act provides that no substantial development shall be undertaken on shorelines of the state without a permit first being obtained. If you have not already done so, you may obtain application forms and further information about the Shoreline Management Act of 1971 from King County.

Sincerely,

Duane E Wegner

DUANE E. WEGNER
Resource Management Supervisor

DEW: ph

Enclosures
NW-35
ECY 070-75

4350-150th Avenue N. E.
Northwest Regional Office, [redacted] 36th Street
Redmond, Washington 98052

CRISP (SPAIGHT) CREEK

Surface Water Application

Supplemental Data Sheet

The State of Washington, Department of Fisheries, is making application to appropriate 8.0 cfs of water for the operation of fish rearing facilities on lands to which the applied for appropriation will become an appurtenance.

This application is being made under the following conditions:

1. The Department of Fisheries is planning to acquire the lands on which the applied for appropriation will become an appurtenance and it is understood the legal land owner will convey and assign the rights as applied for herein to the Department of Fisheries if it acquires the property.

2. This appropriation request includes the claimed right set forth in Claim No. 040920

3. The Department of Fisheries reserves the right to cancel any rights granted under this application in the event it does not acquire the land to which the appropriation will become an appurtenance.

4. The Department of Fisheries will pay all costs for the requested water right.

S122503

FILE

WASHINGTON
Department of
FISHERIES

DANIEL J. EVANS
GOVERNOR

ROOM 115, GENERAL ADMINISTRATION BUILDING ● PHONE 753-6600
OLYMPIA, WASHINGTON 98504

DONALD W. MOOS
DIRECTOR

May 28, 1975

Department of Ecology
Northwest Regional Office
15345 NE 36th Street
Redmond, Washington 98052

Attention: Bob Burrell

Dear Mr. Burrell:

Re: Crisp (Spaight) Creek

Enclosed is an application for appropriating 8.0 cfs of water from Crisp (Spaight) Creek for the operation of fish rearing facilities together with the required $16.00 fee.

Please note the supplemental data sheet attached to the application for special conditions under which this application is being made.

Very truly yours,

DEPARTMENT OF FISHERIES
Donald W. Moos, Director

Kathleen K. Journey

Kathleen K. Journey
Operations Assistant

KKJ:dlt

Enclosure

S122503
FILE

WASHINGTON
Department of
FISHERIES

DANIEL J. EVANS
GOVERNOR

ROOM 115, GENERAL ADMINISTRATION BUILDING ● PHONE 753-6600
OLYMPIA, WASHINGTON 98504

DONALD W. MOOS
DIRECTOR

May 27, 1975

Mr. Thomas G. Spaight
Route 4, Box 666
Auburn, Washington 98002

Dear Mr. Spaight:

Enclosed for Mrs. Spaight's and your signature is an application for appropriating 8.0 cfs of water from Crisp (Spaight) Creek for the operation of fish rearing facilities on lands that Department of Fisheries is planning to purchase from you. As you are aware, one of the conditions of the purchase is the securing of water rights needed for rearing facilities.

Additionally it is understood that after termination of the lease of your lands by the Small Tribes of Western Washington and prior to acquisition, if made, by the Department of Fisheries, you will cause to have the appropriation requested under Surface Water Application No. S1-20988 and Ground Water Application No. G1-20972 cancelled.

After the application has been signed by you and Mrs. Spaight, please return it to me for processing.

Very truly yours,

DEPARTMENT OF FISHERIES
Donald W. Moos, Director

H. A. Harrison
Real Property Agent

HAH:dlt

Enclosure

S122503

File

King County Home | News | Services | Comments | Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471720122032601

General Location Details:

Unique Well ID: S_471720122032601
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 21 QS: SW/SW
Local Number: 21N/06E-21N01
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 200 Feet
Surface Elevation: 173 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: WA Dof

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

21-N-04

the Division of Water Resources
Second Copy — Owner's Copy
Third Copy — Driller's Copy

21-65-21-P

WATER WELL REPORT

STATE OF WASHINGTON

7040

Application No. NONE
21/06-21P
Permit No. .....

(1) OWNER: Name Dave Hustad Address 35032 - 21st S.E Auburn 98002

(2) LOCATION OF WELL: County King SE ¼ SW ¼ Sec. 21 T. 21 N., R. 6 E. W.M.

Bearing and distance from section or subdivision corner The S½ of the S½ of the

(3) PROPOSED USE: Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☑ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 140 ft. Depth of completed well 62 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 62 ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☑ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☑ No ☐
Type of perforator used mills knife
SIZE of perforations 1/8 in. by 1½ in.
39 perforations from 39 ft. to 42 ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☑
Manufacturer's Name ...
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☑ Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☑ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☑
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 30 ft. below top of well Date 1/23/76
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☑ If yes, by whom? ...
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test 3 gal./min. with 13 ft. drawdown after 4 hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☑

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	2
Brown hardpan gravel	2	19
Brown clay	19	39
Brown gravel (water seepage)	39	42
Blue clay	42	115
Brown silt	115	140

Work started 1/21 19 76 Completed 1/23 19 76

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 1/26 19 76

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 1356—(Rev. 2-66)—2-66—5M. 4516.

21-P-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

V Parcel 3040

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) **OWNER:** Name Duane Huotari Address 35022 216 th. Ave S.E. Auburn,

(2) **LOCATION OF WELL:** County King — SE ¼ SW ¼ Sec. 27 T. 21 N. R. 6 E W.M.

Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 38 ft. Depth of completed well 38 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: ..." Diam. from ... ft. to ... ft.
Threaded ☐ ..." Diam. from ... ft. to ... ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☒ No ☐
Type of perforator used Mills
SIZE of perforations 1/4 in. by 3 in.
16 perforations from 20 ft. to 23 ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No .....
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentinite & Cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) **PUMP:** Manufacturer's Name .....
Type: ..... H.P. .....

(8) **WATER LEVELS:** Land-surface elevation above mean sea level .... ft.
Static level 9 ft. below top of well Date .....
Artesian pressure ... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: 12 gal./min. with 6 ft. drawdown after 1 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ... gal./min. with ... ft. drawdown after ... hrs.
Artesian flow ... g.p.m. Date .....
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☐

(10) **WELL LOG:**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top soil	0	5
Silty Sand & Gravel Br.	5	16
Sand & Gravel Water bearing	16	23
Silt Blue	23	36
Silica Sand	36	38

Work started 5/28, 19 79 Completed 5/29, 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Northwest Pump & Drilling Co.
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way S. Auburn, Wa. 9800

[Signed] ..... (Well Driller)

License No. 0097 Date 6/31, 19 79

RECEIVED
JUN 12 1979
DEPT. OF ECOLOGY

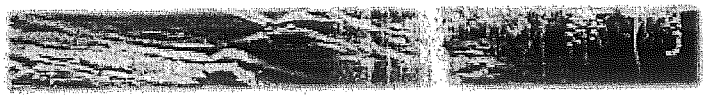
(USE ADDITIONAL SHEETS IF NECESSARY)

B. F. No. 1356—OS—(Rev. 4-71).

21-P-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

King County | Home | News | Services | Comments | Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471716122031501

General Location Details:

Unique Well ID: S_471716122031501
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 21 QS: SW/SW
Local Number: 21N/06E-21N02
City: King County
Data Source: Historic - unknown source
Location Type: Well
Surface Elevation: 165.8 Feet
Location Accuracy: QTRQTRSEC

Name: WA DOE

Zipcode: 98092
Who are these data sources?
Well Depth: 18 Feet
What is surface elevation?
What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
3/5/1980	23:59	3.14	162.66	Steel tape
4/2/1980	23:59	4.23	161.57	Steel tape
5/12/1980	23:59	4.61	161.19	Steel tape
3/12/1981	23:59	4.63	161.17	Steel tape
4/16/1981	23:59	4.56	161.24	Steel tape
5/12/1981	23:59	4.79	161.01	Steel tape
6/24/1981	23:59	4.54	161.26	Steel tape
6/29/1981	23:59	4.64	161.16	Steel tape
7/14/1981	23:59	5.39	160.41	Steel tape

Water Quality Data:

Water quality data is not available.

21-P-3

Parcel 9001

Start Card No. 073869

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

(1) OWNER: Name Jim Birkild Address 33201 Abrams Ave, BL Diamond

(2) LOCATION OF WELL: County King NE¼ NE¼ Sec 22 T 21 N, R 6 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) Same

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 90 feet. Depth of completed well 90 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from 0 ft. to 90 ft.
Welded ☐ Liner Installed ☐ Threaded ☐ _____" Diam. from _____ ft. to _____ ft.
_____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 18 ft. below top of well Date 3-21-90
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 10 gal./min. with stem set at 85 ft. for 2½ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	2
Brown sand & gravel	2	8
Tan, sand, gravel, clay	8	24
Gray gravel sand clay	24	43
Gray clay gravel	43	50
Tan clay gravel	50	57
Tan gravel clay, hardpan	57	78
Gray gravel-sand water	78	88
Gray water sand	88	90

RECEIVED
MAR 26 1990

Work started 3-19 19 Completed 3-21 19 90

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co., Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 19415 108th Ave SE Renton 98055
(Signed) _____ (WELL DRILLER) License No. 0233
Contractor's Registration No. JOHNSDC207DM Date 3-21 19 90

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329

22-A-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
FEB 1974 075093
CASH ___ OTHER ___ NONE ___

Water Right Claims Registration

Water Right Claim

Name Earl M Harris

(Short Form) Ø9

Address 401 Summit

Kent Wash. Zip Code 98031

Phone No. 852-2684

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source, give name if known:

_____ (River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used:

NE¼ of NE¼ of NE¼ Less C/M RGTS. Sec 22 Twp 21 - Rg 06.
SE¼ of SE¼ of SE¼ Less C/M RGTS Sec 15 Twp 21 Rg 06.
W½ of NW¼ of NW¼ of NW¼ Less C/M RGTS Sec 23 Twp 21 Rg 06

If located within the limits of a recorded platted property.

Lot _____ Block _____ of _____ (Give name of plat or addition)

In addition, please indicate Sec. 22 T. 21 N., R. 6E E/W.W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Earl M Harris

Date Feb-16-1974

If claim filed by designated representative print or type full name and mailing address of agent below.

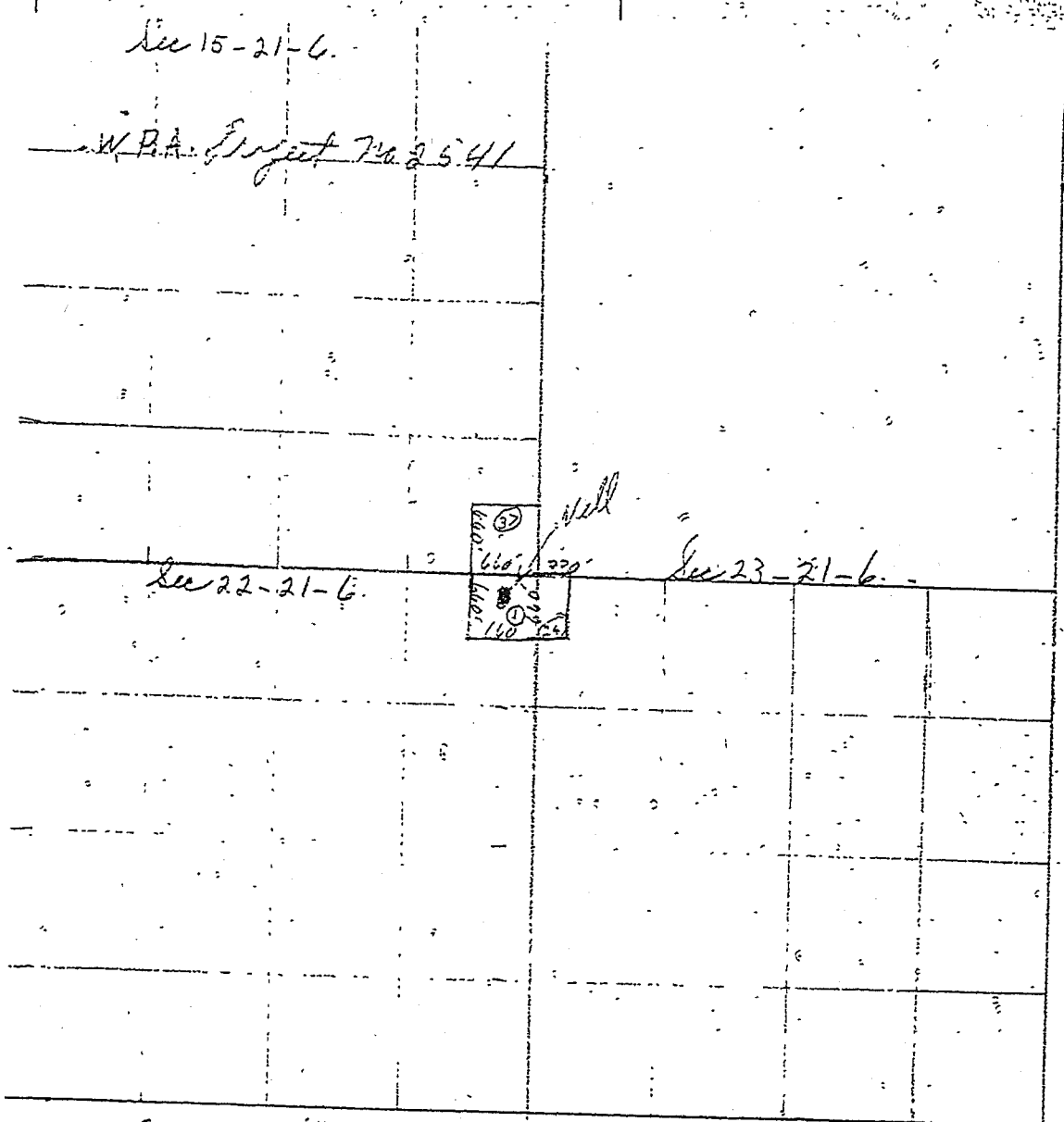
☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

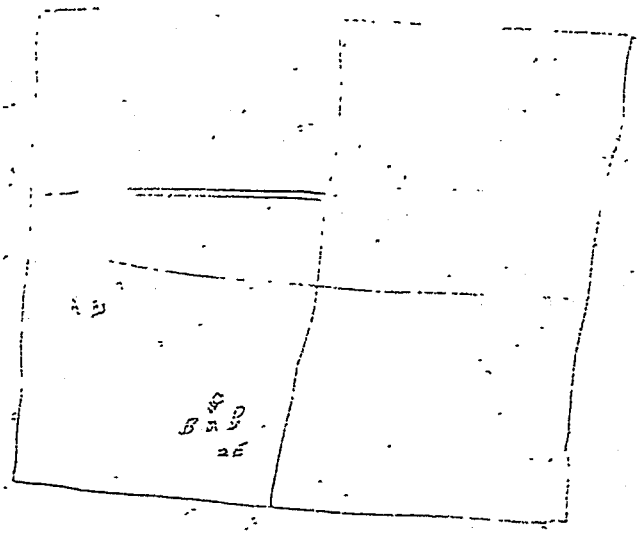
ORIGINAL DOC

22-A-2



25 Acres, This is approximately where well is.
If not Close Enough please let me know.
King County Washington

Earl M Harris
401 Summit
Kent wash 98031



Section 6
Township 20
North Range 4 East
Boise Meridian

(A) 400 feet North and 250 feet East of the Southwest corner of Section 6; being within the SE¼, SE¼, SW¼

(B) 250 feet North and 250 feet West of the South East corner of Section 6; being within the SE¼, SE¼, SW¼.

(C) 300 feet North and 250 feet West of the South East corner of Section 6; being within the SE¼, SE¼, SW¼

(D) 250 feet North and 200 feet West of the South East corner of Section 6; being within the SE¼, SE¼, SW¼

(E) 200 feet North and 200 feet West of the South East corner of Section 6; Being within the SE¼, SE¼, SW¼.

King County | Home | News | Services | Comments | Search

Natural Resources and Parks
Water and Land Resources Division

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471756122010401

General Location Details:

Name: Green

Unique Well ID: S_471756122010401
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 22 QS: NE/NE
Local Number: 21N/06E-22A01
City: Black Diamond Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 65 Feet
Surface Elevation: 555 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

22-A-3

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No 21100 - 22 R
Permit No

(1) OWNER: Name Erhard Weish Address 34918 243rd Ave SE Auburn

(2) LOCATION OF WELL: County King NE45' E1/2 NE1/4 SE1/4 SE1/4 Sec 22 T 21 N, R 6 E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 28 ft. Depth of completed well 28 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 28 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 10 ft. below top of well Date 10/17/78
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test 10 gal./min. with 9 ft. drawdown after 3 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
surface	0	3
Brown clay	3	17
Blue clay	17	20
Gray hardpan	20	23
Gray gravel - water	23	25
Brown solid rock or hard clay	28	—

Work started 10/17, 19 78 Completed 10/17, 19 78

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)
Address 19415 108th Ave SE Renton 98055

[Signed] (Well Driller)

License No. 0233 Date 10/17, 19 78

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20

22-R-9a

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No

(1) OWNER: Name Erhard Weihs Address 349[illegible] - 243rd S. E., Auburn

(2) LOCATION OF WELL: County King [illegible] SE ¼ SE ¼ Sec. 22 T. 21 N. R. 6E W.M.

Bearing and distance from section or subdivision corner See 1st well drilled 10-17-79 to 29 feet

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☒ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 & 4 inches.
Drilled 200 ft. Depth of completed well 190 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 128 ft.
Threaded ☐ 4" Diam. from 0 ft. to 190 ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☒ No ☐
Type of perforator used Mills Knife, Torch
SIZE of perforations 1/8 in. by 3 in.
M.K. perforations from 25 ft. to 28 ft.
... perforations from ... ft to ... ft.
Torch perforations from 80 ft to 180 ft

Screens: Yes ☐ No ☒
Manufacturer's Name ...
Type ... Model No. ...
Diam ... Slot size ... from ... ft. to ... ft.
Diam ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Puddling Clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 50 ft. below top of well Date 10/1/79
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ...
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test 2 gal./min with 130 ft. drawdown after 3 hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown hard clay	28	33
Gray clay	33	66
Brown silt	66	88
Gray silt	88	101
Gray silty clay	101	113
Gray decayed rock	113	121
Coal	121	125
Gray sandstone	125	200
Coal	200	

Deepened well
1st well drilled to 28 days

RECEIVED
OCT 1[illegible] 1979
DEPT. OF ECOLOGY

NOV 7 1979
DEPT. OF ECOLOGY

Work started 9/27 1979 Completed 10/1 1979

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98051

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 10/1 1979

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

22-R-9b

The Department of Ecology does NOT Warr[illegible]y the Data and/or the Information on this Wel[illegible]ort.

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W127860

UNIQUE WELL I.D. # AFS-847

Water Right Permit No. 98092

(1) OWNER: Name Virginia dErhard Weihs Address 34918 243rd Ave SE, Auburn

(2) LOCATION OF WELL: County King SE 1/4 SE 1/4 Sec 22 T 21 N.R. 6E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 34918 243rd Ave SE - Auburn

TAX PARCEL NO.: 222106-9020 21-6E-22R

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
☒ New Well Method: ☐ Dug ☐ Bored
☐ Deepened ☐ Cable ☐ Driven
☐ Reconditioned ☒ Rotary ☐ Jetted
☐ Decommission

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 77 feet. Depth of completed well 77 ft.

(6) CONSTRUCTION DETAILS
Casing installed:
☒ Welded 6" Diam. from 0 ft. to 77 ft.
☐ Liner installed ____" Diam. from ____ ft. to ____ ft.
☐ Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand ____
Material placed from ____ ft. to ____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 62 ft. below top of well Date 7-24-2000
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 11 gal./min. with 5 ft. drawdown after 1 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	3
clay-gravel-brown	3	16
clay-gravel-gray	16	35
hardpan-gray	35	43
clay-brown-gravel	43	67
sand-gravel-brown	67	77
-water		

RECEIVED
JUL 28 2000
DEPT OF ECOLOGY

Work Started 7-22-2000 Completed 7-24-2000

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson License No. 0233
(Licensed Driller/Engineer)

Trainee Name ____ License No. ____

Drilling Company Johnson Drilling Co., Inc.

(Signed) [signature] License No. 0233
(Licensed Driller/Engineer)

Address 19415 108th Ave SE, Renton, WA 98055

Contractor's Registration No JOHNSDC207RM Date 7-24-2000

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

Parcel 9020

22-R-82

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy Goesman

WATER WELL REPORT
STATE OF WASHINGTON

Application No
Permit No.

(1) OWNER: Name Russell Goesman Address 34901 243rd S.E., Auburn, Wa

(2) LOCATION OF WELL: County King SE ¼ SE ¼ Sec. 22 T. 21 N., R. 6 E W.M.

Bearing and distance from section or subdivision corner N½ of N½ of W½ of E½ of

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 68 ft. Depth of completed well 68 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 68 ft.
Threaded [ ] " Diam. from ft. to ft.
Welded [X] " Diam. from ft. to ft.

Perforations: Yes [ ] No [X]
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 46 ft. below top of well Date 10/17/80
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test 7 gal./min. with 10 ft. drawdown after 3 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown Clay - rocks	3	14
Gray hardpan	14	47
Brown hardpan	47	63
Brown water sand	63	68
Gray hardpan	68	—

Add - you have this on parcel 9027
why? is it from well?
the log is parcel 9033 - let me know
9033 - hit rock at 80'

OCT 20 1980

Work started 10/16 19 80 Completed 10/17 19 80

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co, Inc. (Person, firm, or corporation) (Type or print)
Address 19415 108th Ave SE Renton 98055
[Signed] Brad Johnson (Well Driller)
License No. 0233 Date 10/17 19 80

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

22-R-03

The Department of Ecology does NOT Warr 'y the Data and/or the Information on this Wel' ort.

Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Mike Buet Address 2428 129th S.E., Bellevue, WA

(2) LOCATION OF WELL: County King — NE¼ SE¼ Sec. 22 T. 24 N., R. 6 E. W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 140 ft. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 140 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☒ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite & cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level ..... ft.
Static level 60 ft. below top of well Date 11/21/78
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ½ gal./min. with 70 ft. drawdown after 1 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
top soil	0	2
brown till	2	26
blue till	26	43
brown till	43	48
blue till	48	52
brown silt	52	56
blue silt	56	75
greay sandstone	75	83
coal	83	94
greay sandstone	94	140

Check parcels for last name

Work started 11/20/78 19..... Completed 11/21/78 19.....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NORTHWEST PUMP & DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn, WA

[Signed] R. B. DeCamp III
(Well Driller)

License No. 0097 Date 11/22/78, 19.....

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

22-R-61

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
FEB 21 1974 075437
CASH ___ OTHER ___ NONE ___

1. NAME Bert Gibbons

ADDRESS 24628 ~~[illegible]~~ SE Green Valley Rd Auburn, Wash ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: (SURFACE OR GROUND WATER)
Ground Water WRIA 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS Well

B. IF SURFACE WATER, THE SOURCE IS ___

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 6 gal/minute (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 6 gal/minute

B. ANNUAL QUANTITY CLAIMED 1 acre feet (ACRE FEET PER YEAR) PRESENTLY USED 1 acre feet

C. IF FOR IRRIGATION ACRES CLAIMED ___ PRESENTLY IRRIGATED ___

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: ___

4. DATE OF FIRST PUTTING WATER TO USE: MONTH October YEAR 1958

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 50 FEET East AND 100 FEET north FROM THE SW CORNER OF SECTION ___

BEING WITHIN ___ OF SECTION 22 T. 21 N., R. 6 E (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF ___
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: W 172 Feet of SW 1/4 of SE 1/4 of Se 1/4 Lesst So 30 ft for road Section 22, Township 21, Range 6

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: riparian

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED ___ THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

APR 30 1974 062452

Director, Department of Ecology

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Bert Gibbons

DATE ___

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW:

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH LEGIBLE INTACT ALONG WITH YOUR FEE TO DEPARTMENT OF ECOLOGY, WATER RIGHT CLAIMS REGISTRATION, OLYMPIA, WASHINGTON 98504

ORIGINAL BWR

22-R-01

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

INSTRUCTIONS FOR COMPLETING WATER RIGHT CLAIM FORM

The purpose of these instructions is to ease the task of filling out your Water Right Claim.

WHO SHOULD FILE: All persons using or claiming the right to withdraw or divert and make beneficial use of public surface or ground waters of the state shall file with the Department of Ecology, not later than June 30 1974, a statement of claim for each water right. This shall not apply to any water rights which are based on the authority of a permit or certificate issued by the Department of Ecology or one of its predecessor agencies. Permits or certificates issued by the Department of Ecology establish a priority date as of the date application for permit was originally submitted. If an earlier priority right is claimed for the same water use, it will be necessary that a water right claim be submitted. FAILURE TO REGISTER AS REQUIRED BY LAW WILL RESULT IN A WAIVER AND RELINQUISHMENT OF THE CLAIMED WATER RIGHT. A separate Water Right Claim must be filed for each water right asserted.

PROCEDURE FOR FILING: The claim form which is attached identifies that basic information which must be submitted to satisfy the provisions of the Water Rights Claims Registration Act (Chapter 284 Laws of 1969 First Extraordinary Session). If additional space is needed under any of the questions or you wish to submit maps and exhibits in support of your claim please feel free to attach additional sheets to this claim form. However, such attachments must be on 8 1/2" x 13" paper. Should you be filing a claim for the benefit of a company, district, public or municipal corporation or other entity where multiple users are involved, use the same form, except that in instances when the claim cannot be adequately represented on the form, the entity in question may submit its claim in a special format which must have the approval of the Department of Ecology prior to its acceptance for official registration.

(1) Under this item insert your complete name and mailing address.

(2) Normally, a single source will be identified under this item. The item W P I A, is to be left blank and filled in by the Department of Ecology for its use.

A. Ground water sources are those where water does not naturally appear on the surface of the earth, which include but are not limited to, wells, sumps and infiltration trenches or galleries.

B. Surface water sources are those where water appears naturally on the surface of the earth and include but are not limited to, creeks, streams, rivers, lakes, springs, ponds or swamps. If the water is taken from a ditch or canal the source is not the ditch or canal. The source is at the point it leaves its natural course and enters the ditch or canal. If the source does not have an official name (for example "Wenatchee River"), identify it as an unnamed stream (pond or lake etc.).

(3) The quantities of water and times of use claimed shall be indicated by completing Items A through D, as explained below.

A. The instantaneous rate of diversion or withdrawal claimed shall be indicated by the most appropriate unit, either cubic feet per second or gallons per minute. One cubic foot per second equals approximately 450 gallons per minute. Strike out the unit that is not applicable. The diversion or withdrawal rate of water claimed and presently used shall be indicated by the same unit.

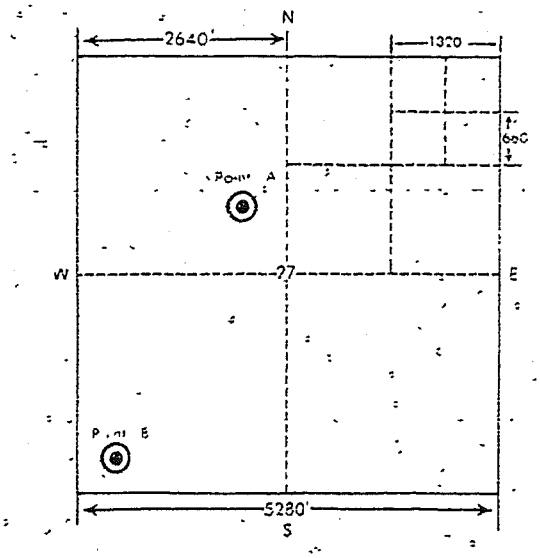
B. The annual quantity claimed shall be indicated as acre-feet per year. One acre-foot equals 43, 560 cubic feet, or 325 850 gallons. Also, the annual quantity presently used shall be indicated as acre-feet per year.

C. If used for irrigation, the number of acres claimed shall be indicated to the nearest whole number of acres. The acres that you presently irrigate shall also be indicated to the nearest whole number of acres.

D. Time(s) during each year when water is used shall be indicated by inserting the period by inclusive dates. For example, April 1 to October 15.

(4) Record the date of first putting the water claimed to beneficial use by inserting the proper month and the correct year.

(5) Identify accurately the location of the point(s) at which water is taken from its source. This identification must include the north-south distance and the east-west distance from a specified subsection or section corner. For example: Using a simple sketch, such as the one shown below, the location of the source at which water is taken can be described.



Point A can be described as being 443 feet west and 600 feet north of the center of Sec 27 being within the SE1/4 NW1/4 of said section.

OR

Point B can be described as being 600 feet north and 614 feet east of the southwest corner of Sec 27, being within the SW1/4 SW1/4 of said section.

If this is within a recorded tract of land, such as a subdivision, plat etc., state that recorded identification. For example, Lot 7 Block 51 of the Plat of the Town of Dixie Washington.

SEE REVERSE SIDE

Groundwater Data Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471717122011401

General Location Details:

Name: Gibbons

Unique Well ID: S_471717122011401
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 22 QS: SE/SE
Local Number: 21N/06E-22R01
City: Black Diamond Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 102 Feet
Surface Elevation: 585 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

22-R-05

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) OWNER: Name ~~Bob~~ Robert M. Connot Address 24322 SE Green Valley Rd, Auburn 98002

(2) LOCATION OF WELL: County King, S322½', N967½', E½, E½, SE¼ SE¼ Sec 22 T 21 N., R 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 95 ft. Depth of completed well 60 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 60 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☒ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 54 ft. below top of well Date 6/27/83
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: gal./min. with ft. drawdown after hrs.
" 6 " 1 " 2 "
" AIR JET "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Surface	0	2
Brown hardpan gravel	2	22
Brown sand & gravel	22	45
Brown sand & gravel	45	54
Brown water sand & gravel	54	60
Brown sand	60	95
Brown sandstone	95	—

check parcel w/ last name
logs looks good

Work started 6/22 1983 Completed 6/27 1983

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 6/27, 1983

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

22-R-96

The Department of Ecology does NOT War[illegible]y the Data and/or the Information on this We[illegible]ort.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

JUL 7 72021378

1. NAME Robert M Connot

ADDRESS Rt. 1 Box 986

Auburn Washington ZIP CODE 98002

2 SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED Ground Water (SURFACE OR GROUND WATER)

WRIA 09 (LEAVE BLANK)

A IF GROUND WATER, THE SOURCE IS Drilled Well

B IF SURFACE WATER, THE SOURCE IS

3 THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED

A QUANTITY OF WATER CLAIMED 9(nine) G P M. (~~CUBIC FEET PER SECOND~~ OR GALLONS PER MINUTE) PRESENTLY USED 2.23 G.P.M.

B ANNUAL QUANTITY CLAIMED 14.4 Acre Feet Per Year (ACRE FEET PER YEAR) PRESENTLY USED 3.568 Acre Feet Per Year

C IF FOR IRRIGATION, ACRES CLAIMED 3 PRESENTLY IRRIGATED 1

D TIME(S) DURING EACH YEAR WHEN WATER IS USED January thru December

4 DATE OF FIRST PUTTING WATER TO USE MONTH September YEAR 1970

5 LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL 170 FEET west AND 146 FEET North FROM THE South East CORNER OF SECTION 22

BEING WITHIN E½ E½ SE¼ SE¼ OF SECTION 22 T 21 N., R. 6E (E. ~~OR W.~~) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT _____ BLOCK _____ OF

(GIVE NAME OF PLAT OR ADDITION)

6 LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED The east half of the east half of the Southeast quarter of the Southeast quarter of Section 22, Township 21 North, Range 6 East W. M., in King County, Washington, except the North 91.75 Feet thereof and except the west 30 feet thereof and except the South 30 feet thereof for County Road COUNTY King

7 PURPOSE(S) FOR WHICH WATER IS USED Domestic, livestock, and irrigation

8 THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OR CLAIM IS BASED contract and Deed dated 3/5/71 recorded 4/2/71 under King County Auditor's File No. 710402015Y, E-139024

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS OR BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO

JUL 10 72015468

John Biggs
DIRECTOR DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Robert M Connot

DATE July 5, 1972

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P.O. BOX 829 OLYMPIA WASHINGTON 98501

22-R-06

✓ Parcel 9031

21106-22K

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. ....

(1) OWNER: Name Terry A. Knight Address 24224 SE Green Valley Rd Auburn 98002

(2) LOCATION OF WELL: County King LotC E½ - SE¼ SE¼ Sec. 22 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 89 ft. Depth of completed well 89 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 89 ft.
Threaded [ ] ..... " Diam. from ..... ft. to ..... ft.
Welded [X] ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes [ ] No [X]
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal: puddling clay
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 60 ft. below top of well Date 10/19/78
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 3 gal./min. with 20 ft. drawdown after 3 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Gray brown gravel - sand	3	18
Brown sandy clay	18	60
Gray hardpan	60	80
Gray hardpan & gravel - seepage	80	89
Brown hard clay	89	

Work started 10/17, 19 78 Completed 10/19, 19 78

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc. (Person, firm, or corporation) (Type or print) 98055

Address 19415 108th Ave SE Renton

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 10/19, 19 78

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20

Group B

22-R97

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 3 74 11 67 48
CASH ___ OTHER ✓ NONE ___

Water Right Claims Registration

Water Right Claim

Name TERRY A KNIGHT

(Short Form) Ø9

Address 24224 Green Valley Rd.
Auburn, Wash. Zip Code 98002

Phone No. TU 61210

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) Drinking

3) Legal description of lands on which water is used: The west Half of the East half of the South east quarter of the Southeast quarter of Section 22, Township 21 Range 6 E.W.M. 10 Acres. farm.

If located within the limits of a recorded platted property:

Lot ___ Block ___ of ___ (Give name of plat or addition)

In addition, please indicate Sec. 22 T. 21 N., R. 6E ~~E.W.~~ W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered — This has been assigned Water Right Claim Registry No.

SEP 16 74 77438

Director, Department of Ecology John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Terry a Knight

Date 5-29-1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

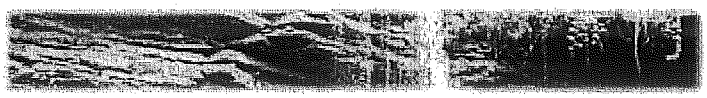
A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

22-R-Ø7

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_16453_01

General Location Details:

Unique Well ID: GrpB_16453_01
Parcel ID Number: 2221069026
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 22 QS: SE/SE
Local Number: 21N/06E-22
City: King County
Data Source: Seattle - KC Health
Location Type: Well
Surface Elevation: 0 Feet
Location Accuracy: Parcel

Name: Knight T.

Zipcode: 98092
Who are these data sources?
Well Depth: 78 Feet ← incorrect
What is surface elevation?
What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
2/4/1999	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		2 mg/L MDL:	

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
10/14/2003	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		3.2 mg/L MDL:	

end of data

22-R-7

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 08/11/2005
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
16453 R	KNIGHT, T.	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

TERRY SCHLIEBE [WS - PRIMARY CONTA
24224 GREEN VALLEY RD
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 009794

TERRY SCHLIEBE
24224 GREEN VALLEY RD
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360) 886-7575		Owner Daytime Phone: (360)886-7575	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [x] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

1,000

15	16	17	18										19			20	21						22	23	24			
	SOURCE NAME	INTERTIE	SOURCE CATEGORY										USE				TREATMENT						DEPTH		SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL #1		X										X				X						78	26		22	21N	06E

22-R-7

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
16453 R	KNIGHT, T.	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	4	4
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	4		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		4	4

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 10

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	**ANNUALLY**	**ONCE EVERY 3 YEARS**
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____ **TITLE:** _____

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471715122010001

General Location Details:

Unique Well ID: S_471715122010001
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 22 QS: SE/SE
Local Number: 21N/06E-22R02
City: King County Zipcode: 98010
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 60 Feet
Surface Elevation: 655 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: Thompson

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

22-R-8

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No. ....

(1) OWNER: Name Steve Hammond Address 2146 Roosevelt, Enumclaw, WA

(2) LOCATION OF WELL: County King — SE ¼ SW ¼ Sec. 22 T. 21 N.

Bearing and distance from section or subdivision corner

Cannot lo. SE¼ SW¼

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 62 ft. Depth of completed well 62 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 62 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite & cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 45 ft. below top of well Date 7/5/78
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 3 gal./min. with 15 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and s... show thickness of aquifers and the kind and nature of the mat... stratum penetrated, with at least one entry for each change ...

MATERIAL	FRO...	
top soil	0	2
brown till	2	58
brown cemented sand & gravel making water	58	62

Located on map to nearest ¼ ¼ section but does not make sense. May need to ignore [illegible]

parcel 9031 - has this been checked w/ prop owner name or just from imap symbol?

Work started 7/4/78, 19 Completed 7/5/78, 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NORTHWEST PUMP & DRILLING CO. (Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn, WA

[Signed] R.B. DeRemer II (Well Driller)

License No. 0097 Date 7/6/78, 19

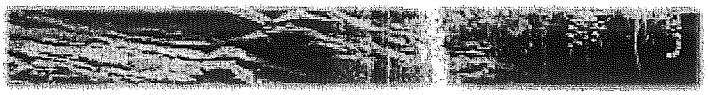
(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

22-R-9

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_01057_01

General Location Details:

Name: Williams

Unique Well ID: GrpB_01057_01
Parcel ID Number: 2321069023
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 23 QS: NW/NE
Local Number: 21N/06E-23B
City: Black Diamond
Data Source: Seattle - KC Health
Location Type: Well
Surface Elevation: 0 Feet
Location Accuracy: Parcel

Zipcode: 98010
Who are these data sources?
Well Depth: 138 Feet
What is surface elevation?
What are these location accuracies?

depth 128' prob. typo.

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

23-B-1

Group B Parcel 9023? 21/06-23B

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. Cook?
Permit No.

(1) OWNER: Name (Graddon Realty) Cy Williams Address 33743 Plant Rd., Black Diamond, Wa.

(2) LOCATION OF WELL: County King NE - NW ¼ NE ¼ Sec 23 T. 21 N., R. CE W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 128 ft. Depth of completed well 128 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 128 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 102 ft. below top of well Date 5-23-84
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" 15 " 11 " 4 "
" " AIR JET "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Surface	0	3
Gray hardpan	3	60
Gray clay	60	115
Gray water sand & gravel	115	128
Gray hardpan	128	—

Group B located by map but doesnt match parcels. 1/4 1/4 location makes sense. Parcel 9023?

RECEIVED
JUN 3 1984
DEPARTMENT OF ECOLOGY
REGION

Work started 5-21, 1984 Completed 5-23, 1984

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 5-23, 1984

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

23-B-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 08/11/2005
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
01057 Y	WILLIAMS, C. (COMM.) WATER SYSTEM	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

DALE ANSON [OWNER]
33743 PLASS RD
BLACK DIAMOND, WA 98101

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 018956

DALE ANSON
33743 PLASS ROAD
BLACK DIAMOND, WA 98101

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (000)000-0000		Owner Daytime Phone: (000)000-0000	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [X] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [X] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [X] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

1,100

15	16	17	18 SOURCE CATEGORY										19			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL		X										X						X				128	15	NE NW	23	21N	06E

23-B-1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
01057 Y	WILLIAMS, C. (COMM.) WATER SYSTEM	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	4	4
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	4		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		4	4

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 10

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	**ANNUALLY**	**ONCE EVERY 3 YEARS**
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

JAN 25 74 008836

OTHER / NONE

1. NAME ROBERT S. ALLEN
ADDRESS BOX 293
BLACK DIAMOND ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND (SURFACE OR GROUND WATER)
W.R.I.A. Ø9 (LEAVE BLANK)
A. IF GROUND WATER, THE SOURCE IS DRILLED WELL
B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:
A. QUANTITY OF WATER CLAIMED 10 GPM. PRESENTLY USED 5 (?)
(~~CUBIC FEET PER SECOND~~ OR GALLONS PER MINUTE)
B. ANNUAL QUANTITY CLAIMED 2 PRESENTLY USED 1 (?)
(ACRE FEET PER YEAR)
C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED
D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: ALL YEAR

4. DATE OF FIRST PUTTING WATER TO USE. MONTH MAY YEAR 1969

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 215 FEET SO. AND 35 FEET WEST FROM THE NE. CORNER OF ~~N½ of NW¼ of NE¼~~ ~~CORNER OF SECTION~~
~~BEING WITHIN~~ OF SECTION 23 T. 21N N. R. 6E (E. OR W.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY LOT BLOCK OF
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED.
SEE ATTACHED DESCRIPTION
COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC USE

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: OWNERSHIP OF PROPERTY

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED REGISTRY NUMBER
THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
Nov 1 1974 055720
ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF
X Robert S. Allen
DATE 1/21/74
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☑ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE BUILDING-OLYMPIA WASHINGTON 98501

23-B-2

That portion of the N½ of the N.W.¼ of the N.E.¼ of Sec. 23, Twsp. 21 N, R. 6 E, W.M., in King Co., Wash. , described as follows:
Beginning at the N.E. corner of said N.½ of the N.W.¼ of the N.E.¼ of Sec. 23, being the true point of beginning; Thence W. along the N. line of Sec. 23, 219.0 ft., thence S. to a point on the c/l of the creekbed as entering Jones Lake; thence continuing S, along the said C/L of meandering creek to its intersection with the S. line of said N.½ of the N.W.¼ of the N.E.¼ of Sec. 23, thence E. to the E. line of said N.½ of the N.W.¼ of the N.E.¼ of Sec.23; thence N. along E. line 660 ft. to the true point of beginning; except the S. 20 ft. thereof.

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 12 1974
CASH OTHER

1. NAME DONALD R. and MARIAN L. CRULL

ADDRESS 202 E HIGH STREET - APT. H 2

WILLIAMSTON, MICHIGAN ZIP CODE 48895

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND WATER (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS A WELL

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 15 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 15 GPM

B. ANNUAL QUANTITY CLAIMED 1 ACRE FOOT (ACRE FEET PER YEAR) PRESENTLY USED 1 ACRE FOOT

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: CONTINUOUSLY

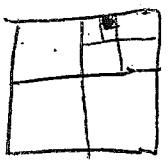
4. DATE OF FIRST PUTTING WATER TO USE: MONTH YEAR 1927

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 91 FEET W of CREEKBED AND 36 FEET NORTH FROM THE EXTREME NW CORNER OF SECTION HOUSE

BEING WITHIN NE¼ NW¼ NE¼ OF SECTION 23 T. 21 N. 6E R. ~~6E~~ (E. or W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF

(GIVE NAME OF PLAT OR ADDITION)



6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 6E.W.M., IN KING COUNTY, WASHINGTON. EXCEPT PORTION LYING EASTERLY OF CENTERLING OF CREEK BED WHICH ENTERS INTO JONES LAKE, ALSO SOUTH 20 FEET OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 6 E.W.M., LYING EASTERLY OF CENTER LINE OF CREEK BED WHICH ENTERS INTO JONES LAKE.

COUNTY KING COUNTY

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC SUPPLY

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPROPRIATION

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED REGISTRY NUMBER

THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

JAN 3 75 101814

ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT, DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Donald R. & Marian L. Crull

DATE June 10 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

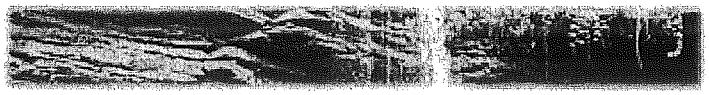
A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL
DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE. BUILDING-OLYMPIA, WASHINGTON 98501

23-B B

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471756122000801

General Location Details:

None: "not given"

Unique Well ID: N_471756122000801
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 23 QS: NW/NE
Local Number: 21N/06E-23B01
City: Black Diamond Zipcode: 98010
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Well Well Depth:
Surface Elevation: 591 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

23-B-4

King County Home News Services Comments Search

Natural Resources and Parks » Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471756122001801

General Location Details:

None: Palmer Coking Coal

Unique Well ID: S_471756122001801
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 23 QS: NW/NE
Local Number: 21N/06E-23B02
City: Black Diamond Zipcode: 98010
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 128 Feet
Surface Elevation: 650 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
6/4/1986	12:10	99.82	550.18	Steel tape
4/7/1987	17:45	99.83	550.17	Steel tape
5/9/1990	12:03	99.62	550.38	Calibrated electric tape
6/20/1990	14:13	99.53	550.47	Calibrated electric tape

Water Quality Data:

Water quality data is not available.

- I Map indicates there should be a log, but none of the Palmer Coking Coal wells in DOE well logs are 128'

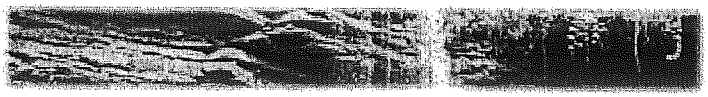
For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

- no log in WAB-28

23-B-5

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471756122002601

General Location Details:

Unique Well ID: N_471756122002601
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Covington Creek
Township: 21N Range: 06E Section: 23 QS: NE/NW
Local Number: 21N/06E-23C01
City: King County Zipcode: 98010
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Well Well Depth:
Surface Elevation: 680 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: "not given"

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

23-C-1

Parcel 9017 21/06 23 2

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. .....
Permit No. .....

(1) **OWNER:** Name ERICA MORGAN Address 19619 Marine View Drive, Seattle, WA 98166

(2) **LOCATION OF WELL:** County KING NW¼ NW¼ Sec 23 T 27 N., R 6 W.M.
Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 130 ft. Depth of completed well 130 ft.

(6) **CONSTRUCTION DETAILS:**
Casing installed: 6 " Diam. from 0 ft. to 130 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☒ No ☐
Manufacturer's Name JOHNSON
Type stainless Model No
Diam. 6 Slot size .018 from 125 ft. to 130 ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☐ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 19 ft.
Material used in seal bentonite & cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) **PUMP:** Manufacturer's Name
Type: H.P.

(8) **WATER LEVELS:** Land-surface elevation above mean sea level .... ft.
Static level 50 ft. below top of well Date 8/18/81
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 10 gal./min. with 31 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) **WELL LOG:**
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
topsoil, brown, dry	0	2
glacial till, brown, dry	2	11
glacial till, blue, dry	11	26
gravel with silty base, brown, damp	26	98
glacial till, lenses of water bearing sand & gravel, brown	98	119
glacial till with lenses of water bearing sand & gravel, blue	119	125
water bearing sand & gravel	125	130

Work started 8/12/81 19 Completed 8/18/81 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NORTHWEST PUMP & DRILLING COMPANY
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn, WA 98002

[Signed] R. B. DeTemple
(Well Driller)

License No. 0097 Date 8/19/81 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

23-D-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent W127762 23
UNIQUE WELL I.D. # AFS-127
Water Right Permit No. 98055

(1) OWNER: Name Ken Hehr Address 14816 196th Ave SE, Renton, WA

(2) LOCATION OF WELL: County King SE 1/4 NE 1/4 Sec 23 T 21 N.R. 6 E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 34704 Edumclaw-BL Diamond Rd
TAX PARCEL NO.: 232106-9044 21-6E-23H

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
☒ New Well ☐ Deepened ☐ Reconditioned ☐ Decommission
Method: ☐ Dug ☐ Cable ☒ Rotary ☐ Bored ☐ Driven ☐ Jetted

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 235 feet. Depth of completed well 235 ft.

(6) CONSTRUCTION DETAILS
Casing installed: ☒ Welded 6" Diam. from 0 ft. to 235 ft.
☐ Liner installed ____ Diam. from ____ ft. to ____ ft.
☐ Threaded ____ Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand ____
Material placed from ____ ft. to ____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 120 ft. below top of well Date 6-28-2000
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 18 gal./min. with 35 ft. drawdown after 2½ hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	3
Sand-gravel-clay-brown	3	8
Hardpan - brown	8	27
Clay - gray	27	69
Tan hardpan	69	160
Sand-gray-fine-heavy	160	228
Sand-gravel - water gray	228	235

RECEIVED
JUN - 3 2008
DEPT OF ECOLOGY

Work Started 6-14-2000 Completed 6-28-2000

WELL CONSTRUCTION CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson License No. 0233
(Licensed Driller/Engineer)
Trainee Name ____ License No. ____
Drilling Company Johnson Drilling Co., Inc.
(Signed) Brad Johnson License No. 0233
(Licensed Driller/Engineer)
Address 19415 108th Ave SE, Renton, WA 98055
Contractor's Registration No JOHNSDC207RM Date 6-28-2000

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

23-H-1

100172

'e Original and First Copy with
..partment of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W150843

UNIQUE WELL I.D. # AGJ639

Water Right Permit No 21-6E-23H

(1) OWNER: Name Wes & Kristy Butt Addre 29445 232nd Ave. S.E. BlackDiamond WA

(2) LOCATION OF WELL: County King - SE 1/4 NE 1/4 Sec 23 T 21 N,R 6E WM

(2a) STREET ADDRESS OF WELL (or nearest address) 34130 Enumclaw/Blk. Diamond Rd. Blk. Diamond, WA

TAX PARCEL NO.

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (If more than one)
[X] New Well Method [ ] Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [ ] Jetted [ ] Decommission

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 232 feet Depth of completed well 232 ft

(6) CONSTRUCTION DETAILS:
Casing Installed:
[X] Welded 6 " Diam from +1.5 ft to 222 ft
[ ] Liner installed " Diam from ft to ft
[ ] Threaded " Diam from ft to ft

Perforations: [ ] Yes [X] No
Type of perforator used
SIZE of perforations in by in
perforations from ft to ft
perforations from ft to ft
perforations from ft to ft

Screens: [X] Yes [ ] No [X] K-Pac Location 219
Manufacturer's Name Johnson
Type Stainless V Wire Model No
Diam 5 Slot size 10 from 222 ft to 227 ft
Diam 5 Slot size 8 from 227 ft to 232 ft

Gravel/Filter packed: [ ] Yes [ ] No [ ] Size of gravel/sand
Material placed from ft to ft

Surface seal: [X] Yes [ ] No To what depth? 18 ft
Material used in seal BENTONITE CHIPS
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type HP

(8) WATER LEVELS: Land-surface elevation above mean sea level ft
Static level 120 ft below top of well Date 7/17/01
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom?
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs
Yield gal/min with ft drawdown after hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal/min with ft drawdown after hrs.
Airtest 30 gal/min with stem set at 230 ft for 1 hrs
Artesian flow g p m Date
Temperature of water Was a chemical analyses made? [ ] Yes [X] No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION:
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Lt Brown Silt Some Gravel	0	8
Gray Clay Some Sand	8	16
Gray Sandy Clay Wet	16	30
Gray Clay	30	45
Dense Gray Sandy Clay	45	67
Gray Gravel Sand Clay	67	85
Gray Dense Sand Gravel Clay	85	90
Gravel Sand Silt	90	112
Greenish Gray Gravel Sand-Silt	112	127
Dark Gray Gravel Sand Clay	127	140
Dark Gray Gravel Sand Clay Wet	140	154
Dark Gray Sand Pea Gravel Some Water	154	158
Gray Sticky Clay	158	172
Gray Sand Clay Pea Gracel Some Water	172	200
Gray Sand Water	200	210
Gray Sand Clay Pea Gravel Water	210	232

RECEIVED
AUG 0 8 2001
DEPT OF ECOLOGY

Work Started 7/16/01 , 19 Completed 7/17/01 , 19

WELL CONSTRUCTION CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name Mark Wiese License No 2432
(Licensed Driller/Engineer)
Trainee Name License No
Drilling Company Tacoma Pump & Drilling Co., Inc
(Signed) License No 2432
(Licensed Driller/Engineer)
Address 30316 Mt. Hwy. Graham, WA 98338
Contractor's Registration No TACOMPD203PF Date 7/24/01 , 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407-6600 The TDD number is (360) 407-6006

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

100172

23-H-2

21/6/23-K

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 058698
Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name JOHNSON, JOHN Address 35003 257 AVE SE BLACK DIAMOND, WA 98010-

(2) LOCATION OF WELL: County KING - SE 1/4 SE 1/4 Sec 23 T 21 N., R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) 35003 257 AVE SE, BLACK DIAMOND

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 200 ft. Depth of completed well 200 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 155 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used ROTARY STAR
SIZE of perforations 3/16 in. by 1 in.
220 perforations from 140 ft. to 155 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 130 ft. below top of well Date 05/25/95
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 12 gal/min. w/ stem set at 155 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	3
BROWN GLACIAL TILL	3	11
BLUE GLACIAL TILL	11	17
BROWN CEMENTED SAND & GRAVEL	17	31
BROWN SILTY SAND & GRAVEL	31	45
BLUE GLACIAL TILL	45	63
BLUE CEMENTED SAND & GRAVEL	63	79
BROWN CEMENTED SAND & GRAVEL	79	86
BLUE GLACIAL TILL	86	118
BLUE CEMENTED SAND & GRAVEL	118	138
WATER BEARING SAND & GRAVEL	138	155
GRAY SANDSTONE	155	200

RECEIVED
JUN 01 1995
DEPT. OF ECOLOGY

Work started 05/24/95 Completed 05/25/95

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] [signature] License No. 0097

Contractor's Registration No. NORTHPD137PO Date 05/25/95

23-Q-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

21-6E-23Q

185553

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W212808

Unique Ecology Well ID Tag No. AKF-981

Water Right Permit No. _____

Property Owner Name Byron & Jovie Parkinson

Well Street Address 34811 257th Ave SE

City Auburn County King

Location SW 1/4-1/4 SE 1/4 Sec 23 Twn 21 R 6 EWM or WWM ☒ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 232106-9033

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 350 ft. Depth of completed well 350 ft.

CONSTRUCTION DETAILS

Casing ☒ Welded 6" Diam. from 0 ft. to 48 ft.

Installed: ☐ Liner installed _____" Diam. from _____ ft. to _____ ft.

☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by ____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal Benotonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 50 ft. below top of well Date 11-15-05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 115 gal./min. with stem set at 350 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Hardpan clay - brown	3	42
Sandstone - gray	42	130
Decayed rock - dark gray	130	145
Sandstone - gray - Seepage	145	165
Sandstone - gray	165	280
Decayed rock - dark gray	280	295
Sandstone - gray	295	350

RECEIVED

NOV 22 2005

DEPT OF ECOLOGY

Start Date 11-8-05 Completed Date 11-15-05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co., LLC

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSDC207QM Date 11-15-05

If TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

23-Q-2

21-6E-23

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)* 209948

● Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W237831

Unique Ecology Well ID Tag No. APR-449

Water Right Permit No. _____

Property Owner Name Gary Rogers

Well Street Address 34800 257th Ave SE

City BL Diamond **County** King

Location SW 1/4-1/4 SE 1/4 Sec 23 Twn 21 R 6 (EWM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 232106-9042

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 370 ft. Depth of completed well 370 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 63 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 120 ft. below top of well Date 10-16-06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 1 1/2 gal./min. with stem set at 350 ft. for 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Clay-gravel-rocks-brown	3	63
Sandstone-gray	63	270
Sandstone-gray-seepage	270	300
Sandstone-gray	300	370

RECEIVED
NOV 13 2006
DEPT. OF ECOLOGY

Start Date 10-9-06 Completed Date 10-16-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co. LLC

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSDC207QM Date 10-16-06

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

23-Q-3

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 21168

Permit No.

(1) OWNER: Name Clayton Snyder Address 25206 SE Green Valley Rd, Black Diamond

(2) LOCATION OF WELL: County King W242', S730' — SW¼ SE¼ Sec. 23 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 8 inches. Drilled 215 ft. Depth of completed well 215 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 8" Diam. from 0 ft. to 18 ft.
Threaded ☐ 6" Diam. from 0 ft. to 215 ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used torch
SIZE of perforations 1/8 in. by 3 in.
205 perforations from 205 ft. to 210 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite / cement
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 30 ft. below top of well Date 5/21/75
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 5-6-75
Bailer test 6 gal./min. with 150 ft. drawdown after 30 min 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown Clay	0	14
Gray sandstone	14	53
Coal	53	57
Gray sandstone	57	113
Coal	113	118
Gray sandstone	118	154
Gray sandstone / coal	154	159
Gray sandstone	159	197
Coal	197	202
Gray sandstone	202	205
Fractured sandstone (water)	205	208
Gray sandstone	208	215

Work started 4/16 19 75 Completed 5/2 19 75

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co, Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave S.E. Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 5/14 19 75

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

23-Q-4

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21/6 — 23/B2

File Original and First Copy with Department of Ecology
Second Copy – Owner's Copy
Third Copy – Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. ...

Permit No. ...

(1) OWNER: Name Jules Dal Santo Address 25414 SE Green Valley Rd Auburn

(2) LOCATION OF WELL: County King 5736' – SW¼ SE¼ Sec. 23 T. 21 N., R. 6 E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 120 ft. Depth of completed well 120 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 120 ft.
Threaded ☐ ... " Diam. from ... ft. to ... ft.
Welded ☒ ... " Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☒
Type of perforator used ...
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ...
Type ... Model No. ...
Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ...
Gravel placed from ... ft. to ... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name ...
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 92 ft. below top of well Date 3/22/83
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ...
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " " "
" " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ...
Bailer test 30 gal./min. with 11 ft. drawdown after 2 hrs.
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	2
Brown hardpan	2	12
Gray hardpan	12	60
Gray clay	60	116
Gray water sand & gravel	116	120

Work started 3/21, 1983 Completed 3/27, 1983

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc
(Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Rod Johnson
(Well Driller)

License No. 0233 Date 3/23, 1983

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

23-Q-5

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

23 WS effective: 1/12/05
Active Sources: 1
Connections: 1
Population: 2

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 01/12/2005
Printed: 02/11/2008
WFI Printed For: On-demand
Submission Reason: New System
New Water Syste

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
AA972 E	JOYCE WATER SYSTEM	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS	7. OWNER NAME & MAILING ADDRESS	8. Owner Number 031079
JOYCE DALSANTO [OWNER] 25428 SE GREEN VALLEY RD BLACK DIAMOND, WA 98010 (SL SE)	JOYCE DALSANTO 25428 SE GREEN VALLEY RD BLACK DIAMOND, WA 98010	

STREET ADDRESS IF DIFFERENT FROM ABOVE	STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN	ATTN
ADDRESS	ADDRESS
CITY STATE ZIP	CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360) 886-1330		Owner Daytime Phone: (360) 886-1330	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [x] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18										19			20	21						22	23	24				
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	SOURCE CATEGORY WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	USE PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	TREATMENT NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	SOURCE LOCATION 1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
	WELL #1		X										X			N	X						120	12	SW SE	23	21N	06E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
AA972 E	JOYCE WATER SYSTEM	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	1	2
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	1		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		1	2

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 2

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPT. OF ECOLOGY
JUN 27 14 ...
BOOK ___ OTHER ___ NONE ___

1. NAME ELIZABETH S. HANNON
ADDRESS 35003 257th AVE S.E.
BLACK DIAMOND, WASH ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS WELL

B. IF SURFACE WATER, THE SOURCE IS ___

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 13 GM PRESENTLY USED 13 GM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED ___ PRESENTLY USED ___ (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED ___ PRESENTLY IRRIGATED ___

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: CONTINUOUSLY

4. DATE OF FIRST PUTTING WATER TO USE: MONTH APRIL YEAR 1955

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 1200 FEET WEST AND 900' FEET NORTH FROM THE SOUTHEAST (S.E.) CORNER OF SECTION 23 BEING WITHIN S.E. 1/4 S.E. 1/4 OF SECTION 23 T. 21 N., R. N. 6E (E.OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF ___ (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
S.E. 1/4 OF SEC. 23 T21 NR 6E WM

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC SUPPLY/STOCK WATER

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPROPRIATION

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

FEB 10 75 125374

DIRECTOR - DEPARTMENT OF ECOLOGY John Biggs

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Elizabeth S. Hannon

DATE 6/24/74

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO.
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

23-Q-6

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
JAN 6 74 174545
CASH ___ OTHER ___ NONE

1. NAME Russell C. Plass
ADDRESS ~~Box 455~~ 35019-257th Black Diamond 35019-257th S.E.
Washington ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground Water (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS well

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 5 G.P.M. PRESENTLY USED 1 G.P.M. (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 8 A.F./YR PRESENTLY USED 1.6 A.F./YR (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED None PRESENTLY IRRIGATED None

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: 12 Months per year

4. DATE OF FIRST PUTTING WATER TO USE: ___ MONTH November YEAR 1939

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 1102 FEET West AND 505 FEET North FROM THE South East CORNER OF SECTION 23
BEING WITHIN SE¼ of SE¼ OF SECTION 23 T. 21 N. ___ R. 6E (E. or W.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF ___
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
That portion of SEc¼ of SE¼ of Sec 23. T21. N. R. 6 E. Lying West of old county road less county road Less North 590 feet thereof.
COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATER AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED REGISTRY NUMBER
THIS HAS BEEN ASSIGNED
WATER RIGHT CLAIM REGISTRY NO.
AM 1375161688
ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF
X Russell C Plass
DATE March 5, 1971
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE BUILDING OLYMPIA WASHINGTON 98501

ORIGINAL
DWR

23-Q-7

21-6E-23Q

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission 179503

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. WI184891

Unique Ecology Well ID Tag No. AKF-952

Water Right Permit No.: _____

Property Owner Name Parkwood Public Water System

Well Street Address 34806 257th Ave SE

City BL Diamond Area County KING

Location SW 1/4-1/4 SE 1/4 Sec 23 Twn 21 R 6 EWM ☒ or WWM ☐ circle one

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 232106-9003

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____ 2 Hookups

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 300 ft. Depth of completed well 300 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 300 ft.; ☐ Liner installed _____" Diam. from _____ ft. to _____ ft.; ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 80 ft. below top of well Date 7-26-05

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 1 1/4 gal./min. with stem set at 280 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Hardpan - clay - brown	3	12
Sandstone - gray	12	105
Shale - gray	105	135
Sandstone - gray - seepage	135	275
Coal	275	285
Sandstone - gray	285	300

RECEIVED
AUG 02 2005
DEPT OF ECOLOGY

Start Date 7-21-05 Completed Date 7-26-05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co., Inc

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSOC207QM Date 7-26-05

If TRAINEE, Driller's Licensed No. _____

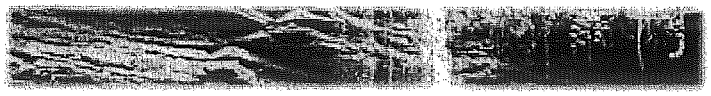
Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

22-Q-8

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471723122001101

General Location Details:

Unique Well ID: S_471723122001101
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Aquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 23 QS: SW/SE
Local Number: 21N/06E-23Q01
City: King County Zipcode: 98010
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 213 Feet
Surface Elevation: 625 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: Bortelson, G-1 B

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

23-Q-9

21/6/23-R

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 058679
Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name PAGANUCCI, DREW Address PO BOX 544 BLAC DIAMOND, WA 98010-

(2) LOCATION OF WELL: County KING SE 1/4 SE 1/4 Sec. 23 T 21 N., R 6 WM

(2a) STREET ADDRESS OF WELL (or nearest address) 257XX SE GREEN VALLEY RD, BLACK DIAMOND

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 140 ft. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 140 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 111 ft. below top of well Date 03/31/95
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 25 gal/min. w/ stem set at 110 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	3
BROWN SILTY SAND & GRAVEL	3	6
BROWN CEMENTED SAND & GRAVEL	6	10
GRAY CEMENTED SAND & GRAVEL	10	12
BLUE GLACIAL TILL	12	46
BLUE SILT W/OCC GRAVEL	46	57
BLUE SILTY SAND	57	72
BLUE CLAY	72	88
BLUE GLACIAL TILL	88	94
BLUE CEMENTED SAND & GRAVEL	94	116
WATER BEARING SAND & GRAVEL	116	140

RECEIVED
JUN 01 1995
DEPT. OF ECOLOGY

Work started 03/29/95 Completed 03/31/95

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] _____ License No. 0097

Contractor's
Registration No. NORTHPD137PO Date 04/03/95

23-R-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

21/06-23J
Application No.

Permit No.

(1) **OWNER:** Name Louis Draghi Address Box 36, Black Diamond, WA

(2) **LOCATION OF WELL:** County King NE ¼ SE ¼ Sec. 23 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 100 ft. Depth of completed well 100 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6 " Diam. from 0 ft. to 100 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used Mills Knife
SIZE of perforations ¼ in. by 2 in.
48 perforations from 80 ft. to 92 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite & Cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) **PUMP:** Manufacturer's Name
Type: H.P.

(8) **WATER LEVELS:** Land-surface elevation above mean sea level....
Static level 43 ft. below top of well Date 9/16/77
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 4 gal./min. with 50 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) **WELL LOG:**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
top soil	0	4
sand & gravel and Bolders brown	4	40
silty sand & gravel brown	40	80
sand and gravel cemented seepage	80	90
till blue	90	100

Work started 9/14/77 19 Completed 9/16/77 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NORTHWEST PUMP & DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn, WA

[Signed] Richard B McKinney
(Well Driller)

License No. 0096 Date 9/17/77 19

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

23-R-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21/06-23K

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Patrick L. Johnson Address 32006 257th Pl. Diamond 98010

(2) LOCATION OF WELL: County King — SE ¼ SE ¼ Sec. 23 T. 21 N., R. 06 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 75 ft. Depth of completed well 75 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 75 ft.
Threaded [ ] ..." Diam. from ... ft. to ... ft.
Welded [X] ..." Diam. from ... ft. to ... ft.

Perforations: Yes [ ] No [X]
Type of perforator used .....
SIZE of perforations ... in. by ... in.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes [ ] No [X]
Manufacturer's Name ..... Model No. .....
Type ..... Diam. ... Slot size ... from ... ft. to ... ft.
Diam. ... Slot size ... from ... ft. to ... ft.

Gravel packed: Yes [ ] No [X] Size of gravel: .....
Gravel placed from ... ft. to ... ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ... Depth of strata ...
Method of sealing strata off ...

(7) PUMP: Manufacturer's Name .....
Type: ... H.P. ...

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 35 ft. below top of well Date 10/25/80
Artesian pressure ... lbs. per square inch Date ...
Artesian water is controlled by ... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? .....
Yield: ... gal./min. with ... ft. drawdown after ... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 5
Bailer test 5 gal./min. with 30 ft. drawdown after 2½
Artesian flow ... g.p.m. Date ...
Temperature of water ... Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown hardpan	3	15
Gray hardpan	15	39
Brown hardpan	39	60
Brown sand & gravel	60	66
Gray sand & gravel water	66	75

RECEIVED
NOV 5 1980
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 10/23, 19 80 Completed 10/24, 19 80

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co, Inc (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 980

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 10/24, 19 80

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

23-R-3

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. 073761
Water Right Permit No.

(1) OWNER: Name BUKOSKEY, JOHN & SHERRY Address 26122 LAWSON ST BLACK DIAMOND, WA 98010-

(2) LOCATION OF WELL: County KING - SW 1/4 SW 1/4 Sec 24 T 21 N., R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) GREEN VALLEY RD

RECEIVED JUN 5 1990 DEPT OF ECOLOGY

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 177 ft. Depth of completed well 177 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 177 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 120 ft. below top of well Date 05/17/90
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 50 gal/min. w/ stem set at 177 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	3
BROWN GLACIAL TILL	3	17
BLUE GLACIAL TILL	17	25
BROWN GLACIAL TILL	25	36
BROWN SILTY SAND & GRAVEL	36	43
BROWN GLACIAL TILL	43	51
BLUE GLACIAL TILL	51	67
BROWN GLACIAL TILL	67	69
BLUE GLACIAL TILL	69	128
BLUE CEMENTED SAND & GRAVEL	128	143
BLUE SILTY SAND	143	165
WATER BEARING SAND & GRAVEL	165	177

Work started 05/16/90 Completed 05/17/90

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] [signature] License No. 0097

Contractor's Registration No. NORTHPD137PQ Date 05/18/90

23-R-4

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 24 74 133999
CASH ___ OTHER ___ NONE ✓

1. NAME Evan M. Johnson

ADDRESS 35112 - 257th Ave. S. E.

Black Diamond, Wash. ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground water (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS A well

B. IF SURFACE WATER, THE SOURCE IS ___

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 12 gpm PRESENTLY USED 12 gpm (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED ___ PRESENTLY USED ___ (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED ___ PRESENTLY IRRIGATED ___

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continously

4. DATE OF FIRST PUTTING WATER TO USE: MONTH June YEAR 1951

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 800 FEET West AND 200 FEET North FROM THE Southeast (SE) CORNER OF SECTION 23

BEING WITHIN SE¼ SE¼ OF SECTION 23 T. 21N N., R. 6 E (E. or ~~W.~~) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF ___ (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Por of SE ¼ of SE ¼ ly ely of old Co rd

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic and Stock

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS: THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

JAN 17 75 107743

John Biggs
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Evan M Johnson

DATE June 19, 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/ OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

23-K-5

08023

ENTERED

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W098817
UNIQUE WELL I.D. # ACV 734
Water Right Permit No. 21-6-24D 98056

(1) OWNER: Name Andrew Falcon Address 11453 SE 87th ST., Newcastle, WA

(2) LOCATION OF WELL: County King NW 1/4 NW 1/4 Sec 24 T 21 N, R 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 35000 BL. Dia. Water Service Rd., Black Diamond

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 253 feet. Depth of completed well 253 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 253 ft.
Welded ☒ _____" Diam. from _____ ft. to _____ ft.
Liner installed ☐ _____" Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 170 ft. below top of well Date 10-9-98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 25 gal./min. with stem set at 245 ft. for 2½ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	4
Brown gravel-clay	4	11
Grey clay	11	195
Gray silty clay	195	225
Grey water sand-gravel	225	253

RECEIVED
OCT 26 1998
NWRO-WR
DEPT OF ECOLOGY

Work Started 9-30 19. Completed 10-9 19 98

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co., Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) 98055
Address 19415 108th Ave SE, Renton, WA
(Signed) _____ (WELL DRILLER) License No. 0233
Contractor's Registration No. JOHNSOC207RM Date 10-9 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

24-E-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

2106/24E

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No.
Permit No.

(1) OWNER: Name John L. & Wilma M. Clay Address 34320 Enumclaw Black Diamond Rd.

(2) LOCATION OF WELL: County King approx 2 - SW¼ NW¼ Sec. 24 T. 21 N., R. 6 E W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 186 ft. Depth of completed well 186 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 186 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 15 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 170 ft. below top of well Date 1-23-86
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: 9 gal./min. with 10 ft. drawdown after 2½ hrs.
" " " " AIR JET "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown surface	0	4
Light brown surface	4	7
Gray clay gravel	7	46
Gray sand & gravel	40	45
Blue gray clay	45	55
Blue gray clay gravel	55	74
Gray gravel clay	74	81
Blue gray clay	81	85
Gray hardpan	85	110
Blue gray clay - gravel	110	126
Gray hardpan	126	155
Gray clay	155	162
Gray gravel	162	170
Gray water gravel	170	184
Gray - black sand & gravel	184	186

RECEIVED
FEB 3 1986
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 1-17, 19 86 Completed 1-23, 19 86

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)
Address 19415 108th Ave SE Renton 98055
[Signed] Brad Johnson
(Well Driller)
License No. 0233 Date 1-23, 19 86

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

24-E-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21/06/241-

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No.
Permit No

(1) OWNER: Name Mike Moffatt Address 34350 Evergreen Black Diamond Rd

(2) LOCATION OF WELL: County King approx. SE¼ NW¼ Sec. 24 T. 21 N., R. 6 E W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 195 ft. Depth of completed well 195 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 195 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 173 ft. below top of well Date 1-17-86
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" 10 " 12 " 2½ "
" " " AIR JET "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown surface soil	0	3
Light brown clay-gravel	3	7
Blue gray clay gravel	7	25
Blue gray hardpan	25	37
Blue gray clay gravel	37	50
Blue gray clay	50	54
Blue gray gravel	54	80
Blue gray clay	80	87
Blue gray clay gravel	87	147
Gray hardpan	147	187
Gray water gravel-clay	187	193
Black sand-gravel	193	195

RECEIVED
FEB 3 1986
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 1-13, 19 86 Completed 1-17, 19 86

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)
Address 19415 108th Ave SE Renton 98055

[Signed] Burl Johnson
(Well Driller)

License No. 0233 Date 1-24, 19 86

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

24-E-3

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy Driller's Copy 93854

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent W128856
UNIQUE WELL I D # AFI628
Water Right Permit No 21-6E-24F

(1) OWNER Name Adam Burnett Address

(2) LOCATION OF WELL County King SE 1/4 NW 1/4 Sec 24 T 21 N R 06 E WM
(2a) STREET ADDRESS OF WELL (or nearest address) 348XX Enumclaw Black Diamond Rd.
TAX PARCEL NO 9030

(3) PROPOSED USE ☑ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK Owner's number of well (if more than one)
☑ New Well Method ☐ Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☑ Rotary ☐ Jetted ☐ Decommission

(5) DIMENSIONS Diameter of well 6 inches
Drilled 260 feet Depth of completed well 260 ft

(6) CONSTRUCTION DETAILS
Casing Installed
☐ Welded 6" Diam from +1.5 ft to 18.5 ft
☐ Liner installed 4" Diam from -4 ft to 240 ft
☐ Threaded Diam from ft to ft

Perforations ☐ Yes ☑ No
Type of perforator used
SIZE of perforations in by in
perforations from ft to ft

Screens ☑ Yes ☐ No ☐ K-Pac Location
Manufacturer's Name Western
Type PVC Model No
Diam 4 Slot Size 15 from 240 ft to 260 ft
Diam Slot Size from ft to ft

Gravel/Filter packed ☑ Yes ☐ No ☐ Size of gravel/sand 8-12 Silica
Material placed from 160 ft to 260 ft

Surface seal ☑ Yes ☐ No To what depth? 160 ft
Material used in seal Bentonite
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP Manufacturer's Name
Type HP

(8) WATER LEVELS Land-surface elevation above mean sea level ft
Static level 190 ft below top of well Date April 14/01
Artesian pressure lbs per square inch Date
Artesian water is controlled by
(Cap valve, etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes, by whom?
Yield gal /min with ft drawdown after hrs
Yield gal /min with ft drawdown after hrs
Yield gal /min with ft drawdown after hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 12.5 gal /min with 0 ft drawdown after 3 hrs
Airtest gal /min with ft drawdown after hrs
Artesian flow g p m Date
Temperature of water Was a chemical analysis made? ☐ Yes ☑ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color, character size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Top Soil	0	2
Brown Till	2	6
Blue Clay	6	70
Soft brown sandstone	70	235
Hard Sandstone	235	241
Fractured sandstone + quartz (water)	241	260

RECEIVED
APR 17 2001
DEPT OF ECOLOGY

Work Started April 11/01 Completed April 14/01

WELL CONSTRUCTION CERTIFICATION
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief
Type or Print Name L. GOSLING License No 1539
(Licensed Driller/Engineer)
Trainee Name License No
Drilling Company CASCADE DRILLING
(Signed) L Gosling License No 1539
(Licensed Driller/Engineer)
Address 7411 30 ST NE MARYSVILLE
Contractor's Registration No CASCAD09128 Date April 15/01
(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407 6600 The TDD number is (360) 407-6006

ECY 050-1-20 (11/98) 93854

24-F1

The Dep. The Department of Ecology does NOT Warranty the Data and/or the Information on the Well Report.

21-6E-24F

WATER WELL REPORT

ECOLOGY Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle) 152927
☒ Construction
○ Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT
Notice of Intent No. W 176111
Unique Ecology Well ID Tag No. AKR 308
Water Right Permit No. 34850 ENDMCLAW BLACK DIAMOND RD.
Property Owner Name ADAM BURNETT
Well Street Address 34850 ENDMCLAW BLACK DIAMOND RD.
City BLACK DIAMOND County: KING
Location SE 1/4 1/4 NW 1/4 Sec 24 Twn 21N R 6 (EWM) or WWM (circle one)
Lat/Long: (s,t,r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____
Tax Parcel No. 242106-9023-05

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other ____

TYPE OF WORK: Owner's number of well (if more than one) ____
☒ New Well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 260 ft.
Depth of completed well 257 ft.

CONSTRUCTION DETAILS
Casing ☐ Welded ____" Diam. from 0 ft. to 100 ft.
Installed: ☒ Liner installed 4" Diam. from 247 ft. to 7 ft.
☐ Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used ____
SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location ____
Manufacturer's Name WESTERN WELL
Type PVC Model No. ____
Diam. 4" Slot Size .15 from 247 ft. to 257 ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☒ Yes ☐ No ☐ Size of gravel/sand 8-12
Materials placed from ____ ft. to ____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft
Materials used in seal BENTONITE
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

PUMP: Manufacturer's Name GOULDS
Type: SUBMERS. H.P. 1

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 175 ft. below top of well Date AUG 2/04
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test 15+ gal./min. with 0 ft. drawdown after 1 hrs.
Airtest ____ gal./min. with stem set at ____ ft. for ____ hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
TOPSOIL	0	2
BROWN HARDPAN	2	11
SANDY GRAY CLAY	11	56
GRAY TILL	56	89
GRAVEL, SAND, CLAY	89	98
BROWN SANDSTONE	98	197
FRACTURED BASALT	197	235
BASALT, QUARTZ, SAND	235	260

RECEIVED
AUG 04 2004
DEPT OF ECOLOGY

Start Date JULY 28/04 Completed Date AUG 2/04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) ____
Driller/Engineer/Trainee Signature ____
Driller or Trainee License No. 2654

Drilling Company CASCADE DRILLING NW INC.
Address 7411 30TH. ST. NE
City, State, Zip MARYSVILLE, WA
Contractor's Registration No. CASCADN976JA Date AUG 3/04

If trainee, licensed driller's Signature and License no. ____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 4/01)

24-F-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Tom Dahl Address 34520 Enumclaw-Black Diamond Rd S.E. Black Diamond, Wa

(2) LOCATION OF WELL: County King NW ¼ SW ¼ Sec. 24 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner See attached

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 180 ft. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 180 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name Model No.
Type Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 160 ft. below top of well Date 8/1/77
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 12 gal./min. with 5 ft. drawdown after 7 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown clay shocked with rocks	3	11
Gray hardpan	11	37
Gray clay	37	95
Gray fine sand	95	98
Blue gray clay	98	137
Gray clay shocked w/ Thy gravel	137	176
Black sand & gravel (water)	176	180

Work started 7/29 19 77 Completed 8/1 19 77

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 8/1, 19 77

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

24-M-1

The Department of Ecology does NOT Warr y the Data and/or the Information on this Wel ort.

21/06 2411

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No. Black Diamond, Wa. 5C

(1) OWNER: Name David Darby Address 34500 Enumclaw-BLK. Diamond Rd

(2) LOCATION OF WELL: County King — NW ¼ SW ¼ Sec. 24 T. 21 N., R. 6 E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 192 ft. Depth of completed well 192 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 192 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☒ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 168 ft. below top of well Date 9/20/78
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 14 gal./min. with 10 ft. drawdown after 3 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Surface	0	3
Brown clay - gravel	3	19
Brown hardpan	19	26
Gray clay	26	75
Gray silty sand seepage	75	80
Gray hardpan	80	123
Gray clay	123	140
Gray hardpan gravel	140	185
Black hardpacked gravel water	185	192

Work started 9/18 1978 Completed 9/20 1978

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 9/20, 1978

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

24-M2

The Department of Ecology does NOT Warr[illegible] the Data and/or the Information on this Well [illegible]rt.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

21/06-247
Application No
Permit No

(1) OWNER: Name Frank Malone Address 555 South 146th, Seattle, WA

(2) LOCATION OF WELL: County King NW¼ SW¼ Sec. 24 T. 21 N., R. 6E W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 178 ft. Depth of completed well 178 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 178 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite & cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 151.00 ft. below top of well Date 9/16/77
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 15 gal./min. with 27 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
top soil	0	7
sand & gravel and bolders brown	7	23
till blue	23	35
clay & gravel blue	35	118
till blue	118	175
sand & gravel water bearing	175	178

Work started 9/16/77 19 Completed 9/19/77 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NORTHWEST PUMP & DRILLING CO.
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn

[Signed] (Well Driller)

License No. 0096 Date 9/20/77, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

24-M-3

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No.

(1) OWNER: Name Jerry Davis Address (approx) 24753 Issaquah-Black Diamond Rd.

(2) LOCATION OF WELL: County King NW ¼ SW ¼ Sec 24 T 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 140 ft. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 140 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam Slot size from ft. to ft.
Diam Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 107 ft. below top of well Date 3/30/78
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test 25 gal./min. with 13 ft. drawdown after 4 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown hardpan	3	16
Gray hardpan	16	47
Gray clay	47	83
Gray hardpan	83	128
Gray water sand & gravel	128	140

Work started 3/27, 19 78 Completed 3/30, 19 78

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc.
(Person, firm, or corporation) (Type or print)

Address 19415 108th Ave S.E. Renton 98055

[Signed] Brad Johnson
(Well Driller)

License No. 0233 Date 3/30, 19 78

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

24-M-4

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471725121593501

General Location Details:

Name: Davis, Jerry

Unique Well ID: S_471725121593501
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 24 QS: NW/SW
Local Number: 21N/06E-24M02
City: King County Zipcode: 98010
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 140 Feet
Surface Elevation: 650 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
4/8/1987	11:45	105.82	544.18	Steel tape

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact

Related Information:

Water and Land Resources Topics

24-M-4

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_52331_01

General Location Details:

Name: Beadle - Freshwater

Unique Well ID: GrpB_52331_01
Parcel ID Number: 2421069010
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 24 QS: NW/SW
Local Number: 21N/06E-24
City: King County
Zipcode: 98010
Data Source: Seattle - KC Health
Who are these data sources?
Location Type: Well
Well Depth: 140 Feet
Surface Elevation: 0 Feet
What is surface elevation?
Location Accuracy: Parcel
What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
7/28/1997	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

24-M-4

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 08/02/2005
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
52331 Y	BEADLE FRESHWATER WATER SYSTEM	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

JAMES MAULE [WS - PRIMARY CONTACT]
PO BOX 293
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 013386

JAMES MAULE
26130 SE GREEN VALLEY RD
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360) 886-1641		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [x] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

1,000

15	16	17	18										19			20	21						22	23	24			
	SOURCE NAME	INTERTIE	SOURCE CATEGORY										USE				TREATMENT								SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456. IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL		X										X				X						140	24	SW SW	24	21N	06E

24-N-4

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
52331 Y	BEADLE FRESHWATER WATER SYSTEM	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	3	3
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	3		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		3	3

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 8

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
AUG 27 70 001617
CASH ___ OTHER ___ NONE ___

RECEIVED
DEPARTMENT OF ECOLOGY
AUG 31 70 001633
CASH ___ OTHER ___ NONE ___

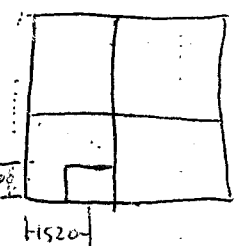
1. NAME Boondocks Tavern ANDREW Callero
ADDRESS 1/2-Mi-So-of BLACK DIAMOND-ONE NUMCA [illegible]
BLACK DIAMOND ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)
A. IF GROUND WATER, THE SOURCE IS Well
B. IF SURFACE WATER, THE SOURCE IS ___

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:
A. QUANTITY OF WATER CLAIMED 10 Gal. Per M PRESENTLY USED 5 Gals (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)
B. ANNUAL QUANTITY CLAIMED 16 PRESENTLY USED 2 Gal-P.M. (ACRE FEET PER YEAR)
C. IF FOR IRRIGATION, ACRES CLAIMED ___ PRESENTLY IRRIGATED ___
D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continuously

4. DATE OF FIRST PUTTING WATER TO USE: Aug 1951 MONTH August YEAR 1951

5. LOCATION OF THE POINT(S) OF DIVERSION, WITHDRAWAL: ~~[illegible]~~ 1520 FEET East AND 1000 FEET North ~~[illegible]~~ FROM THE ~~[illegible]~~ SW CORNER OF SECTION 24 Twsp 21
BEING WITHIN ~~[illegible]~~ SE¼SW¼ OF SECTION 24 T. 21 N. ___ R. 6 E (E.or W.) ~~[illegible]~~
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF ___
(GIVE NAME OF PLAT OR ADDITION)



6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED.
Sec. 24 Twsp. 21N R 6E Block 9011 Code 3140
SW¼ of SW¼ Less Portion of - RR R/W
Kummer Branch Ly - NLy - of C/L of
State Hiway #169 - Less - St. Hiway #169.
Less - Co. Road COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic, Residence - Tavern Cafe + Gas Station

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED ___ REGISTRY NUMBER ___

SEP-1 70 001167 < THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

[signature]
ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT - DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF
X Andrew Callero
DATE Aug 25-1970
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBON IN ALL ALONG WITH YOUR FEE TO DEPARTMENT OF WATER RESOURCES DIVISION OF WATER MANAGEMENT

24-N-1

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpA_07710_01

General Location Details:

Name: Boondocks Tavern

Unique Well ID: GrpA_07710_01
Parcel ID Number: 2421069031
Washington Dept. of Ecology Well Tag: aff817
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 24 QS: SW/SW
Local Number: 21N/06E-24N
City: King County
Zipcode: 98010
Data Source: King County DNRP
Who are these data sources?
Location Type: Well
Well Depth: 117 Feet
Surface Elevation: 669.67 Feet
What is surface elevation?
Location Accuracy: GPS
What are these location accuracies?

Well Log Data:

King County well log data is not available.
The link below leads to the Washington Dept. of Ecology (WA DOE) Well Logs website and searches for any available well logs for this location. Well logs are available from WA DOE in both PDF and TIF formats. **[NOTE: this link will open a new window]:**
Search for WA DOE well logs for aff817 – not in database

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications &

Related Information:

Water and Land Resources Topics

24-N-1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 05/25/2006
Printed: 03/13/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
07710 L	BOONDOCKS TAVERN	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

ERIC ROB [OWNER]
PO BOX 830
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 032067

ERIC ROB
PO BOX 830
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360) 886-9735		Owner Daytime Phone: (360) 886-9735	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

1. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [x] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [ ] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [x] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL #1		X										X				X						117	10	SW SW	24	21N	06E

24-N-1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
07710 L	BOONDOCKS TAVERN	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	0	Undetermined
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	0		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	2	2	
28. TOTAL SERVICE CONNECTIONS		2	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 0

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?	4	4	4	4	4	4	4	4	4	4	4	4
B. How many days per month are they present?	20	20	20	20	20	20	20	20	20	20	20	20

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	**ANNUALLY**	**ONCE EVERY 3 YEARS**
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____ **TITLE:** _____

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

95206

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent G1128859

UNIQUE WELL I D # AFJ 631

Water Right Permit No 21-6E-24N

(1) OWNER Name Clayton Snyder Address 25206 SE Green Valley Rd Black Diamond

(2) LOCATION OF WELL County King SW 1/4 SW 1/4 Sec 24 T 21 N R 6E WM

(2a) STREET ADDRESS OF WELL (or nearest address) Green Valley Rd Black Diamond

TAX PARCEL NO 242106-9036

(3) PROPOSED USE ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK Owner's number of well (if more than one) ____
☒ New Well Method ☐ Deepened ☐ Dug ☐ Bored ☐ Reconditioned ☐ Cable ☐ Driven ☐ Decommission ☒ Rotary ☐ Jetted

(5) DIMENSIONS Diameter of well 6 inches
Drilled 150 feet Depth of completed well 150 ft

(6) CONSTRUCTION DETAILS
Casing Installed
☐ Welded 6" Diam from +2 ft to 18 ft
☒ Liner installed 4" Diam from +2 ft to 130 ft
☐ Threaded ____ Diam from ____ ft to ____ ft

Perforations ☐ Yes ☐ No
Type of perforator used ____
SIZE of perforations ____ in by ____ in
____ perforations from ____ ft to ____ ft

Screens ☒ Yes ☐ No ☐ K-Pac Location ____
Manufacturer's Name Western
Type PVC Model No ____
Diam 4 Slot Size 15 from 130 ft to 150 ft
Diam ____ Slot Size ____ from ____ ft to ____ ft

Gravel/Filter packed ☒ Yes ☐ No ☐ Size of gravel/sand 8-12 Silica
Material placed from 100 ft to 150 ft

Surface seal ☒ Yes ☐ No To what depth? 100 ft
Material used in seal Bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP Manufacturer's Name ____
Type ____ H P ____

(8) WATER LEVELS Land-surface elevation above mean sea level ____ ft
Static level 114 ft below top of well Date May 25 01
Artesian pressure ____ lbs per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____
Yield ____ gal /min with ____ ft drawdown after ____ hrs
Yield ____ gal /min with ____ ft drawdown after ____ hrs
Yield ____ gal /min with ____ ft drawdown after ____ hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test 20+ gal /min with 6 ft drawdown after 2 hrs
Airtest ____ gal /min with ____ ft drawdown after ____ hrs
Artesian flow ____ g p m Date ____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Top Soil	0	10
Sandy Brown Clay + Cobbles	10	30
Blue Till	30	52
Blue clay	52	102
Gravel	102	103
Blue Till	103	107
Gravel	107	125
Blue Till	125	141
Sand (water)	141	150

RECEIVED
MAY 29 2001
DEPT OF ECOLOGY

Work Started May 22 01 Completed May 25 01

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name L. GOSLING License No 1539
(Licensed Driller/Engineer)

Trainee Name ____ License No ____
Drilling Company ____
(Signed) ____ License No ____
(Licensed Driller/Engineer)
Address 7411 30th St NE Marysville WA
Contractor's Registration No CASCADOG1P8 Date June 26 01

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407-6600 The TDD number is (360) 407-6006

ECY 050-1-20 (11/98)

95206

24-N-29

The Dep. The Department of Ecology does NO Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on the Well Report.

WELL LOG CHANGE FORM

Public Health

Instructions: Record any change made to the well log record on this form. Then always append this form to the well log image. File with the original.

WCL Log ID (Required) 95206 Well Log ID _____

Regional Office: ☐CRO ☐ERO ☒NWRO ☐SWRO

Type of Well: ☒ Water ☐ Resource
Notice of Intent: W128859 Ecology Well ID Tag No. AFJ632
Property (Well) Owner's Name Snyder
Well Street Address _____
City _____ County _____ Zip Code _____
Location: ____1/4-1/4 ____1/4 Sec ____ Twn ____ R ____ E or W (Circle One)
Lat./Long: (Required) Lat. Deg. _____ Lat. Min/Sec _____
Long. Deg. _____ Long. Min/Sec _____
Horizontal Collection Method Code _____
Tax Parcel No _____
Type of Work: ☐New Well ☐ Reconditioned ☐ Deepened
Well Log Received Date __/__/__
Well Diameter ___ (in inches) Well Depth _____ (in feet) Well Completed Date __/__/__
Driller's Ecology License No. _____
Trainee's Ecology License No. _____

Reason/Source of Change (Required)
Changed well tag per request from Seattle & King County Health Dept.

Signature of Well Log Tracker (Required) Melissa Snochinger Date 5/11/06

ECY-WR-WLCF Rev. 10/02/02

24-N-26

21/06-24N

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No.

(1) OWNER: Name Jim Maule Address Black Diamond

(2) LOCATION OF WELL: County King — SW ¼ SW ¼ Sec 24 T. 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☑ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) II

New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☑ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 359 ft. Depth of completed well — ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 100" Diam. from 0 ft. to 100 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☑ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☑
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☑
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 18 ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 640 ft.
Static level — ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☑ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test — gal./min. with — ft. drawdown after — hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown Till	0	23
Dark Brown clay	23	33
Coal	33	38
Dark Brown clay will scrape off LT	38	56
Coal	56	60
Dark Brown clay	60	80
Coal	80	87
Dark Brown clay or shale	87	92
Coal	92	96
Dark Brown hard-wavy shale	96	352
Coal cores v	352	359
filled with cement and bentonite	359	340
had 110 of water - twice - not consist - talked USGS - they said dont go any deeper move as far North as possible		

APR 26 1988

Work started April 1988 Completed April 1988

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Evergreen Drilling (Person, firm, or corporation) (Type or print)

Address 25627 SE 192 Maple Valley

[Signed] Roland Finkeny (Well Driller)

License No. 0139 Date 4-25, 1988

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

24-N-3

The Department of Ecology does NOT Warr[illegible] the Data and/or the Information on this Well [illegible]rt.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

1. NAME ERNEST ROMEDO

ADDRESS BOX 136

BLACK DIAMOND WASH. ZIP CODE 98010

OTHER / NONE

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: WELL (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS WELL

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 1 A.F (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 300 GAL DAILY

B. ANNUAL QUANTITY CLAIMED 1 A.F (ACRE FEET PER YEAR) PRESENTLY USED 300 GAL. DAILY

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED:

4. DATE OF FIRST PUTTING WATER TO USE: MONTH YEAR 1953

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 300' FEET AND

FEET 1500 FROM THE W CORNER OF SECTION 24

BEING WITHIN OF SECTION 24 T. 21 N., R. 6E (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: 24-21-06 BEG SW COR OF SE 1/4 OF SW 1/4 TH N 01-44-11 W 816.98FT TH S 86-31-25 E 640.79 FT TH S 01-46-19 E 834.70 FT TH N 84-53-08 W 629.05 FT TO BEG LESS R/W KUMMER BRANCH PAC COAST R R LESS STATE RD #5

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC FARM

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: DEED

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

SEP 24 1979635

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Ernest Romedo

DATE 9-28-74

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA WASHINGTON 98504

ORIGINAL DWR

24-P-1

254708

21·6E·25C

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

● Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W237808

Unique Ecology Well ID Tag No. APR-443

Water Right Permit No. _____

Property Owner Name Randy Weber

Well Street Address 26500 SE 354th ST

City Black Diamond County King

Location NE 1/4-1/4 NW 1/4 Sec 25 Twn 21 R 6 (WWM or WWM) circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 289400-0010

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 107 ft. Depth of completed well 107 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 107 ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____ Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal bentowite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 70 ft. below top of well Date 2-6-07

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 50 gal./min. with stem set at 104 ft. for 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Hardpan-brown	3	26
Sandy clay-brown	26	41
Hardpan-gray	41	85
Sand-gravel water gray	85	107
Hardpan-gray	107	–

RECEIVED
FEB 20 2007
DEPT. OF ECOLOGY

Start Date 2-5-07 Completed Date 2-6-07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co, Inc

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSOC207QM Date 2-6-07

If TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

25-C-1

193911

21-6E-25C

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

- (•) Construction
- ( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

PROPOSED USE: (•) Domestic ( ) Industrial ( ) Municipal ( ) DeWater ( ) Irrigation ( ) Test Well ( ) Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

(•) New well ( ) Reconditioned *Method:* ( ) Dug ( ) Bored ( ) Driven ( ) Deepened ( ) Cable (•) Rotary ( ) Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 132 ft. Depth of completed well 130 ft.

CONSTRUCTION DETAILS

Casing Installed: (•) Welded 6" Diam. from 0 ft. to 130 ft.
( ) Liner installed _____" Diam. from _____ ft. to _____ ft.
( ) Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ( ) Yes (•) No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ( ) Yes (•) No ( ) K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ( ) Yes (•) No ( ) Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: (•) Yes ( ) No To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? ( ) Yes (•) No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 70 ft. below top of well Date 3-23-06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ( ) Yes (•) No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 20 gal./min. with stem set at 125 ft. for 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ( ) Yes (•) No

CURRENT

Notice of Intent No. W244651

Unique Ecology Well ID Tag No. APR-476

Water Right Permit No. _____

Property Owner Name Randy Weber

Well Street Address 26514 SE 354th ST

City Black Diamond-Enumclaw County King

Location NE 1/4-1/4 NW/4 Sec 25 Twn 21 R 6 (EWM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 289400-0020

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Hardpan - brown	3	20
Sandy clay - brown	20	45
Hardpan - grey	45	118
Sand-gravel-water-grey	118	130
Hardpan - grey	130	132

RECEIVED

APR 03 2006

DEPT. OF ECOLOGY

Start Date 3-21-06 Completed Date 3-23-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

(•) Driller ( ) Engineer ( ) Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature Brad Johnson

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co., Inc.

Address 9415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSDC207QM Date 3-23-06

If TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.

The Department of Ecology does NOT warranty the Data and/or the Information on this Well Report.

25-C-2

The Department of Ecology does NOT warranty the Data and/or the Information on this Well Report.

21-6E. 25C.

193855 Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current
Notice of Intent No. W237802
Unique Ecology Well ID Tag No. AKF-987
Water Right Permit No.
Property Owner Name Randy Weber
Well Street Address 26517 SE 354th ST
City Enumclaw-Black Diamond County King
Location NE 1/4-1/4 NW/4 Sec 25 Twn 21 R 6 EWM or WWM ☒ circle one
Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. 289400-003

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 130 ft.
Depth of completed well 123 ft.

CONSTRUCTION DETAILS
Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 123 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used _____
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☒ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 58 ft. below top of well Date 3-6-06
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 18 gal./min. with stem set at 118 ft. for 1 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Sandy clay - brown	3	14
Hardpan - gravel - brown	14	51
Hardpan - gray	51	106
Sand - gravel - water gray	106	123
Hardpan - gray	123	130

RECEIVED
MAR 27 2006
DEPT. OF ECOLOGY

Start Date 3-1-06 Completed Date 3-6-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brad Johnson
Driller/Engineer/Trainee Signature _____
Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co, Inc
Address 19415 108th Ave SE
City, State, Zip Renton, WA 98055
Contractor's Registration No. JOHNSDC207CM Date 3-6-06

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

25-C-B

21-6E-25C

193854 Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission

☒ Construction
☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W237801
Unique Ecology Well ID Tag No. AKF-961
Water Right Permit No. _____
Property Owner Name Randy Weber
Well Street Address 26527 SE 354th St
City Enumclaw County King
Location NE 1/4-1/4 NW 1/4 Sec 25 Twn 21 R 6 EWM or WWM ☒ circle one
Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____
Tax Parcel No. 289400-0040

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____
☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 128 ft.
Depth of completed well 124 ft.

CONSTRUCTION DETAILS
Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 124 ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No
Type of perforator used _____
SIZE of perfs _____ in. by ____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____
Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 60 ft. below top of well Date 2-28-06
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 15 gal./min. with stem set at 120 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	4
Sandy-clay-brown	4	15
Hardpan-gravel-brown	15	53
Hardpan-rocks-gray	53	108
Sand-gravel-water-gray	108	124
Hardpan-gray	124	128

RECEIVED
MAR 27 2006
DEPT. OF ECOLOGY

Start Date 2-22-06 Completed Date 2-28-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) Brad Johnson
Driller/Engineer/Trainee Signature _____
Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co., Inc.
Address 19415 108th Ave SE
City, State, Zip Renton, WA 98055
Contractor's Registration No. JOHNSOC202QM Date 2-28-06

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

25-C-4

The Department of Ecology does NOT warranty the Data and/or the Information on this Well Report.

193853

21-6E-25C

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

● Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W 237803

Unique Ecology Well ID Tag No. AKF-958

Water Right Permit No. _____

Property Owner Name Randy Weber

Well Street Address 26537 SE 354th ST

City Enumclaw-BLDNG County King

Location NE/4-1/4 NW/4 Sec 25 Twn 21 R 6 (EWM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 289400-0050

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened — *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 124 ft. Depth of completed well 120 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 120 ft.; ☐ Liner installed _____" Diam. from _____ ft. to _____ ft.; ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no of perfs _____ from _____ ft. to _____ ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal Bentonite

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 60 ft. below top of well Date 3-20-06

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test ☒ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 20 gal./min. with stem set at 116 ft. for 1 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☒ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Sandy clay - brown	3	15
Hardpan-gravel - brown	15	53
Hardpan - gray	53	108
Sand-gravel-water-gray	108	120
Hardpan - gray	120	124

RECEIVED

MAR 27 2006

DEPT OF ECOLOGY

Start Date 3-7-06 Completed Date 3-20-06

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co., Inc.

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSDC207CM Date 3-20-06

If TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Ecology is an Equal Opportunity Employer

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

The Department of Ecology does NOT warranty the Data and/or the Information on this Well Report.

25-C-5

21-6E-25 C

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)* 253420

● Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W237809

Unique Ecology Well ID Tag No. APR-417

Water Right Permit No. _____

Property Owner Name Randy Weber

Well Street Address 26547 SE 354th ST

City BL. Diamond County King

Location NE 1/4-1/4 NW 1/4 Sec 25 Twn 21 R 6 (BWM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 289400-0060

PROPOSED USE: ■ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

■ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ■ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 290 ft. Depth of completed well 290 ft.

CONSTRUCTION DETAILS

Casing Installed: ■ Welded 6 " Diam. from 0 ft. to 150' ft. ■ Liner installed PVC 4 " Diam. from -1 ft. to 290 ft. ☐ Threaded _____ " Diam. from _____ ft. to _____ ft.

Perforations: ■ Yes ☐ No

Type of perforator used Saw

SIZE of perfs 1/8 in. by 3 in. and no. of perfs 100 from 230 ft. to 290 ft.

Screens: ☐ Yes ■ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ■ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ■ Yes ☐ No To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? ☐ Yes ■ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 80 ft. below top of well Date 2-2-07

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ■ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 11 gal./min. with stem set at 260 ft. for 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ■ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Hardpan - brown	3	27
Clay - tan	27	53
Hardpan - gravel - gray	53	150
Sandstone - gray	150	230
Sandstone - water - gray	230	275
Sandstone - gray	275	290
Sandstone - decayed	290	

RECEIVED
FEB 06 2007
DEPT. OF ECOLOGY

Start Date 1-29-07 Completed Date 2-2-07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

■ Driller ☐ Engineer ☐ Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature Brad Johnson

Driller or trainee License No 0233

Drilling Company Johnson Drilling Co. Inc.

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSOC207DM Date 2-2-07

If TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

25-C-6

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

6833

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W125597
AEP 815

OWNER: Name CADMAN ROCK Address PO BOX 97038 REDMOND, WA 98073-9738 21-6E-26A

LOCATION OF WELL: County KING - NE 1/4 NE 1/4 Sec 26 T 21 N., R 6E WM

STREET ADDRESS OF WELL (or nearest address) 26111 GREEN VALLEY RD

PROPOSED USE: IRRIGATION

TYPE OF WORK: Owner's Number of well
If more than one. 1
NEW WELL Method: ROTARY

DIMENSIONS Diameter of well 6 inches
Drilled 360 ft. Depth of completed well 360 ft.

CONSTRUCTION DETAILS:
Casing installed: 6 Dia. from +4 ft. to 36 ft.
WELDED Dia. from ft. to ft.
Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam slot size from ft. to ft.

Gravel packed. NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

PUMP: Manufacturer's Name
Type H.P.

WATER LEVELS: Land-surface elevation
above mean sea level ... ft.
Static level 151 ft. below top of well Date 07/27/00
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal./min. ft. drawdown after hrs.
Air test 1 gal./min. w/ stem set at 360 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

00 AUG -7 AM 10:23

DEPT OF ECOLOGY
CASHIERING SECT

MATERIAL	FROM	TO
BROWN SAND GRAVEL & CLAY	0	23
BROWN SANDSTONE	23	30
COAL	30	40
GRAY SANDSTONE	40	118
TAN SANDSTONE & WATER	118	298
COAL	298	332
GRAY SANDSTONE	332	

RECEIVED
AUG 0 9 2000
DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

Work started 07/26/00 Completed 07/27/00

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME HAYES DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 5696 ERSHIG RD. BOW, WA

[SIGNED] [signature] License No. 1149

Contractor's
Registration No. HAYESDI106J5 Date 08/03/00

7074

25-D-01

6833 82364

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W125600
Water Right Permit No. AEP 814

(1) OWNER: Name CADMAN ROCK Address PO BOX 97038 REDMOND, WA 98073-9738

(2) LOCATION OF WELL: County KING - NE 1/4 NE 1/4 Sec 26 T 21 N , R 6E WM
(2a) STREET ADDRESS OF WELL (or nearest address) 26111 SE GREEN VALLEY RD

00 SEP 18 P1:31

(3) PROPOSED USE: IRRIGATION

(4) TYPE OF WORK: Owner's Number of well (If more than one) 3
NEW WELL Method: ROTARY

(5) DIMENSIONS Diameter of well 6 inches
Drilled 334 ft. Depth of completed well 351 ft.

(6) CONSTRUCTION DETAILS:
Casing installed 8 " Dia from 0 ft. to 29 ft.
WELDED 6 " Dia. from +3 ft to 223 ft.
" Dia. from ft to ft

Perforations: NO
Type of perforator used
SIZE of perforations in by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam slot size from ft. to ft.
Diam slot size from ft. to ft

Gravel packed: NO Size of gravel
Gravel placed from ft to ft.

Surface seal YES To what depth? 18 ft
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level ft below top of well Date 08/17/00
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(10) WELL LOG 21-6E-26A

DEPT OF ECOLOGY
FISCAL SERVICE

Formation Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
BROWN SILT SAND & GRAVEL & CLAY	0	26
GRAY SANDSTONE	26	172
Abandoned Mine Shaft 6" Steel Cased	172	218
BROWN SANDSTONE	218	250
GRAY SANDSTONE	250	290
BROWN SANDSTONE	290	318
COAL	318	334
Abandoned Mine Shaft	334	351
BROWN SANDSTONE	351	

RECEIVED
SEP 20 2000
DEPARTMENT OF ECOLOGY
WELL DRILLING UNIT

DRY HOLE

RECEIVED
DEC 08 2000
DEPT OF ECOLOGY

Work started 08/01/00 Completed 08/17/00

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? NO If yes, by whom?
Yield: gal /min with ft drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test gal/min w/ stem set at ft for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

WELL CONSTRUCTOR CERTIFICATION
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

NAME HAYES DRILLING, INC
(Person, firm, or corporation) (Type or print)

ADDRESS 5696 ERSHIG RD BOW, WA

[SIGNED] [signature] License No. 1149

Contractor's Registration No HAYESDI106J5 Date 09/14/00

7110

25-0-02

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Re

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 6 7109677 9
CASH OTHER NONE

1. NAME Willard L. Todnem
ADDRESS 37825 212th AVE SE
Auburn, Wash ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Surface water (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS _____

B. IF SURFACE WATER, THE SOURCE IS unnamed pond

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 300 gPM PRESENTLY USED 300 GPM
(CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 100 acre feet PRESENTLY USED 20 acre feet
(ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED _____ PRESENTLY IRRIGATED _____

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Year around

4. DATE OF FIRST PUTTING WATER TO USE: MONTH Exact date unknown YEAR Prior to 1900

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: A 10 FEET South AND 235
B 520 FEET ✓ AND 60
FEET East ✓ FROM THE NW CORNER OF SECTION 25
BEING WITHIN NW ¼ NW ¼ OF SECTION 25 T. 21 N., R. 6 E (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT _____ BLOCK _____ OF
_____
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: NW ¼ NW ¼ Sec 25
T 21 N R 6 E WM

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Washing Sand & Gravel

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED Appropriation &/or Riparian

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
FEB 1975 126126
John Biggs
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
X Willard L Todnem
DATE 4-30-74
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/ OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO.
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P.O BOX 829 OLYMPIA, WASHINGTON 98504

25-D-S 3

21/06-25E

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No
Permit No

(1) **OWNER:** Name J. Maule Address 12512 - 6th pl S.W - Seattle

(2) **LOCATION OF WELL:** County King SW ¼ NW ¼ Sec 25 T 21 N. R. 6 W.M

Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic ☑ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one)
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☑ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches.
Drilled 318 ft. Depth of completed well 308 ft.

(6) **CONSTRUCTION DETAILS:**
Casing installed: 6 " Diam. from -0- ft. to 94 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☑ " Diam. from ft. to ft.
PVC - 4½" casing 0 - to 308
Perforations: Yes ☐ No ☐
Type of perforator used Drilled ⅛" holes
SIZE of perforations in. by in.
perforations from 290 ft. to 305 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☑
Manufacturer's Name
Type Model No
Diam Slot size from ft. to ft.
Diam Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☑ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☑ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) **PUMP:** Manufacturer's Name
Type: H.P.

(8) **WATER LEVELS:** Land-surface elevation above mean sea level 400 ft.
Static level 125 ft. below top of well Date 4-3-84
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☑ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test 1 gal./min. with 175 ft. drawdown after 8 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☑

(10) **WELL LOG:**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Glacial Till compact	-0-	93'
Brown Sandstone	93	280'
grey sandstone	280	308
crumbly grey sandstone	308	318'
Water at 300'		
streaks of coal 110' - 170' - 220' 275'		

RECEIVED
MAY 15 1984
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started Nov 1984 Completed April 1984

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Evergreen Drilling (Person, firm, or corporation) (Type or print)
Address 25627 S.E. 192 Maple Valley Wa
[Signed] Roland Finkbeiner (Well Driller)
License No. 0139 Date 4 - 3 , 1984

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

25-E-1

The Department of Ecology does NOT Warrar the Data and/or the Information on this Well Re t.

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

NE

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 075624
Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name RINKS, RON Address PO BOX 271 BLACK DIAMOND, WA 98010- 21-6-26A

(2) LOCATION OF WELL: County KING - NE 1/4 NE 1/4 Sec 26 T 21 N., R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) 258XX SE GREEN VALLEY RD, BLACK DIAMOND

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 140 ft. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 140 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 20 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 91 ft. below top of well Date 04/12/98
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 45 gal/min. w/ stem set at 140 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	3
BROWN CEMENTED SAND & GRAVEL	3	15
BLUE CEMENTED SAND & GRAVEL	15	25
BLUE CLAY	25	44
BLUE CEMENTED SAND & GRAVEL	44	73
BLUE CLAY	73	90
BLUE CEMENTED SAND & GRAVEL	90	125
SM AMT H20	90	125
WATER BEARING SAND & GRAVEL	125	140

Work started 04/11/98 Completed 04/12/98

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] [signature] License No. 0097

Contractor's
Registration No. NORTHPD137PO Date 04/14/98

RECEIVED
AUG 4 - 1998
NWRO-WR
DEPT OF ECOLOGY

NE NW
located per disc via phone call/open house
26-A-1

21/6 - 26 B

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. 614996
Water Right Permit No. _____

(1) OWNER: Name Clayton Snyder Address 25206 SE Green Valley Rd

(2) LOCATION OF WELL: County King NW ¼ NE ¼ Sec 26 T. 21 N. R. 6 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 25421 SE Green Valley Rd, Black Diamond

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 216 feet. Depth of completed well 216 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 79 ft.
Welded ☒ PVC 4" Diam. from -4 ft. to 214 ft.
Liner installed ☐
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☒ No ☐
Type of perforator used saw
SIZE of perforations 1/8 in. by 3 in.
80 perforations from 205 ft. to 212 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 73 ft. below top of well Date 11-30-88
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " " " " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 4 gal./min. with stem set at 210 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	3
Tan gravel sand clay	3	10
Gray hardpan	10	17
Gray clay	17	45
Gray sand	45	50
Gray clay	50	70
Gray gravel	70	79
Gray sandstone - light	79	105
Gray sandstone	105	113
Gray sandstone - light	113	185
coal	185	190
Gray sandstone	190	193
Coal	193	200
Gray sandstone -	200	204
Gray sandstone - seepage	204	208
Gray sandstone	208	216
4' bentonite plug in bottom of well		

RECEIVED
DEC 06 1988
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 11-21 19. Completed 11-30 19 88

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co, Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) 98052
Address 19415 108th Ave SE Renton
(Signed) _____ (WELL DRILLER) License No. 0233
Contractor's Registration No. JOHNSDC207DM Date 11-30 19 88

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

26B-01

located by address

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

RECEIVED
DEPARTMENT OF ECOLOGY
AUG 18 70 00 15 26
CASH ___ OTHER ✓ NONE ___

WATER RIGHT CLAIM

1. NAME ANDREW Callero.
ADDRESS BLACK DIAMOND
Wash. ZIP CODE 98010

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground. (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS Well

B. IF SURFACE WATER, THE SOURCE IS ___

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 5 Gals. Per M PRESENTLY USED 2 Gals. Per M (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 3 AF PRESENTLY USED 3 AF (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED ___ PRESENTLY IRRIGATED ___

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continously

4. DATE OF FIRST PUTTING WATER TO USE: Aug MONTH ___ YEAR 1968

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: ___ FEET ___ AND ___ FEET ___ FROM THE NW¼ & NE¼ CORNER OF SECTION 26 BEING WITHIN 20' W OF SECTION 26 T 21N N ___ R. 6E (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 1 BLOCK Paines Addition OF Block 9003-3135 Sec 26 Twp 21N R 6E (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
Water to be used for Lot-1-2-45
& For watering about 10 head of Cattle
SEC. 26 T. 21N., R. 6E. W.M.

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic Use + Cattle.

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPROPRIATION

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED REGISTRY NUMBER

THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

~~AUG 18 70 001073~~
AUG 18 70 001072

Glen H. Fuller
Glen H. Fuller
ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT-DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Andrew Callero

DATE Aug 15, 1970

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

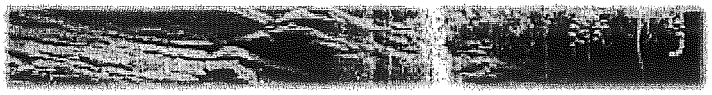
RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE BUILDING OLYMPIA WASHINGTON 9850

ORIGINAL
DWR

26-B-02

group B well

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_10553_01

General Location Details:

Name: Calloo, A

Unique Well ID: GrpB_10553_01
Parcel ID Number: 2621069006
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 26 QS: NW/NE
Local Number: 21N/06E-26B
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Well Well Depth: 105 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
7/20/1994	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0 mg/L MDL:	ND

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
10/28/1997	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
1/12/2000	23:59	WA_DoH_WQ_testing	Normal Environmental	1

26-B-2

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.2 mg/L MDL:	<

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land Resources Web site, please contact Fred Bentler, webmaster.

Department of Natural Resources and Parks
Water and Land Resources Division

Updated: 03/12/2008 17:26:12

Related Information:

Water and Land Resources Topics

Groundwater Management

Links to external sites do not constitute endorsements by King County.
By visiting this and other King County web pages,
you expressly agree to be bound by terms and conditions of the site.
The details.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 08/11/2005
Printed: 03/12/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
10553 H	CALLERO,A	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

DAN & DEANNA HUMPHREYS [WS - PRIMA
25511 SE GREEN VLY R
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 000767

DAN & DEANNA HUMPREYS
25511 SE GREEN VLY R
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360)886-2957		Owner Daytime Phone: (360)886-2957	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [X] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [X] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [X] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	Well 01		X										X				X						105	28	NW NE	26	21N	06E

26-B-2

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
10553 H	CALLERO,A	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	4	Undetermined
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	4		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
28. TOTAL SERVICE CONNECTIONS		4	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 5

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	**ANNUALLY**	**ONCE EVERY 3 YEARS**
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____ **TITLE:** _____

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 058822
Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name CLASSEN, MIKEY Address 22801 92 AVE SO #M-202 KENT, WA 98031- 21-6E-26B

(2) LOCATION OF WELL: County KING - NW 1/4 NE 1/4 Sec 26 T 21 N., R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) 35232 253 AVE SE, AUBURN

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 180 ft. Depth of completed well 180 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 35 ft.
WELDED/LINER IN 4 " Dia. from 7 ft. to 180 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used SAW CUT
SIZE of perforations 1/8 in. by 3 in.
40 perforations from 160 ft. to 180 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 20 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 70 ft. below top of well Date 06/26/97
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 18 gal/min. w/ stem set at 180 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	2
BROWN GLACIAL TILL	2	16
BLUE GLACIAL TILL	16	23
GRAY SANDSTONE W/ COAL	23	180

RECEIVED
JUL 11 1997
DEPT. OF ECOLOGY

Work started 06/25/97 Completed 06/26/97

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] [signature] License No. 0097

Contractor's
Registration No. NORTHPD137PO Date 07/08/97

26-B-02a

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

ENTERED

21-6-26B

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W 058822
Unique Well I.D. #
Water Right Permit No.

(1) OWNER: Name CLASSEN, MIKEY Address 22801 92 AVE SO #M-202 KENT, WA 98031-

(2) LOCATION OF WELL: County KING - NW 1/4 NE 1/4 Sec 26 T 21 N., R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) 35232 253 AVE SE, AUBURN

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 2
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 220 ft. Depth of completed well ~~220~~ 204 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 204 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used SAW CUT
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 20 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 120 ft. below top of well Date 11/20/97
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 40 gal/min. w/ stem set at 220 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	2
BROWN GLACIAL TILL	2	16
BLUE GLACIAL TILL	16	23
GRAY SANDSTONE W/ COAL	23	180
GRAY SANDSTONE	180	198
COAL	198	203
GRAY SANDSTONE	203	220

REPRINT

RECEIVED
DEC 02 1997
DEPT. OF ECOLOGY

Work started 06/25/97 Completed 11/20/97

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] [signature] License No. 0097

Contractor's
Registration No. NORTHPD137PO Date 11/24/97

26-B-63b

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

84583

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W118749

UNIQUE WELL I D # AFT 619

Water Right Permit No

(1) OWNER Name Wayne Haley Address 12857 162 SE Renton 98056

(2) LOCATION OF WELL County King SW 1/4 SE 1/4 Sec 28 T 21 N R 6E WM

(2a) STREET ADDRESS OF WELL (or nearest address) 352XX 253 ave SE Auburn Lot 46

TAX PARCEL NO 289140 0460

21-6E-23Q

(3) PROPOSED USE ☑ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK Owner's number of well (if more than one)
☑ New Well ☐ Deepened ☐ Reconditioned ☐ Decommission
Method ☐ Dug ☐ Bored ☐ Cable ☐ Driven ☑ Rotary ☐ Jetted

(5) DIMENSIONS Diameter of well 6 inches
Drilled 305 feet Depth of completed well 305 ft

(6) CONSTRUCTION DETAILS
Casing Installed 6 Diam from +2 ft to 18 ft
☐ Welded
☑ Liner installed 4 Diam from -5 ft to 295 ft
☐ Threaded Diam from ft to ft

Perforations ☐ Yes ☑ No
Type of perforator used
SIZE of perforations in by in
perforations from ft to ft

Screens ☑ Yes ☐ No ☐ K-Pac Location
Manufacturer's Name Western
Type PVC Model No
Diam 4 Slot Size 15 from 295 ft to 305 ft
Diam Slot Size from ft to ft

Gravel/Filter packed ☑ Yes ☐ No ☐ Size of gravel/sand 8-12 Silica
Material placed from 18 ft to 305 ft

Surface seal ☑ Yes ☐ No To what depth? 18 ft
Material used in seal Bentonite
Did any strata contain unusable water? ☐ Yes ☑ No
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP Manufacturer's Name Goulds
Type Submersible HP 1½

(8) WATER LEVELS Land-surface elevation above mean sea level
Static level 138 ft below top of well Date Dec 20/00
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☑ No If yes, by whom?
Yield gal /min with ft drawdown after hrs
Yield gal /min with ft drawdown after hrs
Yield gal /min with ft drawdown after hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 2 gal /min with 65 ft drawdown after 2 hrs
Airtest gal /min with ft drawdown after hrs
Artesian flow g p m Date
Temperature of water Was a chemical analysis made? ☐ Yes ☑ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation Describe by color, character, size of material and structure and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered

MATERIAL	FROM	TO
Topsoil	0	2
Sandy brown clay rocks	2	7
Brown Till	7	12
Blue Till	12	27
Blue Clay	27	120
Grey shale	120	124
Coal	124	125
Grey shale	125	175
Coal	175	176
Black shale	176	264
Grey shale	264	302
Sandstone (water)	302	305

RECEIVED
DEC 27 2000
DEPT OF ECOLOGY

Work Started Dec 15/00 Completed Dec 20/00

WELL CONSTRUCTION CERTIFICATION

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Type or Print Name L. GOSNELL License No 1539
(Licensed Driller/Engineer)

Trainee Name License No
Drilling Company CASCADE DRILLING
(Signed) License No 1539
(Licensed Driller/Engineer)
Address 2411 30 ST NE Marysville WA.
Contractor's Registration No CASCAD091P8 Date Dec 21/00

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer For special accommodation needs, contact the Water Resources Program at (360) 407-6600 The TDD number is (360) 407 6006

ECY 050-1 20 (11/98)

located to parcel

26-B-04

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report

Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W053781

UNIQUE WELL I.D. # ACG896

Water Right Permit No. 21-QE-26B

(1) OWNER: Name Mike Straight Address 240 15TH ST SE, Auburn, WA 98002

(2) LOCATION OF WELL: County King NW 1/4 NE 1/4 Sec 26 T. 21 N., R. 5E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 35670 SE 253rd, Auburn

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 250 feet. Depth of completed well 250 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: Welded [X] Liner installed [ ] Threaded [ ]

6" Diam. from 0 ft. to 65 ft.

PVC 4" Diam. from -1 ft. to 250 ft.

" Diam. from ft. to ft.

Perforations: Yes [X] No [ ]

Type of perforator used Saw

SIZE of perforations 1/8 in. by 3 in.

90 perforations from 210 ft. to 250 ft.

perforations from ft. to ft.

perforations from ft. to ft.

Screens: Yes [ ] No [X]

Manufacturer's Name

Type Model No.

Diam. Slot size from ft. to ft.

Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel

Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? Yes [ ] No [X]

Type of water? Depth of strata

Method of sealing strata off

(7) PUMP: Manufacturer's Name

Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level

Static level 130 ft. below top of well Date 7-26-96

Artesian pressure lbs. per square inch Date

Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? Yes [ ] No [X] If yes, by whom?

Yield: gal./min. with ft. drawdown after hrs.

" " " "

" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.

Airtest 25 gal./min. with stem set at 220 ft. for 2 1/2 hrs.

Artesian flow g.p.m. Date

Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	3
Brown silty clay	3	8
Brown hardpan	8	19
Tan hardpan	19	36
Gray hardpan - rocks	36	60
Gray sandstone - decayed	60	64
Gray sandstone - medium	64	225
Gray sandstone - water	225	235
Gray sandstone	235	250

RECEIVED
JUL 31 1996
DEPT. OF ECOLOGY

Work Started 7-22 19. Completed 7-26 19 96

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co., Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) 98055

Address 19415 108th Ave SE, Renton

(Signed) (WELL DRILLER) License No. 0233

Contractor's Registration No. JOHNSDC207QM Date 7-26 19 96

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

26-B-05

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21/22 266

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No

(1) OWNER: Name Larry Biller Address 2527 SE 356th Auburn

(2) LOCATION OF WELL: County King, Lot 43 Green River - Sec. NE¼ Sec 26 T 21 N., R 6 E W.M.

Bearing and distance from section or subdivision corner Gorge Homesites

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 30 ft. Depth of completed well 30 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 0 ft. to 30 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 17 ft. below top of well Date 7/28/81
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test 10 gal./min. with 4 ft. drawdown after 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown Top soil	0	5
Gray clay	5	23
Gray hardpan	23	27
Gray water sand & gravel	27	30
Gray clay	30	—

Work started 7/27 19 81 Completed 7/28 19 81

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 7/28, 19 81

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

26-B-06

The Department of Ecology does NOT Warra' the Data and/or the Information on this Well Re rt.

File Original with Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Notice of Intent W098843
UNIQUE WELL I.D. # ABZ 188
Water Right Permit No 21-6E-26A 98031

(1) OWNER: Name Bob Weir Address 11126 SE 256th ST, APT E-104, Kent, WA

(2) LOCATION OF WELL: County King NE 1/4 NE 1/4 Sec 26 T 21 N.R. 6E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 25220 SE 356th, Black Diamond

TAX PARCEL NO.: 289140-0435

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
☒ New Well ☐ Deepened ☐ Reconditioned ☐ Decommission
Method: ☐ Dug ☐ Bored ☐ Cable ☐ Driven ☒ Rotary ☐ Jetted

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 207 feet. Depth of completed well 207 ft.

(6) CONSTRUCTION DETAILS
Casing Installed: ☒ Welded ☐ Liner installed ☐ Threaded
6" Diam. from 0 ft. to 77 ft.
PVC 4" Diam. from -1 ft. to 207 ft.
Diam. from ____ ft. to ____ ft.

Perforations: ☒ Yes ☐ No
Type of perforator used saw
SIZE of perforations 1/8 in. by 3 in.
90 perforations from 130 ft. to 207 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand ____
Material placed from ____ ft. to ____ ft.

Surface seal: ☒ Yes ☐ No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? ☐ Yes ☒ No Depth of strata ____
Type of water? ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 60 ft. below top of well Date 4-14-99
Artesian pressure ____ lbs per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 1 1/2 gal./min. with 100 ft. drawdown after 2 1/2 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? ☐ Yes ☒ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	3
Brown sand-gravel	3	7
Brown hardpan	7	17
Gray sandstone	17	50
coal	50	67
Gray sandstone	67	135
Gray sandstone-seepage	135	207

RECEIVED
APR 15 1999
DEPT OF ECOLOGY

Work Started 4-9 99 Completed 4-14 99

WELL CONSTRUCTION CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson License No. 0233
(Licensed Driller/Engineer)
Trainee Name ____ License No ____
Drilling Company Johnson Drilling Co., Inc
(Signed) ____ License No. 0233
(Licensed Driller/Engineer) 92055
Address 19415 108th Ave SE, Renton, WA
Contractor's Registration No JOHNSDC207PM Date 4-14-99

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

26-B-08

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21/06-26B

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No 014480
Permit No. . . .

(1) OWNER: Name Ed Rein Address 25210 SE 356th Auburn 98002

(2) LOCATION OF WELL: County King NW¼ NE¼ Sec. 26 T. 21 N., R. 6 W.M.
Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) . . . .
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 290 ft. Depth of completed well 290 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 142 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type. Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata.
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level . . . . ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Baller test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	6
Gray hardpan gravel	6	40
Brown hardpan	40	65
Brown sand-gravel	65	140
Gray sandstone seepage	140	290
Owner halted drilling at 290', cap was welded on the well awaiting decision to deepen		

RECEIVED
SEP 12 1989
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 8-19 19 89 Completed 8-23 19 89

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. 9800
(Person, firm, or corporation) (Type or Print)
Address 19415 108th Ave SE Renton
[Signed] (Well Driller)
License No. 0233 Date 8-23 19 89

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1 20

8
26-B-04

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

JUN 25 74 136139
CASH ___ OTHER ___ MORE ___

1. NAME Willis J KENYON
ADDRESS 35864 252 Ave S. E
Auburn Wash ZIP CODE 98001 PHONE NO. TU6-2242

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground WATER (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS A hand dug well

B. IF SURFACE WATER, THE SOURCE IS ___

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 5 gpm (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 5 gpm

B. ANNUAL QUANTITY CLAIMED 1/2 Acre Foot (ACRE FEET PER YEAR) PRESENTLY USED 1/2 Acre Foot

C. IF FOR IRRIGATION, ACRES CLAIMED ___ PRESENTLY IRRIGATED ___

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: CONTINUOUSLY

4. DATE OF FIRST PUTTING WATER TO USE: MONTH SEPT YEAR 1965

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 860 FEET EAST AND 66 FEET South FROM THE North West CORNER OF ~~SECTION~~ TRACT 9
BEING WITHIN ___ OF SECTION 26 T. 21 N., R. 6 (E. or W.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 9 BLOCK ___ OF
Green River Gorge homesites
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
TRACT 9 Green River Gorge homesites

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic supply

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPropriation

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED: THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
JAN 20 75 108237
John Biggs
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF
X Willis J Kenyon
DATE June 24 1974
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

09
26-B-~~60~~

21/06-26B

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ____
Permit No. ____

(1) OWNER: Name Jim Kenyon Address 35614 252nd Ave SE Auburn 98002

(2) LOCATION OF WELL: County King — NW¼ NE¼ Sec. 26 T. 21 N., R. 6E W.M.
Bearing and distance from section or subdivision corner Tract 9 Green River Homesites

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 213 ft. Depth of completed well 213 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 213 ft.
Threaded [ ] ____" Diam. from ____ ft. to ____ ft.
Welded [X] ____" Diam. from ____ ft. to ____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name ____ Model No ____
Type ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel: ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 20' 1984 ft. below top of well Date 3/7/84
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom? ____
Yield: 20 gal./min. with 10 ft. drawdown after 3 hrs.
" " AIR JET " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Baller test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	2
Gray hardpan / rocks	2	26
Gray clay	26	38
Gray hardpan	38	75
Brown sand	75	100
Brown hardpan	100	160
Gray hardpan	160	183
Gray gravel - clay - seepage	183	204
Gray water sand & gravel	204	213

Work started 3/5 19 84 Completed 3/7 19 84

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)
Address 1945 108th Ave SE Renton 98055
[Signed] Brad Johnson (Well Driller)
License No. 0233 Date 3/7, 19 84

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050 1-20

26-B-M
10

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

'888

ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

The Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

Start Card No. W098993
UNIQUE WELL I.D. # ACV725
Water Right Permit No. 21-6-26B

(1) OWNER: Name Lance Short Address 3650 Porter ST., Enumclaw, WA 98022

(2) LOCATION OF WELL: County King NW 1/4 NE 1/4 Sec 26 T. 21 N. R. 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 25231 SE 356th ST., Auburn, WA 98092

(3) PROPOSED USE: ☒ Domestic ☒ Irrigation ☐ DeWater Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (If more than one) ____
Abandoned ☐ New well ☒ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☒ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 199 feet. Depth of completed well 199 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +1 ft. to 199 ft.
Welded ☒ ____" Diam. from ____ ft. to ____ ft.
Liner installed ☐ ____" Diam. from ____ ft. to ____ ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 173 ft. below top of well Date 8-18-98
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 11 gal./min. with stem set at 195 ft. for 2 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	3
Brown sand-gravel	3	9
Brown hardpan	9	23
Tan hardpan	23	67
Brown hardpan-gravel	67	136
Tan hardpacked gravel	136	193
Gray black water sand-gravel	193	199

RECEIVED
SEP 1 1998
DEPT OF ECOLOGY

Work Started 8-10, 19. Completed 8-18, 1998

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co., Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) 9802
Address 19415 108th Ave SE, Renton, WA
(Signed) [signature] (WELL DRILLER) License No. 0233
Contractor's Registration No. JOHNSDC207QM Date 8-18, 1998

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

11
26-B-

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No 028158

Water Right Permit No.

(1) OWNER: Name Jack Van Kooten Address 25900 416th Enumclaw

(2) LOCATION OF WELL: County King NE¼ NE¼ Sec 26 T 21 N, R 6 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 2547x 357th Auburn

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 340 feet. Depth of completed well 340 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from 0 ft. to 94 ft.
Welded [X] PVC 4" Diam. from -1 ft. to 340 ft.
Liner installed [ ]
Threaded [ ] " Diam. from ft. to ft.

Perforations: Yes [X] No [ ]
Type of perforator used Saw
SIZE of perforations 1/8 in. by 3 in.
100 perforations from 260 ft. to 340 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 250 ft. below top of well Date 1-28-90
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.
Airtest 2 1/2-3 gal./min. with stem set at 315 ft. for 2 1/2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	5
Brown hardpan gravel	5	23
Gray hardpan gravel	23	68
Gray clay - gravel	68	94
Gray sandstone	94	125
Coal	125	128
Gray sandstone water at 300'	128	340

Work started 1-24 19 Completed 1-28 19 90

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co. Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 19415 108th Ave SE Renton 98055
(Signed) (WELL DRILLER) License No. 0233
Contractor's Registration No JOHNSDC207DM Date 1-28 19 90

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 060-1-20 (10/87) 1329-

26-B-12

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original with
Department of Ecology
Second Copy - Owner's Copy
Third Copy - Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W108023

UNIQUE WELL I.D. # ACG837

Water Right Permit No. 21-6E-26B 98051

(1) OWNER: Name Frank Beach Address PO Box 665, Ravensdale, WA

(2) LOCATION OF WELL: County King NW 1/4 NE 1/4 Sec 26 T 21 N.R. 6E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 25247 SE 356 Th, Auburn

TAX PARCEL NO.: 289140-0060

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
[X] New Well [ ] Deepened [ ] Reconditioned [ ] Decommission
Method: [ ] Dug [ ] Cable [X] Rotary [ ] Bored [ ] Driven [ ] Jetted

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 115 feet. Depth of completed well 115 ft.

(6) CONSTRUCTION DETAILS
Casing Installed: [X] Welded 6" Diam. from 0 ft. to 115 ft.
[ ] Liner installed ____" Diam. from ____ ft. to ____ ft.
[ ] Threaded ____" Diam. from ____ ft. to ____ ft.

Perforations: [ ] Yes [X] No
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.

Screens: [ ] Yes [X] No [ ] K-Pac Location ____
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.
Diam. ____ Slot Size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: [ ] Yes [X] No [ ] Size of gravel/sand ____
Material placed from ____ ft to ____ ft.

Surface seal: [X] Yes [ ] No To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft
Static level 85 ft. below top of well Date 5-4-99
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 20 gal./min. with 12 ft. drawdown after 2 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? [ ] Yes [X] No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Surface	0	3
Brown sand-gravel	3	8
Tan hardpan	8	56
Gray hardpan	56	100
Gray water sand-gravel	100	115
Gray hardpan gravel	115	

RECEIVED
MAY 6 1999
DEPT OF ECOLOGY

Work Started 4-30-99 Completed 5-4-99

WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Brad Johnson License No. 0233
(Licensed Driller/Engineer)

Trainee Name ____ License No. ____

Drilling Company Johnson Drilling Co., Inc

(Signed) [signature] License No. 0233 98051
(Licensed Driller/Engineer)

Address 19415 108th Ave SE, Renton, WA

Contractor's Registration No JOHNSOC298M Date 5-4-99

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

ECY 050-1-20 (11/98)

13

26-B-[illegible]

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

21/6 - 26 B
Application No.
Permit No.

(1) OWNER: Name Mr Phil Burnett Address 25277 SE 356th Auburn 98002

(2) LOCATION OF WELL: County King See attached NW¼ NE¼ Sec. 26 T 21 N. R 6 E W.M.

Bearing and distance from section or subdivision corner Lot 4 - Green River Gorge homesites

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 109 ft. Depth of completed well 109 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 109 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 80 ft. below top of well Date 5/4/84
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" 20 " 15 " 3½ "
" " AIR JET "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface loam	0	5
Brown sandy gravel	5	15
Gray hardpan	15	98
Gray water sand & gravel	98	109
Gray gravel & clay	109	—

Work started 4/27 1984 Completed 5/1 1984

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 5/1 1984

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

14
26-B-4

The Department of Ecology does NOT Warra[illegible] the Data and/or the Information on this Well Re[illegible]t.

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No 219424

21/6E/26D

Water Right Permit No. 98148

(1) OWNER: Name Bob Brown Address 19619 Occidental Ave S, Seattle

(2) LOCATION OF WELL: County King NW ¼ NW ¼ Sec 26 T. 21 N., R. 6E W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 254XX SE 357th, Auburn

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one)

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 240 feet. Depth of completed well 231 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 95 ft.
Welded [X] PVC 4 " Diam. from -1 ft. to 231 ft.
Liner installed [ ]
Threaded [ ] " Diam. from ft. to ft.

Perforations: Yes [X] No [ ]
Type of perforator used saw
SIZE of perforations 1/8 in. by 3 in.
100 perforations from 100 ft. to 225 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 80 ft. below top of well Date 4-12-93
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test

Bailer test gal./min. with ft. drawdown after hrs.
Airtest 4-5 gal./min. with stem set at 215 ft. for 2 1/2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	3
Brown hardpan-rocks	3	19
Gray hardpan	19	90
Gray sandstone	90	170
Gray sandstone-seepage	170	232
Coal	232	237
Gray sandstone	237	240
Bentonite	231	240

RECEIVED
APR 23 1993
DEPT. OF ECOLOGY

Work started 4-8 19. Completed 4-12 1993

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 19415 108th Ave SE Renton 98055

(Signed) Bud Johnson (WELL DRILLER) License No. 0233

Contractor's Registration No. JOHNSDC207CM Date 4-12 1993

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329

15

26-B-18

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

File Original and First Copy with the Division of Water Management
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

21/06-26 B

Application No.

STATE OF WASHINGTON

Permit No. ....

(1) OWNER: Name DONALD L. DEFFLEY Address 25430 SE 357 AUBURN WASH

(2) LOCATION OF WELL: County KING — NW ¼ NE ¼ Sec. 26 T. 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 204 ft. Depth of completed well 204 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from — ft. to 83 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☒ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used: .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? ..... ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 65 ft. below top of well Date 3-23-73
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
Recovers		To	145'	in	1 HR.
Recovers		To	65'	over	nite

Date of test .....
Bailer test 2 gal./min. with ..... ft. drawdown after 4 hrs.
Artesian flow ..... g.p.m. Date 3-23-73
Temperature of water ..... Was a chemical analysis made? Yes ☒ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Till - Brown - Compact	0	33
Clay - Brown	33	35
Clay - Blue	35	42
Clay - Purple	42	48
Clay - Purple - Coal fragments	48	65
" yellow " "	65	77
SANDSTONE - fractured	77	82
SANDstone grey - solid	82	90
1+ gpm AT 90'		
SANDSTONE - Rust-color	90	128
SANDSTONE grey	128	168
SANDSTONE - lime green	168	204
Fracture at 145 - -1 gpm		

Work started MAR, 1973 Completed MAY, 1973

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME EVERGREEN DRILLING (Person, firm, or corporation) (Type or print)

Address 15407 - 42 Ave So Seattle

[Signed] Roland Fuiling (Well Driller)

License No. 223-02 3719 Date MAY 28, 1973

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 5-69)—5-69.

16

26-B-

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
APR 25 74 094075
CASH OTHER NONE

1. NAME DONALD L. DEFFLEY
ADDRESS 25430 S.E. ~~358~~ 357TH
AUBURN WASH ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS DRILLED WELL

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 2.6 GPM PRESENTLY USED 2.6 GPM
(~~CUBIC FEET PER SECOND~~ OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 1 PRESENTLY USED 1
(ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED — PRESENTLY IRRIGATED —

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: DAILY

4. DATE OF FIRST PUTTING WATER TO USE: 2 MONTH NOVE YEAR 1973

5. LOCATION OF THE POINT(S) OF DIVERSION (WITHDRAWAL) 100 FEET NORTH AND
100 FEET WEST FROM THE SOUTH CORNER OF SECTION LOT 13
BEING WITHIN OF SECTION 26 T. 21 N. R. 6E (~~E~~) (W.M)

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 13 BLOCK OF
GREEN RIVER GORGE HOMESITES IN VOLUME 62, OF PLATS, PAGES 36 & 37
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
SECTION 26 TWP 21N. R6E. WM,
TRACK #13 GREEN RIVER GORGE HOMESTES
IN VOLUME 62 of PLATS PAGES 36 AND 37
IN KING COUNTY WASHINGTON
COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPROPRIATED

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED REGISTRY NUMBER
THIS HAS BEEN ASSIGNED
OCT 1 / 1408374 CLAIM REGISTRY NO.
ASSISTANT DIRECTOR, DIVISION OF WATER MANAGEMENT-DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
X Donald L. Deffley
DATE 4-23-74
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☒ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL
OWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE. BUILDING-OLYMPIA, WASHINGTON 98501

16
26-B-W

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No 028159
Water Right Permit No

(1) OWNER: Name Duane Gerrard Address 2C920 SE Renton Issaquah Rd

(2) LOCATION OF WELL: County King NW¼ NE¼ Sec 26 T. 21 N., R. 6 W.M

(2a) STREET ADDDRESS OF WELL (or nearest address) 25500 SE 357th, Auburn

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐ DeWater ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 300 feet. Depth of completed well 300 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 90 ft.
Welded ☒ PVC 4" Diam. from +1 ft. to 300 ft.
Liner installed ☐
Threaded ☐ Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used saw
SIZE of perforations 1/8 in. by 3 in.
100 perforations from 200 180 ft. to 300 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 120 ft. below top of well Date 2-5-90
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest 4-5 gal./min. with stem set at 280 ft. for 2½ hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	3
Brown gravel	3	12
Brown hardpan-rocks	12	46
Gray hardpan	46	90
Gray decayed rock	90	115
Gray sandstone	115	180
Gray sandstone seepage	180	220
Gray sandstone	220	260
Gray sandstone 3gpm	260	280
Gray sandstone	280	300

Work started 1-31 19. Completed 2-8 19 90

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 19415 108th Ave SE Renton 980
(Signed) (WELL DRILLER) License No. 0273
Contractor's Registration No. JOHNSDC202BR Date 2-8 19 90

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329

17
26-B

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

- location of well known from Open House
- No log or Water Claim or IMap data sheet

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
JAN 23 74 13783
CASH ___ OTHER ___ NONE ___

Water Right Claims Registration

Water Right Claim

49

Name RALPH L. GRAVES

Address 35241 - 253RD S.E.

AUBURN, WN. Zip Code 98002 Phone No. TU6-2479

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: TRACT No. 45 OF GREEN RIVER GORGE HOMESITES. RECORD ON PLAT VOL. #62, PG. 36, 37, OF KING COUNTY, TOGETHER WITH 1/50 UNDIVIDED INTEREST OF TRACT #26 GREEN RIVER GORGE HOME-SITES.

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 26 T. 21 N., R. 6E E/W. W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered: JAN 23 75

This has been assigned Water Right Claim Registry No. 111514

Director, Department of Ecology John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Ralph L. Graves

Date 6-17-74

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☒ Additional information relating to water quality and/or well construction is available.

FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL. DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

19
26-B-[illegible]

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

RECEIVED
DEPARTMENT OF ECOLOGY
JAN 25 74 137832
CASH ___ OTHER ✓ NONE ___

Name RALPH L GRAVES (Short Form) 09

Address 35241 - 253RD S.E.

AUBURN, WN. Zip Code 98002 Phone No. TU6-2470

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: GREEN RIVER GORGE HOMESITES TRACT #46 & 1/50 INTEREST IN TR. #26 GREEN RIVER GORGE HOMESITES.

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____ (Give name of plat or addition)

In addition, please indicate Sec. 26 T. 21 N., R. 6E E/W, W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered — This has been assigned Water Right Claim Registry No.

JAN 23 75 111515

Director, Department of Ecology [signature]

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X [signature]

Date 6/17/94

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

26-B-20

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 31 1974 173388
CASH ___ OTHER ___ NONE ___

1. NAME JACKIE W. HATFIELD

ADDRESS 1002 68th AVE E

TACOMA, WASH ZIP CODE 98424

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: ~~SURFACE~~ GROUND (SURFACE OR GROUND WATER)

~~GROUND~~ W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS [redacted]

B. IF SURFACE WATER, THE SOURCE IS A NATURAL SPRING

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED .015 PRESENTLY USED .01
(CUBIC FEET PER SECOND ~~OR GALLONS PER MINUTE~~)

B. ANNUAL QUANTITY CLAIMED 2.0 PRESENTLY USED 1.5
(ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED ~~1~~ PRESENTLY IRRIGATED 0

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: DOMESTIC SUPPLY; JAN TO DEC.

4. DATE OF FIRST PUTTING WATER TO USE: MONTH MAY YEAR 1968

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 200 FEET SOUTH AND 10 FEET WEST FROM THE NORTH WEST CORNER [redacted]
SEE LEGAL BELOW
~~BEING WITHIN~~ OF SECTION 26 T. 21 N., R. 6 E (E. or ~~W.~~) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: THE WEST HALF OF THE EAST HALF OF GOVERNMENT LOT 6, SECTION 26, TOWNSHIP 21 NORTH, RANGE 6 EAST, W. M., IN KING COUNTY, WASHINGTON; EXCEPT THE NORTH 30 FEET THEREOF CONVEYED TO KING COUNTY FOR ROAD PURPOSES BY DEED RECORDED UNDER AUDITOR'S FILE NO. 4574301 COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC SUPPLY, STOCK WATER & IRRIGATION

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: CONTRACT OF SALE AUDITOR'S FILE NO. 6342635

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

APR 21 75 158834

John Biggs
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Jackie W. Hatfield

DATE 5-28-1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P.O. BOX 829 OLYMPIA, WASHINGTON 98504

26-D-1

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

Name ORVIN E. GRANGRUTH (Short Form) Ø9

Address 25427 S.E. 356th RT-1

AUBURN Zip Code 98002 Phone No. 886-2641

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: TRACT 5 of GREEN RIVER GORGE HOMESITES, AS PER PLAT RECORDED IN VOLUME 62 of PLATS, PAGE 36, RECORDS of KING COUNTY

If located within the limits of a recorded platted property:

Lot 5 Block of GREEN RIVER GORGE HOMESITES (Give name of plat or addition)

In addition, please indicate Sec. 26 T. 21 N., R. 6 E. W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered This has been assigned Water Right Claim Registry No.

FEB 27 1974 054033

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Orvin E. Grangruth

Date 14 JAN 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☒ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

26-B-22

21/06-26C

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. 1088 017430
Water Right Permit No.

(1) OWNER: Name KERSOP, KEN Address 10407 SE 174TH #1404 RENTON, WA 98055

(2) LOCATION OF WELL: County KING NE 1/4 NW 1/4 Sec 26 T 21 N. R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) LOT 49 GREEN VALLEY RD

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 00016
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 300 ft. Depth of completed well 300 ft.

(6) CONSTRUCTION DETAILS.
Casing installed: 6 " Dia. from 0 ft. to 40 ft.
LINER INSTALLED 4 " Dia. from 20 ft. to 300 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used SAW CUT
SIZE of perforations 1/8 in. by 3 in.
50 perforations from 280 ft. to 300 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? YES
Type of water? SURFACE Depth of strata 18 ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 90 ft. below top of well Date 06/24/88
Artesian Pressure lbs. per square inch Date / /
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 2.5 gal/min. w/ stem set at 300 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	3
BR GLACIAL TILL W/ COBBLES	3	9
BL GLACIAL TILL	9	35
GR SANDSTONE	35	46
SILICA SAND	46	54
GR SANDSTONE	54	59
COAL	59	64
GR SANDSTONE	64	67
SILICA SAND	67	106
COAL	106	112
GR SANDSTONE	112	169
COAL	169	181
GR SANDSTONE	181	300

Work started 06/21/88 Completed 06/24/88

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3249 AUBURN WAY SOUTH

[SIGNED] [signature] License No. 0097

Contractor's
Registration No. NORTHP0137PQ Date 06/23/88

26-C-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Re t.

21/6-26C

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. 017463
Water Right Permit No.

(1) OWNER: Name WHITTLE, C R Address 12762 SE 164 RENTON, WA 98058-

(2) LOCATION OF WELL: County KING - NW 1/4 NW 1/4 Sec 26 T 21 N., R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) 12762 SE 164

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: NEW WELL Owner's Number of well (If more than one) Method: ROTARY

(5) DIMENSIONS: Drilled 300 ft. Diameter of well 6 inches Depth of completed well 300 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 0 ft. to 90 ft.
WELDED/LINER IN 4 " Dia. from 80 ft. to 300 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used SAW CUT
SIZE of perforations 1/8 in. by 3 in.
40 perforations from 280 ft. to 300 ft.
40 perforations from 160 ft. to 180 ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 145 ft. below top of well Date 06/04/89
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time | Water Level | Time | Water Level | Time | Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 2 gal/min. w/ stem set at 300 ft. for 2 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	3
BROWN CEMENTED SAND & GRAVEL	3	9
BLUE GLACIAL TILL	9	75
GRAY SANDSTONE	75	78
COAL	78	83
GRAY SANDSTONE W/ LAYERS OF COAL	83	300

RECEIVED
JUN 20 1989
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 06/03/89 Completed 06/04/89

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME NORTHWEST PUMP & DRILLING (Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] R.B. DeRamus License No. 0097

Contractor's Registration No. NORTHPD137PQ Date 06/04/89

26-C-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21/6E/26 V

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No 036986

Water Right Permit No. _____

(1) OWNER: Name Rudolf Mittelstadt Address 2305 S. 352nd Street Valley Rd Auburn

(2) LOCATION OF WELL: County King NW ¼ NW ¼ Sec 26 T. 21 N., R. 6 W.M

(2a) STREET ADDDRESS OF WELL (or nearest address) _____

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [X] Driven [ ] Reconditioned [ ] Rotary [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 330 feet. Depth of completed well 330 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: _____ " Diam. from _____ ft. to _____ ft.
Welded [X] 6 " Diam. from +1 ft. to 40 ft.
Liner installed [ ] 4" Diam. from 40 ft. to 330 ft.
Threaded [ ]

Perforations: Yes [X] No [ ]
Type of perforator used saw blade
SIZE of perforations 18 in. by 3 in.
50 Per 100 perforations from 40 ft. to 300 ft.
100 perforations from 300 ft. to 330 ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name G.E. Rite
Type: Submersible H.P. 1

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 290 ft. below top of well Date 4-2-91
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test 5 gal./min. with 20 ft. drawdown after 2 hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface soil	0	20
Hardpan	20	36
Sand & rocky	36	60
Sand & gravel w/ Cobbles & rocks	60	330

Work started 3-21 19 91 Completed 4-2 19 91

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Mueller Drlg (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address Box 366 Duvall 98019

(Signed) Randle Harris (WELL DRILLER) License No 1374

Contractor's Registration No Mueller*01 Date 4-11 19 91

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20 (10/87) -1329-

26-C-3

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 17 74 12524
CASH OTHER MONEY

Water Right Claims Registration

Water Right Claim

9

Name Kenneth E. and Ellen R. Hansen

Address 743 So. Trenton St.

Seattle, Wash. Zip Code 98108 Phone No. 762-2954

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: _____

Tract 39 of Green River Gorge Homesites, as per plat recorded in Vol. 62 of Plats, on pages 36 and 37, records of King County.

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 26 T. 21 N., R. 6E (E) W, W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered JAN 16 75

This has been assigned Water Right Claim Registry No. 10/152

Director, Department of Ecology John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Ellen R. Hansen & Kenneth E. Hansen

Date 6/13/74

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

FEE OF $ MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

49
26C-B

21-6E-26B

WATER WELL REPORT

ECOLOGY Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle) 150055

(●) Construction

( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* _____

CURRENT Notice of Intent No. W159086

Unique Ecology Well ID Tag No. AHH-488

Water Right Permit No. _____

Property Owner Name Ken Hansen

Well Street Address 35416 252nd Ave SE

City Black Diamond Area County: King

Location NW 1/4 - 1/4 NE 1/4 Sec 26 Twn 21 R 6 (E/W/WWM circle one)

Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No 289140-0390-81

PROPOSED USE: [■] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

[ ] New Well [ ] Reconditioned Method [ ] Dug [ ] Bored [ ] Driven [■] Deepened [ ] Cable [■] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 105 ft. Depth of completed well 230 ft.

CONSTRUCTION DETAILS

Casing Installed: [ ] Welded _____" Diam from _____ ft to _____ ft

[■] Liner installed PVC 4" Diam from -1 ft to 230 ft

[ ] Threaded _____" Diam from _____ ft to _____ ft

Perforations: [■] Yes [ ] No

Type of perforator used Saw

SIZE of perfs 1/8 in by 3 in and no of perfs 100 from 180 ft to 230 ft

Screens: [ ] Yes [■] No [ ] K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No _____

Diam _____ Slot Size _____ from _____ ft to _____ ft

Diam _____ Slot Size _____ from _____ ft to _____ ft

Gravel/Filter packed: [ ] Yes [■] No [ ] Size of gravel/sand _____

Materials placed from _____ ft to _____ ft

Surface Seal: [✓] Yes [ ] No To what depth? _____ ft

Materials used in seal _____

Did any strata contain unusable water? [ ] Yes [ ] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H P _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft

Static level 150 ft below top of well Date 5-24-04

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [■] No If yes, by whom? _____

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal/min with _____ ft drawdown after _____ hrs

Airtest 4 gal/min with stem set at 220 ft for 2 hrs

Artesian flow _____ g p m Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [■] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Gray sandstone medium	125	200
Gray sandstone - water	200	210
Gray sandstone	210	230

RECEIVED
JUN 04 2004
DEPT OF ECOLOGY

Start Date 5-20-04 Completed Date 5-24-04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[■] Driller [ ] Engineer [ ] Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature _____

Driller or Trainee License No 0233

Drilling Company Johnson Drilling Co, Inc

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSOC207QM Date 5-24-04

If trainee, licensed driller's Signature and License no. _____

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

26-6-4b

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

ENTERED

Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. WOCC078
UNIQUE WELL I.D. # ACB349
Water Right Permit No. 21/6C/26C

(1) OWNER: Name Gene Montesi Address PO Box C086, Kent, WA 98064

(2) LOCATION OF WELL: County King NE 1/4 NW 1/4 Sec 26 T. 21 N., R. 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 35412 252nd Ave SE, Auburn

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 487 feet. Depth of completed well 480 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from 0 ft. to 65 ft.
Welded [X] PVC 4" Diam. from -1 ft. to 480 ft.
Liner installed [ ] _____ Diam. from _____ ft. to _____ ft.
Threaded [ ]

Perforations: Yes [X] No [ ]
Type of perforator used Saw
SIZE of perforations 1/8 in. by 3 in.
100 perforations from 350 ft. to 460 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 240 ft. below top of well Date 9-12-95
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 1 gal./min. with stem set at 460 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Brown sand - gravel	0	4
Brown silty sand-gravel	4	8
Gray clay - gravel	8	58
Gray decayed rock	58	65
Tan rock - sandstone	65	115
Gray sandstone	115	220
Dark gray rock	220	260
Tan rock	260	350
Tan rock - seepage	350	460
Brown rock	460	485
Coal	485	487
bentonite	480	485
pea gravel	485	487

RECEIVED
SEP 18 1995
DEPT. OF ECOLOGY

Work Started 9-5 19. Completed 9-12 1995

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co., Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) 98055
Address 19415 108th Ave SE, Kent
(Signed) _____ (WELL DRILLER) License No. 0233
Contractor's Registration No. JOHNSDC207QM Date 9-12 1995

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

26-C-05

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report

21/06/26C

Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No

(1) OWNER: Name Margaret Swenson Address 35417 252nd SE Auburn

(2) LOCATION OF WELL: County KING NE ¼ NW ¼ Sec. 26 T. 21 N. R. 6 W.M.

Bearing and distance from section or subdivision corner Tract 37 of Green River Tops Homesites

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 620 ft. Depth of completed well 620 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 28 ft.
Threaded ☐ PVC 4" Diam. from -4 ft. to 620 ft.
Welded ☒ ____" Diam. from ____ ft. to ____ ft.

Perforations: Yes ☒ No ☐
Type of perforator used saw
SIZE of perforations 1/8 in. by 3 in.
80 perforations from 406 ft. to 610 ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ____
Type ____ Model No ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level 410 ft. below top of well Date 11-14-86
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ____
Yield: 1.4 gal./min. with 130 ft. drawdown after 2 1/2 hrs.
" " " " Bailer "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Baller test 1.4 gal./min. with 130 ft. drawdown after 2 1/2 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown surface	0	3
Brown sand & gravel	3	12
Gray boulder	12	15
Gray clay-gravel	15	20
Gray rocks (sandstone)	20	35
Coal	35	40
Gray rock	40	90
Coal	90	100
Dark gray rock	100	110
Gray rock	110	140
Coal	140	145
Gray rock	145	180
Coal	180	185
Gray rock	185	235
Coal	235	237
Gray rock	237	310
Coal	310	312
Gray rock	312	410
Tan rock	410	440
Gray rock	440	580
Dark gray rock-soapose	580	590
Dark gray rock	590	620

Work started 9-24 19 86 Completed 11-14 19 86

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co, Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0273 Date 11-17, 1986

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1 20

26-C-6

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

ENTERED

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 407079

UNIQUE WELL I.D. # ACS 959

Water Right Permit No. 21-6E-26C

(1) OWNER: Name DAN SIMON Address 29224 158th SE. Kent 98042

(2) LOCATION OF WELL: County KING NE 1/4 NW 1/4 Sec 26 T. 21 N., R. 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 35500 252nd Ave S.E.

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6" inches. Drilled 56' feet. Depth of completed well 51.5' ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from +1.5 ft. to 51.5' ft.
Welded ☒ _____ Diam. from _____ ft. to _____ ft.
Liner installed ☐ _____ Diam. from _____ ft. to _____ ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18' ft.
Material used in seal BENTONITE
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 43 65. ft. below top of well Date _____
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 2 gal./min. with stem set at 50 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
BLACK TOPSOIL	0	2'
BRN SILTY CL	2'	12'
BRN SILTY FI SA	12'	16'
BRN CLAYEY SA & GR	16'	50'
BRN SILTY FI - MED SA, SO CL W.B. 2 GPM	50'	53'
BRN VERY WEATHERED ROCK	53'	56'

RECEIVED
AUG 18 1997
DEPT. OF ECOLOGY

Work Started 7-16 19. Completed 7-17 1997

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME H&H Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 10621 Todd Rd E Puy. 98372

(Signed) _____ (WELL DRILLER) License No. 2081

Contractor's Registration No. HHDRIB606 Date 7-18- 1997

(USE ADDITIONAL SHEETS IF NECESSARY)

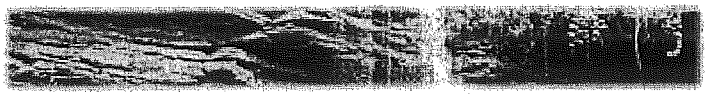
Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

26-C-97

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_14321_01

General Location Details:

Name: Blum, E

Unique Well ID: GrpB_14321_01
Parcel ID Number: 2621069028
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 26 QS: NW/NW
Local Number: 21N/06E-26D
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Spring Well Depth: 0 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
1/14/1993	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.5 mg/L MDL:	

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
5/7/1997	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv	No	0.4 mg/L MDL:	<

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
11/19/2001	23:59	WA_DoH_WQ_testing	Normal Environmental	1

26-D-1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		1.9 mg/L MDL:	

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land Resources Web site, please contact Fred Bentler, webmaster.

Department of Natural Resources and Parks
Water and Land Resources Division

Related Information:

Water and Land Resources Topics

Groundwater Management

Updated: 03/12/2008 17:33:44

Links to external sites do not constitute endorsements by King County.
By visiting this and other King County web pages,
you expressly agree to be bound by terms and conditions of the site.
The details.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 06/09/2005
Printed: 03/12/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
14321 P	BLUM, E	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

HOWARD MEECE [WS - PRIMARY CONTA
24515
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 009549

HOWARD MEECE
24515 SE GREEN VALLEY RD
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360)886-1145		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [x] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19	20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	USE PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	SPRING #1					X							X				X							3		26	21N	06E

26-D-1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
14321 P	BLUM, E	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	4	4
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	4		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		4	4

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 10

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

OTHER NONE

(Short Form) 09

Name RICHARD K. SUNDERBRUCH

Address 24417 S. E. GREEN VALLEY ROAD

AUBURN, WASHINGTON Zip Code 98002 Phone No. 886-1249

1) Source from which the right to take and make use of water is claimed: ☒ Surface Water ☐ Ground Water

If surface water, please indicate source: give name if known:

UNNAMED SPRING

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: The West half of the West Half of Government Lot 6, Section 26, Township 21 North, Range 6 East, W.M. in King County, Washington; Except the north 30 feet thereof conveyed to King County for road purposes.

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____ (Give name of plat or addition)

In addition, please indicate Sec. 26 T. 21 N. R. 6 ☒ E. ☐ W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered AUG 23 70

This has been assigned Water Right Claim Registry No. 73452

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Richard K. Sunderbruch

Date 3-19-74

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

26-D-2

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 27 74 107395
CASH OTHER / NONE

Water Right Claims Registration

Water Right Claim

09

Name ROBERT S. ALMY

Address 24713 SE GREEN VALLEY RD.

AUBURN Zip Code 98002 Phone No.

1) Source from which the right to take and make use of water is claimed: ☒ Surface Water ☐ Ground Water

If surface water, please indicate source; give name if known:

SPRING

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used:

EAST ½ OF THE EAST ½ OF GOVERNMENT LOT 6, SECTION 26 TOWNSHIP 21 NORTH, RANGE 6 EAST, W. M.

If located within the limits of a recorded platted property:

Lot 6 Block 26 of TOWNSHIP 21 NORTH, RANGE 6 EAST W.M.
(Give name of plat or addition)

In addition, please indicate Sec. 26 T. 21 N. R. 6E E/W. W.M.

County in which lands are located KING

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

DEC 074090999

Director, Department of Ecology

John Biggs

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Robert S. Almy

Date 5-22-74

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

26-D-3

21-6E-26G

Please print, sign and return to the Department of Ecology

Water Well Report

Original – Ecology, 1st copy – owner, 2nd copy – driller

Construction/Decommission 181883

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Current Notice of Intent No. W189955

Unique Ecology Well ID Tag No. AKM-891

Water Right Permit No. N/A

Property Owner Name K-S CONSTRUCTION

Well Street Address 35709 252ND AVE SE

City AUBURN County KING

Location SW 1/4-1/4 NE 1/4 Sec 26 Twn 21N R 6E WWM or EWM (circle one)

Lat/Long (s, t, r still REQUIRED.) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 289400-0310

PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 342 ft. Depth of completed well 342 ft.

CONSTRUCTION DETAILS

Casing Installed: ☒ Welded 6" Diam. from 0 ft. to 195 ft.

☒ Liner installed 4" Diam. from 10 ft. to 342 ft.

☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☒ Yes ☐ No

Type of perforator used Saw cut

SIZE of perfs 1/4 in. by 6 in. and no. of perfs 60 from 340 ft. to 320 ft.

Screens: ☐ Yes ☒ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 18 ft.

Material used in seal Bentonite chips

Did any strata contain unusable water? ☐ Yes ☐ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 232 ft. below top of well Date 5-16-05

Artesian pressure _____ lbs. per square inch. Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 20 gal./min. with stem set at 340 ft. for 2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information indicate all water encountered. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
brn sand + gravel	0	10
brn cobbles + silt	10	26
grey clay sm gravels	26	70
brn dense silt + gravel	70	120
brn coarse sand + gravel	120	138
brn silt occ gravel	138	185
grey sand + gravel - dry	185	195
weathered brn sandstone	195	225
Lgt brn sandstone	225	290
Tan sandstone	290	310
white sandstone fracture	310	343

RECEIVED

OCT 11 2005

DEPT OF ECOLOGY

Start Date 5-12-05 Completed Date 5-16-05

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Driller/Engineer/Trainee Name (Print) John Artman

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2673

If TRAINEE, Driller's Licensed No. _____ Driller's Signature _____

Drilling Company HOLT DRILLING / BOART LONGYEAR

Address PO Box 1890

City, State, Zip MILTON WA 98354

Contractor's Registration No BOARTLO55PZ Date 5-17-05

Ecology is an Equal Opportunity Employer. ECY 050-1-20 (Rev 2/03)

The Department of Ecology does NOT warranty the Data and/or the Information on this Well Report.

26-F-1

ENTERED

21-6-26F

Start Card No. W073527

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

UNIQUE WELL I.D. # ACF255

Water Right Permit No. _____

(1) OWNER: Name NEAL GREGG Address P.O. BOX 196 KAPOWASIN, WA 98344

(2) LOCATION OF WELL: County KING SE 1/4 NW 1/4 Sec 26 T 21 N. R 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 35619 - 252ND AVE SE AUBURN WA 98092

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned [ ] New well [X] Deepened [ ] Reconditioned [ ] Method: Dug [ ] Cable [X] Rotary [ ] Bored [ ] Driven [ ] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 79 feet. Depth of completed well 78½ ft.

(6) CONSTRUCTION DETAILS:

Casing Installed: 6" Diam. from +2 ft. to 33 ft.
Welded [X] 4" Diam. from +2 ft. to 68 ft.
Liner installed [X] _____" Diam. from _____ ft. to _____ ft.
Threaded [ ]

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [X] No [ ]
Manufacturer's Name ENVIROMENTAL MFG
Type FACTORY SLOT SCH40 PVC Model No. _____
Diam. 4 Slot size .010 from 68 ft. to 78 ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [X] No [ ] Size of gravel 10-20
Gravel placed from 35 ft. to 79 ft.

Surface seal: Yes [X] No [ ] To what depth? 28 ft.
Material used in seal BENTONITE CHIP
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 43 ft. below top of well Date 1-24-98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [X] No [ ] If yes, by whom? WESTPAC
Yield: 2 gal./min. with 20 ft. drawdown after 3 hrs.
" " " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 1-24-98
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
TOPSOIL	0	2
BROWN SANDY SILT W/COBBLES	2	9
CLEAN COURSE SAND & GRAVEL	9	10
BROWN SANDY SILT W/ COBBLES	10	22
BROWN SANDY SILT W/BOULDERS	22	28
CLEAN COURSE SAND & GRAVEL	28	31
BLUE/TAN SILTBOUND SAND	31	37
BROWN/TAN SANDSTONE	37	43
BLUE/GRAY SANDSTONE W/ BLUE CLAYSTONE STRINGRS	43	79
WATER @ 45'		

RECEIVED
MAR 5 1998
DEPT OF ECOLOGY

Work Started 1-2-98 19 Completed 1-26 19 98

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME WESTPAC DRILLING (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address P.O. BOX 1027 BUCKLEY, WA 98321

(Signed) _____ (WELL DRILLER) License No. 1462

Contractor's Registration No. WESTPO*044PB Date 1-27 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

26-F-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
FOR DEPT. OF ECOLOGY
APR 12 72 014756
CASH OTHER CHECK

1. NAME Melvin A. Larson
ADDRESS 35601 - 252 Ave SE
Auburn, Wash ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS well

B. IF SURFACE WATER, THE SOURCE IS —

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 5 gal per Min (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED

B. ANNUAL QUANTITY CLAIMED 1-2 Acre Ft (ACRE FEET PER YEAR) PRESENTLY USED

C. IF FOR IRRIGATION, ACRES CLAIMED none PRESENTLY IRRIGATED none

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: May To Sept

4. DATE OF FIRST PUTTING WATER TO USE: MONTH May To Sept YEAR 1971

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: FEET AND

FEET FROM THE CORNER OF SECTION

BEING WITHIN OF SECTION 26 T. 21 N.; R. 6E (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 32 - 33 BLOCK OF
Green River Gorge Addition
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
Lots #32 and #33 Green River Gorge Homesites
Section 26 Township 21 N.
Range 6E W.M. King Co.

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: domestic Supply

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
APP 137 016886

DIRECTOR, DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
X Melvin A. Larson
DATE 4-10-72
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE; PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
P.O. BOX 829 OLYMPIA WASHINGTON 98504

26-F-3

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

JAN 22 74 070213

CASH ___ OTHER ___ NONE ___

WATER RIGHT CLAIM

1. NAME HAROLD L. JAMES
ADDRESS 21251 94 PL. SO
KENT WN ZIP CODE 98031

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: SURFACE (SURFACE OR GROUND WATER)
WATER W.R.I.A. Ø9 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS ___

B. IF SURFACE WATER, THE SOURCE IS SPRING

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 3 GALLONS/MIN. PRESENTLY USED 3 GALLONS/MIN. (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 5 ACRE FT/YEAR PRESENTLY USED 5 ACRE FT/YEAR (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED — PRESENTLY IRRIGATED —

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: YEAR AROUND

4. DATE OF FIRST PUTTING WATER TO USE. MONTH JULY YEAR 1971

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL. SEE 6 BELOW FEET ___ AND ___
FEET ___ FROM THE ___ CORNER OF SECTION ___
BEING WITHIN KING COUNTY OF SECTION 26 T. 21 N., R. 6 (E OR W.) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 30 BLOCK ___ OF
GREEN RIVER GORGE HOME SITES
(GIVE NAME OF PLAT OR ADDITION)

6. ~~LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED.~~ BEGINNING AT INTERSECTION OF LINE OF O.H.W. OF GREEN RIVER AND A LINE WITH DIRECTION OF N 33° 32' 33" E (THIS LINE IS PROPERTY LINE BETWEEN TRACTS 29 & 30 GREEN RIVER GORGE HOMESITES), APPROX. 375 FEET UPHILL ALONG PROPERTY LINE, THENCE APPROX 15 FEET NORTH EAST ONTO TRACT 30 IS SPRING LOCATION COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: ___

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS; THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED
WATER RIGHT CLAIM REGISTRY NO.
MAR 27 74 057297

[signature]

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF

X Harold L. James

DATE 1-27-74

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
[illegible]

ORIGINAL DWR

26-F-4

D Fld Dec 19-18 4-30 1268222
Dt Jul 13-18 $5000 $5 irs x
John Golob, and Mary A Golob, hus and wf, now and at all times since shortly after title to portion of hinafter des lands was acquired by John G olob, and since prior to acquistion of title to remainder of sd des lands, and bo th now of Sunnyside, Wash Yakima Co
to John Prijatel, and Frances Prijatel, hus and wf, of Enumclaw, k c w
fp g b s cy to sp h and a, the fdld. in. Kcw

lot9 and the SW¼ of the SE¼ of sec 28, tp 21 n r 6 east of the wm and the NW¼ of the NW¼ of sec 34, tp 21 n r 6 east of the WM Subj to that ctn mtimber sale cont dtd Feb 4-08, recdd in vol 628 of deeds pg 531, and except co roads, also subj to any other timber le se or cont of record; it is understood that the N W¼ of the N W¼ of sec 34, above mentd, shall include the 84 ft awarded grantors by d ecree of Court, wch extended the true bdry line of sd subdivision 84 ft E
Covs O in fee, ffi except as above stated, and G W except as afsd

John Golob sl
Mary A Golob sl

KCW Jul 13-18, by Mary A Golob, wf of John Golob, of Sunnyside, wn bef B H Kibler, n p for wn res at Enumclaw W S
May 15-21

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

1. NAME Richard H. Sharpe

ADDRESS 35639 252nd Ave SE

Auburn, WASH ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Surface (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS

B. IF SURFACE WATER, THE SOURCE IS Spring

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 3 Gpm (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 3 Gpm

B. ANNUAL QUANTITY CLAIMED 4.8 acre ft. (ACRE FEET PER YEAR) PRESENTLY USED 4.8 Acre ft.

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continuously

4. DATE OF FIRST PUTTING WATER TO USE: MONTH July YEAR 1968

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 1813 FEET North AND 2293 FEET EAST FROM THE South West CORNER OF SECTION 26

BEING WITHIN OF SECTION 26 T. 21 N. R. 6E (E. OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 30 BLOCK OF

Green River Gorge Homesites
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: LOT 29 Code 3135 Green River Gorge Homesites Add. 29 & undivided 1/50th interest in TR 26 According to plat recorded in volume 62 of Plats pages 36 & 37.

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic water Supply - Stock & irrig.

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Riparian

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED REGISTRY NUMBER

THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

MAR 3 1 75 1 05579

ASSISTANT DIRECTOR DIVISION OF WATER MANAGEMENT, DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Richard H Sharpe

DATE 29 June 74

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL
DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE. BUILDING-OLYMPIA, WASHINGTON 98501

26-F-5

14809

ENTERED 21-6-26A

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 098975

UNIQUE WELL I.D. # ACV 771

Water Right Permit No. 98010

(1) OWNER Name Curtis Kawaske Address PO Box 57, Black Diamond, WA

(2) LOCATION OF WELL County King NE 1/4 NE 1/4 Sec 26 T 21 N. R 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 25433 SE 357th, Auburn

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK Owner's number of well (if more than one)

Abandoned [ ] New well [ ] Method Dug [ ] Bored [ ]
Deepened [X] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [ ] Jetted [ ]

(5) DIMENSIONS Diameter of well C inches
Drilled 45 feet. Depth of completed well 250 ft

(6) CONSTRUCTION DETAILS

Casing installed PVC Diam from -1 ft to 250 ft.
Welded [X] Diam from ft. to ft.
Liner installed [ ]
Threaded [ ] Diam from ft to ft

Perforations Yes [X] No [ ]
Type of perforator used Saw
SIZE of perforations 118 in by 3 in
80 perforations from 215 ft to 250 ft.
perforations from ft. to ft.
perforations from ft to ft.

Screens Yes [ ] No [X]
Manufacturer's Name
Type Model No
Diam Slot size from ft. to ft.
Diam Slot size from ft to ft.

Gravel packed Yes [ ] No [X] Size of gravel
Gravel placed from ft to ft.

Surface seal Yes [X] No [ ] To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP Manufacturer's Name
Type HP

(8) WATER LEVELS Land-surface elevation above mean sea level ft
Static level 140 ft. below top of well Date 12-3-97
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap valve etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes by whom?
Yield gal /min with ft. drawdown after hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal /min with ft. drawdown after hrs.
Airlest 5 gal /min with stem set at 240 ft for 2 hrs
Artesian flow g.p.m Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Gray sandstone	205	230
Gray sandstone - water	230	235
Gray sandstone	235	250
Gray sandstone - soft caving	250	—

RECEIVED
DEC 08 1997
DEPT OF ECOLOGY

Work Started 12-2 19 Completed 12-3 19 97

WELL CONSTRUCTOR CERTIFICATION

I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co., Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) 98055

Address 19415 108th Ave SE, Renton, WA

(Signed) Brad Johnson (WELL DRILLER) License No 0233

Contractor's Registration No JOHNSOC207QM Date 12-3 19 97

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006

ECY 050-1-20 (9/93) f

26-6-01

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

Name EDMUND E. DONOVAN

Address 25433 SE 357th

Auburn, Wa. Zip Code 98002

Phone No.

Ø9

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used:

West ½ of lot 15, Green River Gorge home sites addition, King County, Wa.

If located within the limits of a recorded platted property:

Lot Block of (Give name of plat or addition)

In addition, please indicate Sec. 26 T. 21 N., R. 6E E/W. W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

1 AR 75137731

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X

Date

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

26-6-02

Original and First Copy with ment of Ecology
1 Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON 423

Application No.

Permit No.

(1) OWNER: Name [illegible] Address [illegible]

(2) LOCATION OF WELL: County King NE 1/4 Sec. 26 T. 21 N., R. 06 W.M.

Bearing and distance from section or subdivision corner [illegible]

(3) PROPOSED USE: Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(4) TYPE OF WORK: Owner's number of well (if more than one) ...
New well [X] Method: Dug [ ] Bored [ ]
Deepened [X] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 4 inches.
Drilled 110 ft. Depth of completed well 220 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 4 " Diam. from 0 ft. to 220 ft
Threaded [ ] " Diam. from ft. to ft.
Welded [X] " Diam from ft. to ft.

Perforations: Yes [X] No [ ]
Type of perforator used Torch
SIZE of perforations 1/8 in. by 3 in.
36 perforations from 60 ft. to 215 ft.
perforations from ft. to ft
perforations from ft to ft.

Screens: Yes [ ] No [X]
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel.
Gravel placed from ft. to ft.

Surface seal: Yes [X] No [ ] To what depth? ft.
Material used in seal Clay
Did any strata contain unusable water? Yes [ ] No [ ]
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 60 ft. below top of well Date 8/14/79
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 2 gal./min. with 145 ft drawdown after 3 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG: Sec. 4, NE 1/4 Sec. 26

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Gray sandstone	110	220

Work started 8/13 19 79 Completed 8/14 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co, Inc. (Person, firm, or corporation) (Type or print) 98055

Address 19415 108th Ave SE Renton

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 9/14, 19 79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

26-6-03

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

84950

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. M114100
Unique Well I.D. # AFN601
Water Right Permit No.

(1) OWNER: Name BEST, LARRY Address 31323 3RD AVENUE BLACK DIAMOND, WA 98010-

(2) LOCATION OF WELL: County KING - NW 1/4 NE 1/4 Sec 26 T 21 N., R 6E WM
(2a) STREET ADDRESS OF WELL (or nearest address) 25403 SE 357TH STREET,

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 345 ft. Depth of completed well 345 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from 1.5 ft. to 56 ft.
WELDED 4.5 " Dia. from 45 ft. to 345 ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used ROTARY STAR
SIZE of perforations 1/8 in. by 3 in.
20 perforations from 285 ft. to 325 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Dia. slot size from ft. to ft.
Dia. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 62 ft. below top of well Date 12/11/00
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 3 gal/min. w/ stem set at 345 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG 21-6E-26B

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
BLACK TOPSOIL	0	2
GRAY SILTY GRAVEL & ROCKS	2	25
BROWN SILTY LOOSE GRAVEL	25	47
RED TO TAN	47	65
WEATHERED SANDSTONE	47	65
GRAY-TO GREEN	65	80
SANDSTONE	65	80
GRAY TO TAN	80	121
SANDSTONE	80	126
GRAY TO GREEN	126	140
SANDSTONE	126	140
TAN TO RED	140	165
SANDSTONE	140	165
GRAY HARDER ROCK	165	200
GRAY TO BROWN	200	260
SOFT ROCK	200	260
GRAY HARD FRACTURED	260	275
GRAY TO BROWN	275	320
FRACTURED	275	320
GRAY FRACTURED W/ BROWN SILT	320	345

RECEIVED
JAN 17 2001
DEPT OF ECOLOGY

Work started 12/10/00 Completed 12/11/00

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME OELKE DRILLING, INC.
(Person, firm, or corporation) (Type or print)

ADDRESS 4312-166 AVE E. SUMNER,WA

[SIGNED] Roger Oelke License No. 379 ROGER OELKE

Contractor's Registration No. OELKEDI 136QC Date 01/08/01

84950

266-04

124617

21-6E-26B

WATER WELL REPORT

Original & 1st copy - Ecology, 2nd copy owner, 3rd copy driller

Construction/Decommission ("x" in circle)

- (●) Construction
- ( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number* _____

CURRENT Notice of Intent No W127766

Unique Ecology Well ID Tag No ABO-549

Water Right Permit No _____

Property Owner Name Kathryn Kennedy

Well Street Address 25337 SE 357th St

City Auburn County King

Location NW 1/4 - 1/4 NE 1/4 Sec 26 Twn 21 R 6 (EWM) circle one or WWM

Lat/Long (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No 289140-0180

PROPOSED USE [■] Domestic [ ] Industrial [ ] Municipal [ ] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK Owner's number of well (if more than one) _____

[■] New Well [ ] Reconditioned *Method* [ ] Dug [ ] Bored [ ] Driven [ ] Deepened [ ] Cable [■] Rotary [ ] Jetted

DIMENSIONS Diameter of well 6 inches, drilled 300 ft. Depth of completed well 300 ft.

CONSTRUCTION DETAILS

Casing Installed: [■] Welded 6" Diam from 0 ft to 80 ft

[■] Liner installed PVC 4" Diam from -1 ft to 300 ft

[ ] Threaded _____" Diam from _____ ft to _____ ft

Perforations [■] Yes [ ] No

Type of perforator used saw

SIZE of perfs 1/8 in by 4 in and no of perfs 100 from 200 ft to 300 ft

Screens [ ] Yes [■] No [ ] K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No _____

Diam _____ Slot Size _____ from _____ ft to _____ ft

Diam _____ Slot Size _____ from _____ ft to _____ ft

Gravel/Filter packed [ ] Yes [■] No [ ] Size of gravel/sand _____

Materials placed from _____ ft to _____ ft

Surface Seal [■] Yes [ ] No To what depth? 18 ft

Materials used in seal bentonite

Did any strata contain unusable water? [ ] Yes [■] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP Manufacturer's Name _____

Type _____ H P _____

WATER LEVELS Land surface elevation above mean sea level _____ ft

Static level 120 ft below top of well Date 12-11-02

Artesian pressure _____ lbs per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc)

WELL TESTS Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [■] No If yes, by whom? _____

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Yield _____ gal/min with _____ ft drawdown after _____ hrs

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal/min with _____ ft drawdown after _____ hrs

Airtest 4 gal/min with stem set at 270 ft for 1 hrs

Artesian flow _____ g p m Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [■] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Surface	0	3
Hardpan clay-gravel	3	26
Hardpan-tan	26	60
Decayed rock-brown	60	75
Sandstone-gray	75	210
Sandstone-gray	210	300
seepage		

RECEIVED
DEC 16 2002
DEPT OF ECOLOGY

Start Date 12-9-02 Completed Date 12-11-02

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

[■] Driller [ ] Engineer [ ] Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature _____

Driller or Trainee License No 0233

Drilling Company Johnson Drilling Co., Inc

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No JOHNSDC207QM Date 12-11-02

If trainee, licensed driller's Signature and License no _____

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

26-6-05

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21/66 200

iginal and First Copy with
nent of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Dorothy H. Hjellum Address 25217 SE 357th Auburn 98002

(2) LOCATION OF WELL: County King, LOT 19 SW ¼ NE ¼ Sec. 26 T. 21 N., R. 06 W.M.

Bearing and distance from section or subdivision corner Green River Gorge Homesites

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 & 4 inches.
Drilled 280 ft. Depth of completed well 280 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 40 ft.
Threaded ☐ 4" Diam. from 0 ft. to 280 ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☒ No ☐
Type of perforator used torch
SIZE of perforations 1/8 in. by 3 in.
30 perforations from 220 ft. to 275 ft.
... perforations from ... ft. to ... ft.
... perforations from ... ft. to ... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level 210 ft. below top of well Date 9/20/79
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 7 gal./min. with 35 ft. drawdown after 3 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown sandy loam	0	7
Brown hardpan, boulders	7	40
Gray sandstone	40	110
Coal	110	130
Gray sandstone	130	160
Coal	160	170
Gray sandstone	170	255
Gray sandstone water	255	280

RECEIVED
SEP 24 1979
DEPT. OF ECOLOGY
REGIONAL OFFICE
BELLEVUE, WA 98052

Work started 9/18, 1979. Completed 9/20, 1979

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print) 9805

Address 19415 108th Ave SE Renton

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 9/20, 1979

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

26-6-06

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21/06--26G

Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Allen Palevsky Address 25230 SE 359th Auburn

(2) LOCATION OF WELL: County King Tract #30 - SW ¼ NE ¼ Sec 26 T. 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner Green River Gorge Homesites

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) .....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 & 4 inches.
Drilled 220 ft. Depth of completed well 194 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 8 ft. to 18 ft.
Threaded ☐ 4 " Diam. from 8 ft. to 194 ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used Torch
SIZE of perforations 1/8 in. by 3 in.
32 perforations from 90 ft. to 184 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal cement
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 85 ft. below top of well Date 12/12/79
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 1 1/2 gal./min. with 100 ft. drawdown after 4 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	3
Brown hardpan gravel	3	16
Brown decayed rock	16	38
Gray sandstone	38	200
Coal	200	220

Work started 12/11, 19 79 Completed 12/14, 19 79

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc (Person, firm, or corporation) (Type or print) 98031

Address 19415 108th Ave SE Kent

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 12/14, 19 79

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

26-6-07

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

[X] Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

[ ] Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
August 22, 1973	S1-20857	S1-20857P	S1-20857C

NAME
STANLEY J. TERLITSKY

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
25426 S. E. 359th	Auburn	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Unnamed springs

TRIBUTARY OF (IF SURFACE WATERS)
--

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
0.04		7.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Domestic supply - continuously, 1.0 acre-foot per year, 0.01 cfs

Irrigation - April 15 to October 1 (3 acres), 6.0 acre-feet per year, 0.03 cfs

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
#1 - 1930 feet south and 910 feet east of the N¼ corner of Sec. 26 26-6-08

#2 - 2510 feet south and 730 feet east of the N¼ corner of Sec. 26 26-6-12 6-11

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
	26	21	6 E	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
22, 25		Plat of Green River Gorge Homesites in Sec. 26

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Tracts 22 and 25 and the South 140 feet of the W½ of Tract 16 of the Plat of Green River Gorge Homesites in Sec. 26, T. 21N., R. 6 E.W.M.

26-6-08
26-6-12

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond *Washington, this* 15th *day of* May, *19* 84

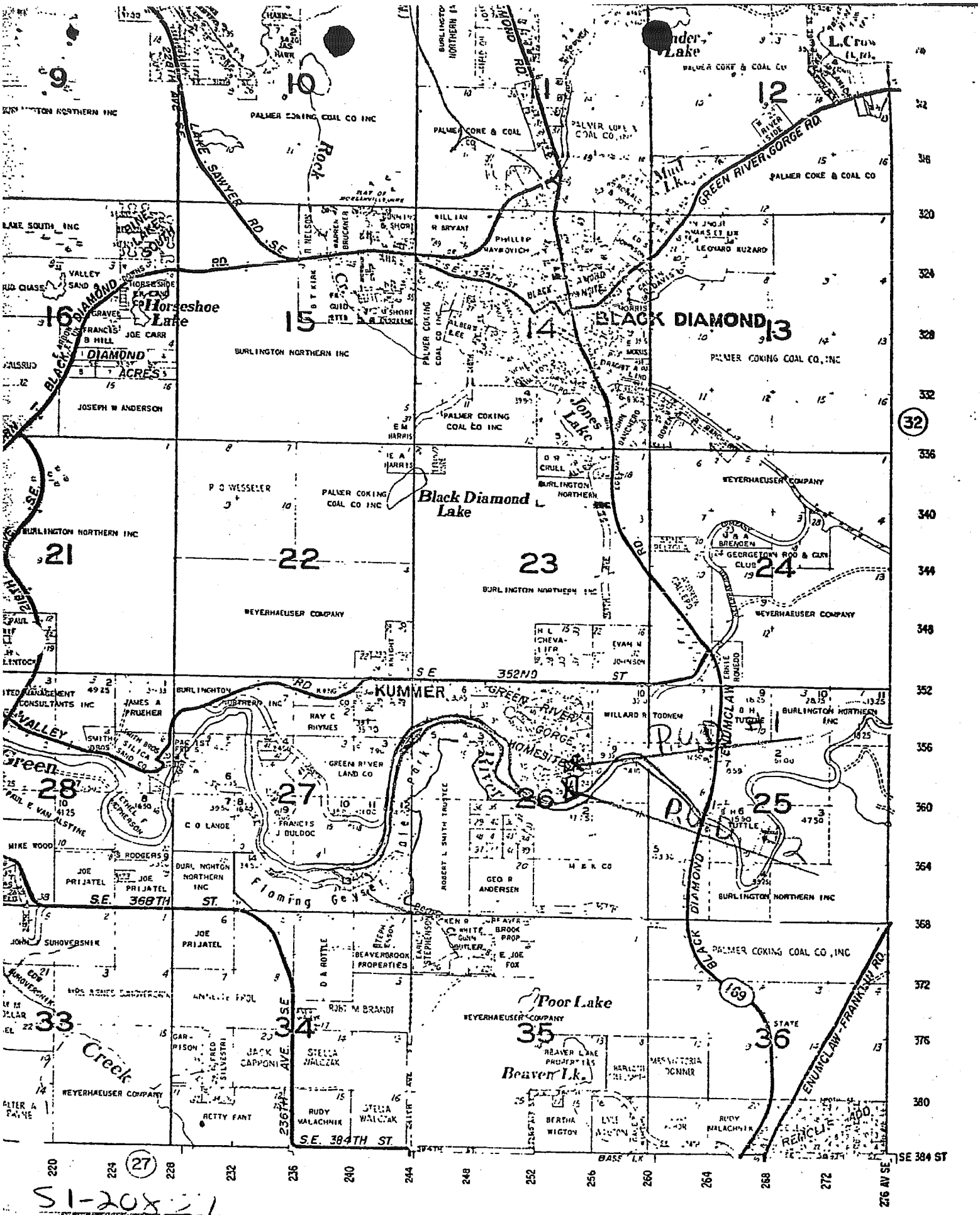
Department of Ecology

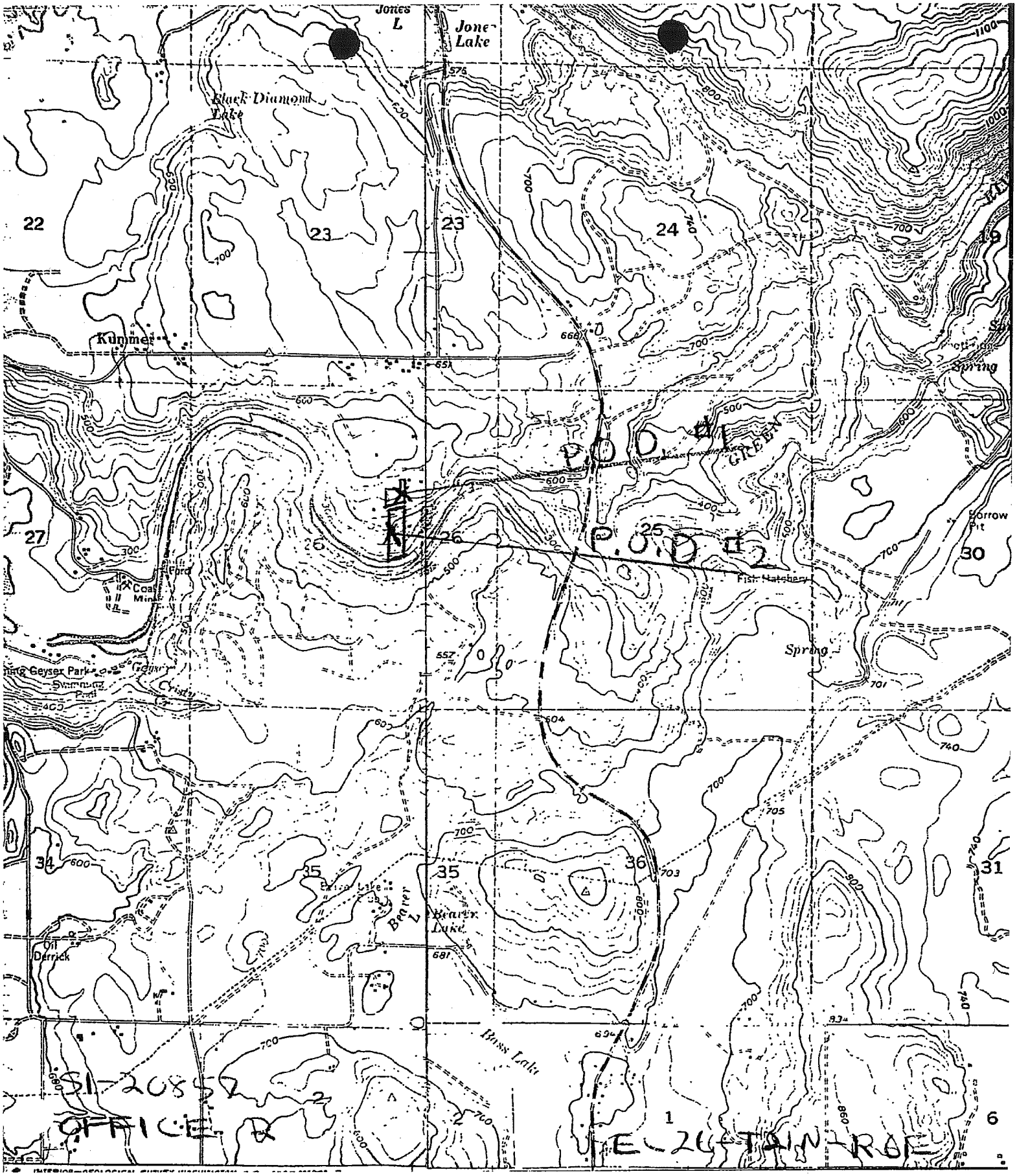
ENGINEERING DATA

OK ..... *by* Robert K. McCormick

ROBERT K. McCORMICK, Regional Manager

FOR COUNTY USE ONLY

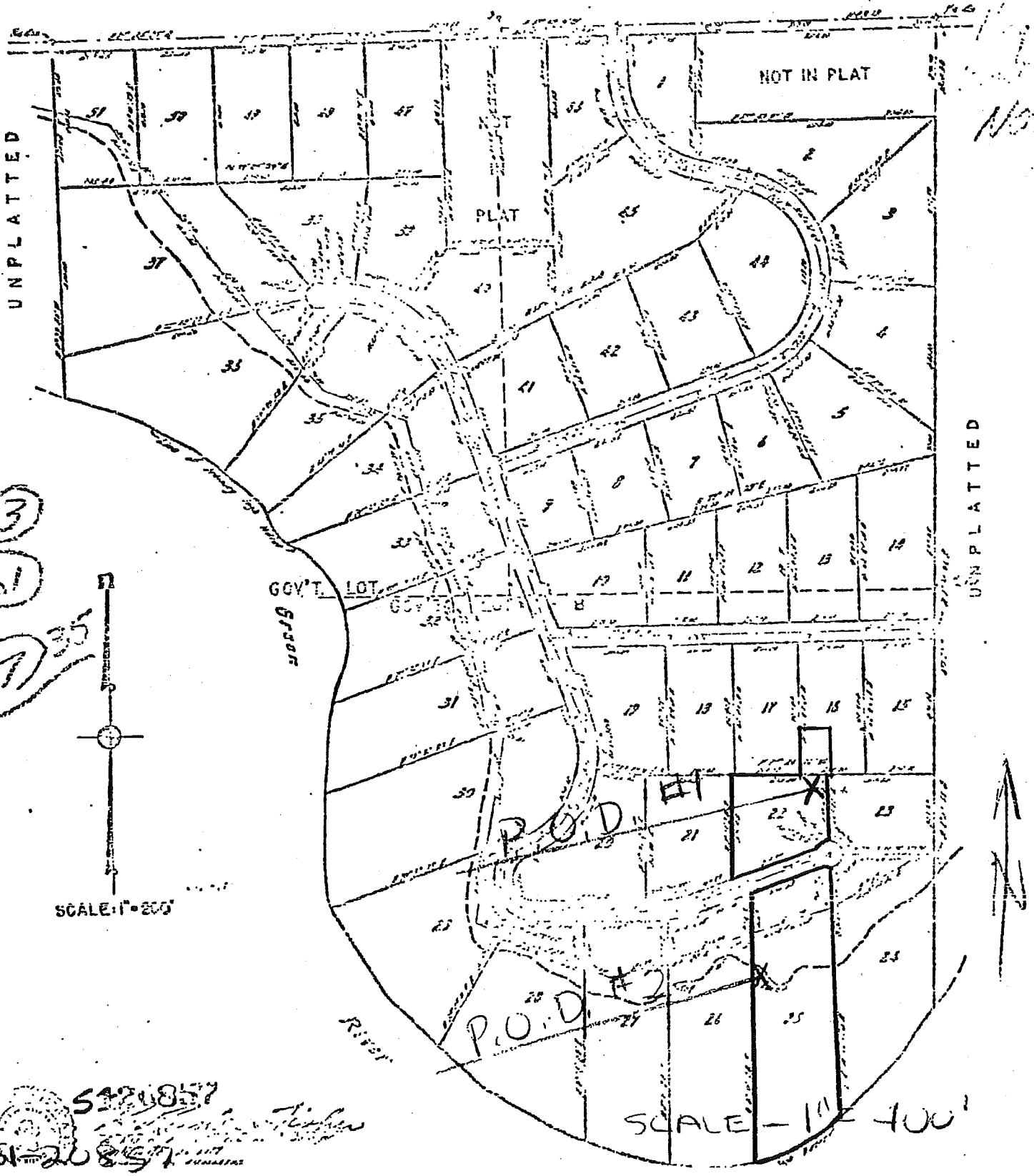

Horseshoe Lake
Black Diamond Lake
Jones Lake
Mud Lk.
Poor Lake
Beaver Lk.
Lake Sawyer Rd. SE
Green River Gorge Rd.
Black Diamond Rd.
Enumclaw-Franklin Rd.
SE 352ND ST
S.E. 368TH ST.
S.E. 384TH ST
SE 384 ST
Fleming Creek
Green River Gorge Homesites
KUMMER
BLACK DIAMOND
PALMER COKING COAL CO INC
PALMER COKING COAL CO, INC
BURLINGTON NORTHERN INC
WEYERHAEUSER COMPANY
PALMER COKE & COAL CO
Beaver Lake Properties
Beaverbrook Properties
9
10
11
12
13
14
15
16
21
22
23
24
25
26
27
28
33
34
35
36
220
224
228
232
236
240
244
248
252
256
260
264
268
272
276 AV SE
(27)
(32)
169
S1-20X-21
OFFICE 1
SEC 26 - T21N - R6E



SI-20852
OFFICE R
E-26-TAIN-ROE

SECTION 25, T.N.21 N., R.5E., W.M.

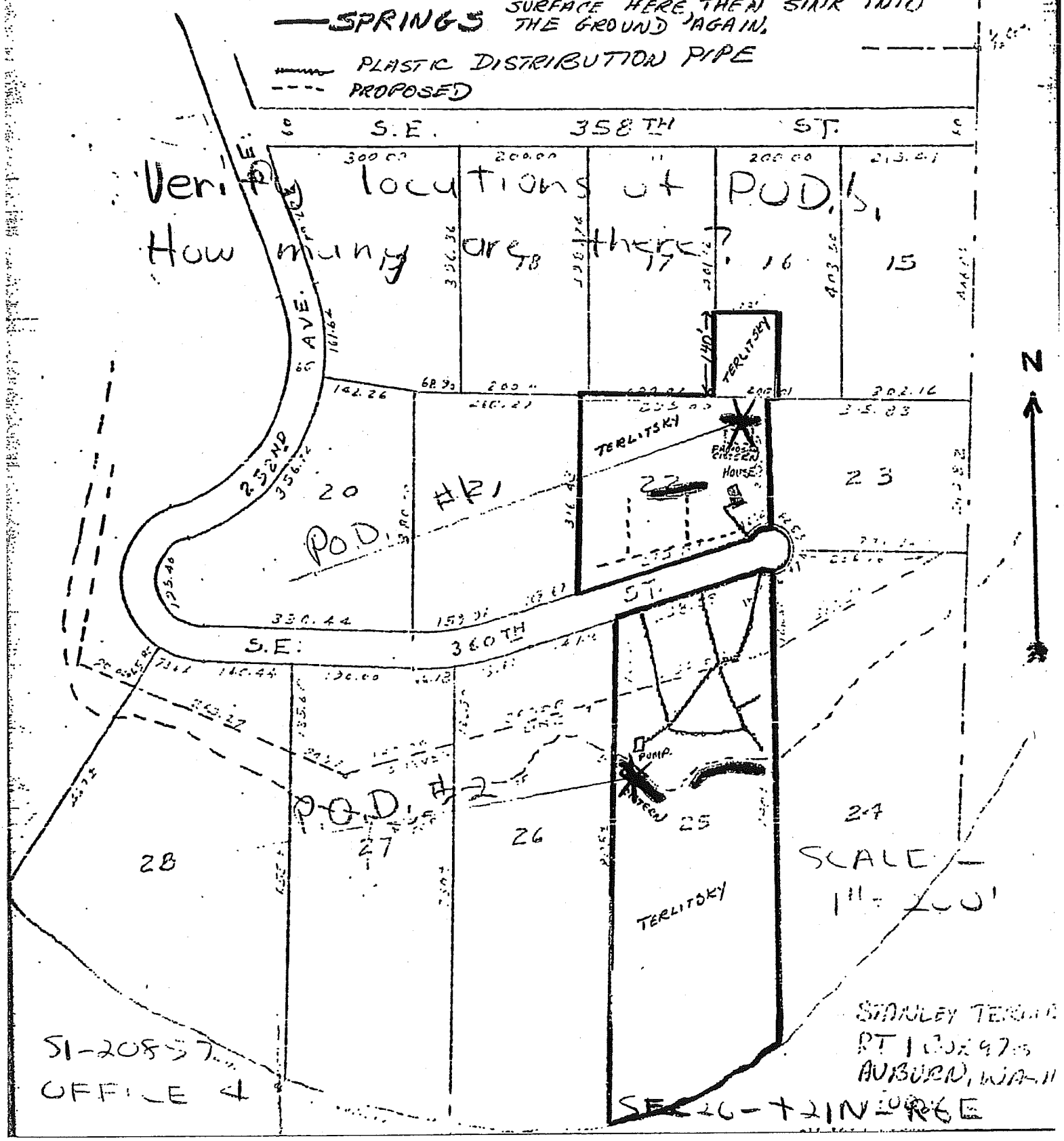
KING COUNTY, WASHINGTON



OFFICE 3

SEC 24 - T21N - R6E

This sketch is not based upon a survey of the property described in Order No. 202572 of Lawyers Title Insurance Corporation. It is furnished without charge solely for the purpose of assisting in locating the said premises. It does not purport to show all roads or easements. The Company assumes no liability for inaccuracies therein.



Affidavit of Publication

STATE OF WASHINGTON
COUNTY OF KING } ss.

Lee Bailey
..... being first duly sworn on

she chief clerk
oath, deposes and says that ..... is the ..... of THE KENT NEWS-JOURNAL, a tri-weekly newspaper. That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publication referred to, printed and published in the English language continually as a tri- weekly newspaper in Kent, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the Kent News-Journal has been approved as a legal newspaper by order of the Superior Court of the County in which it is published, to-wit, King County, Washington. That the annexed is a Water Right Appl.

S, Terlitsky
.....

..... as it was published in regular issues (and not in supplement form of said newspaper) once each issue for a period

of two consecutive issues, commencing on the

17 day of May, 19 74, and ending the

24 day of May, 19 74, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of $ 10.00, which has been paid in full at the rate of per folio of one hundred words for the first insertion and per folio of one hundred words for each subsequent insertion.

Lee Bailey
Chief Clerk

Subscribed and sworn to before me this 17 day of May, 19 74

Ann L Kuykendall
Notary Public in and for the State of Washington, residing at Kent, King County.

—Passed by the Legislature, 1955, known as Senate Bill 281, effective June 9th, 1955.

—Western Union Telegraph Co. rules for counting words and figures, adopted by the newspapers of the State.

V.P.C. Form No. 87

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That STANLEY TERLITSKY of Auburn, Washington on August 22, 1973 under Application No. SI-20857 filed for permit to appropriate public waters, subject to existing rights, from unnamed springs in the amount of 0.05 cubic foot per second each year for domestic supply - continuous use; irrigation - during irrigation season. The source of the proposed appropriation is located within Tracts 22 and 26 of the Plat of Green River Gorge Homesites of Section 20, Township 21 N., Range 6E W.M., in King County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, Northwest Regional Office, 15345 N.E. 36th, Redmond, WA 98052 within thirty (30) days from May 24, 1974.

Published in the Kent News-Journal May 17 and 24, 1974.
KI701.

6K KM
6-11-74

STANLEY TERLITSKY

Auburn, Washington — August 22, 1973

St-20857

unnamed springs

0.05 cubic feet per second

domestic supply - continuous use

irrigation - during irrigation season

Tracts 22 and 23 of the plat of Green River Gorge Homesites

1	26	21	SE	King

20

21-6-26H

ENTERED

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W098753
UNIQUE WELL I.D. # ACV763
Water Right Permit No. 98092-9629

(1) OWNER: Name Victor Mills Address 25432 SE 359th ST., Auburn, WA

(2) LOCATION OF WELL: County KING SE 1/4 NE 1/4 Sec 26 T. 21 N., R. CE W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 25201 SE 359th ST., Auburn

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ] Deepened [ ] Cable [ ] Driven [ ] Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 200 feet. Depth of completed well 200 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from 0 ft. to 40 ft.
Welded [X] PVC 4" Diam. from -1 ft. to 200 ft.
Liner Installed [ ]
Threaded [ ] _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes [X] No [ ]
Type of perforator used Saw
SIZE of perforations 1/8 in. by 2 in.
80 perforations from 120 ft. to 200 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 60 ft. below top of well Date 1-23-98
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airlest 15+ gal./min. with stem set at 190 ft. for 2 1/2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	3
Gray gravelly clay	3	24
Brown sand-gravel	24	34
Brown sand stone	34	39
Gray sandstone	39	160
Gray water sand-gravel	160	170
Gray sandstone	170	200

RECEIVED
FEB 11 1998
WR
DEPT OF ECOLOGY

Work Started 1-20 19. Completed 1-23 19 98

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co., Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 19415 108th Ave SE, Renton, WA 98055
(Signed) _____ (WELL DRILLER) License No. 0233
Contractor's Registration No. JOHNSOC202QM Date 1-23 19 98

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6800. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

26-6-09

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21-6E-26G

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)* 253424

● Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. W237841

Unique Ecology Well ID Tag No. APR-416

Water Right Permit No. _____

Property Owner Name Larry Best

Well Street Address 25415 SE 359th

City Auburn County King

Location SW 1/4-1/4 NE 1/4 Sec 26 Twn 21 R 6 (EWM or WWM) circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 289140-0250

PROPOSED USE: ■ Domestic ☐ Industrial ☐ Municipal ☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

■ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ■ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 8 inches, drilled 300 ft. Depth of completed well 300 ft.

CONSTRUCTION DETAILS

Casing Installed: ■ Welded 8" Diam. from 0 ft. to 25 ft. ■ Liner installed PVC 5" Diam. from -1 ft. to 300 ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ■ Yes ☐ No

Type of perforator used Saw

SIZE of perfs 1/8 in. by 3 in. and no. of perfs 100 from 270 ft. to 300 ft.

Screens: ☐ Yes ■ No ☐ K-Pac Location _____

Manufacturer's Name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ from _____ ft. to _____ ft

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☐ Yes ■ No ☐ Size of gravel/sand _____

Materials placed from _____ ft. to _____ ft.

Surface Seal: ■ Yes ☐ No To what depth? 18 ft.

Material used in seal bentonite

Did any strata contain unusable water? ☐ Yes ■ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 120 ft. below top of well Date 1-26-07

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ■ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest 7-8 gal./min. with stem set at 270 ft. for 2 1/2 hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ■ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Surface	0	3
Sand- brown	3	7
Clay- brown	7	23
Shale- gray	23	75
Sandstone-gray-medium	75	215
Decayed rock-dark	215	270
Sandstone-gray-water	270	290
Sandstone-gray-medium	290	300

RECEIVED
FEB 06 2007
DEPT. OF ECOLOGY

Start Date 1-15-07 Completed Date 1-26-07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

■ Driller ☐ Engineer ☐ Trainee Name (Print) Brad Johnson

Driller/Engineer/Trainee Signature Brad Johnson

Driller or trainee License No. 0233

Drilling Company Johnson Drilling Co., Inc

Address 19415 108th Ave SE

City, State, Zip Renton, WA 98055

Contractor's Registration No. JOHNSOC207QM Date 1-26-07

If TRAINEE,
Driller's Licensed No. _____
Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

26-6-10A

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

[X] Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

[ ] Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
August 22, 1973	S1-20857	S1-20857P	S1-20857C

NAME
STANLEY J. TERLITSKY

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
25426 S. E. 359th	Auburn	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Unnamed springs

TRIBUTARY OF (IF SURFACE WATERS)
--

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
0.04		7.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Domestic supply - continuously, 1.0 acre-foot per year, 0.01 cfs

Irrigation - April 15 to October 1 (3 acres), 6.0 acre-feet per year, 0.03 cfs

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
#1 - 1930 feet south and 910 feet east of the N¼ corner of Sec. 26 — 26-6-8

#2 - 2510 feet south and 730 feet east of the N¼ corner of Sec. 26 — 26-6-11

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
	26	21	6 E	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
22, 25		Plat of Green River Gorge Homesites in Sec. 26

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Tracts 22 and 25 and the South 140 feet of the W½ of Tract 16 of the Plat of Green River Gorge Homesites in Sec. 26, T. 21N., R. 6 E.W.M.

26-6-8
26-6-11

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond *Washington, this* 15th *day of* May, *19* 84

Department of Ecology

ENGINEERING DATA

OK ..... JJ

by Robert K. McCormick

ROBERT K. McCORMICK, Regional Manager

FOR COUNTY USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
JUN 5 1974
DOE

1. NAME GERALD DEAN SEGEBARTS

ADDRESS 25239 SE 359ST

AUBURN WASHINGTON ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS WELL

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 2½ GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 2½ GPM

B. ANNUAL QUANTITY CLAIMED 1 ACRE FOOT (ACRE FEET PER YEAR) PRESENTLY USED 1 ACRE FOOT

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: CONTINUOUSLY

4. DATE OF FIRST PUTTING WATER TO USE: MONTH JUNE YEAR 1962

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 100 FEET WEST AND 20 FEET SOUTH FROM THE NORTH EAST (NE) CORNER OF SECTION Lot 28

BEING WITHIN Lot 27 OF SECTION 26 T. 21 N., R. 6 (E. or W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT 27 BLOCK OF GREEN RIVER GORGE HOMESITES (GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: SECTION 26 TWP 21 N R6E W.M.

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic Supply

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER-USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

FEB 7 5131370

DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Gerald D Segebarts

DATE JUNE 24, 1974

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/ OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

1 6121

26-6-E

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

[XX] *Surface Water* (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

[ ] *Ground Water* (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

CERTIFICATE NUMBER	PERMIT NUMBER	APPLICATION NUMBER	PRIORITY DATE
S1-21237C	S1-21237P	S1-21237	February 7, 1974

NAME: ALVIN E. SEGEBARTT

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
23432 S.E. 359th Street	Auburn	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown

PUBLIC WATER TO BE APPROPRIATED

SOURCE: Unnamed spring

TRIBUTARY OF (IF SURFACE WATERS): ----

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
0.02		1.0

QUANTITY, TYPE OF USE, PERIOD OF USE: Domestic supply - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION/WITHDRAWAL: 1930 feet South and 1000 feet East of North quarter corner of Sec. 26.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
	26	21	6 E	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
23		Green River Gorge Homesites

LEGAL DESCRIPTION OF PROPERTY WATER TO BE USED ON

Tract 23, of Green River Gorge Homesites, in Sec. 26, T. 21 N., R. 6 E. W.M.

CERTIFICATE

13

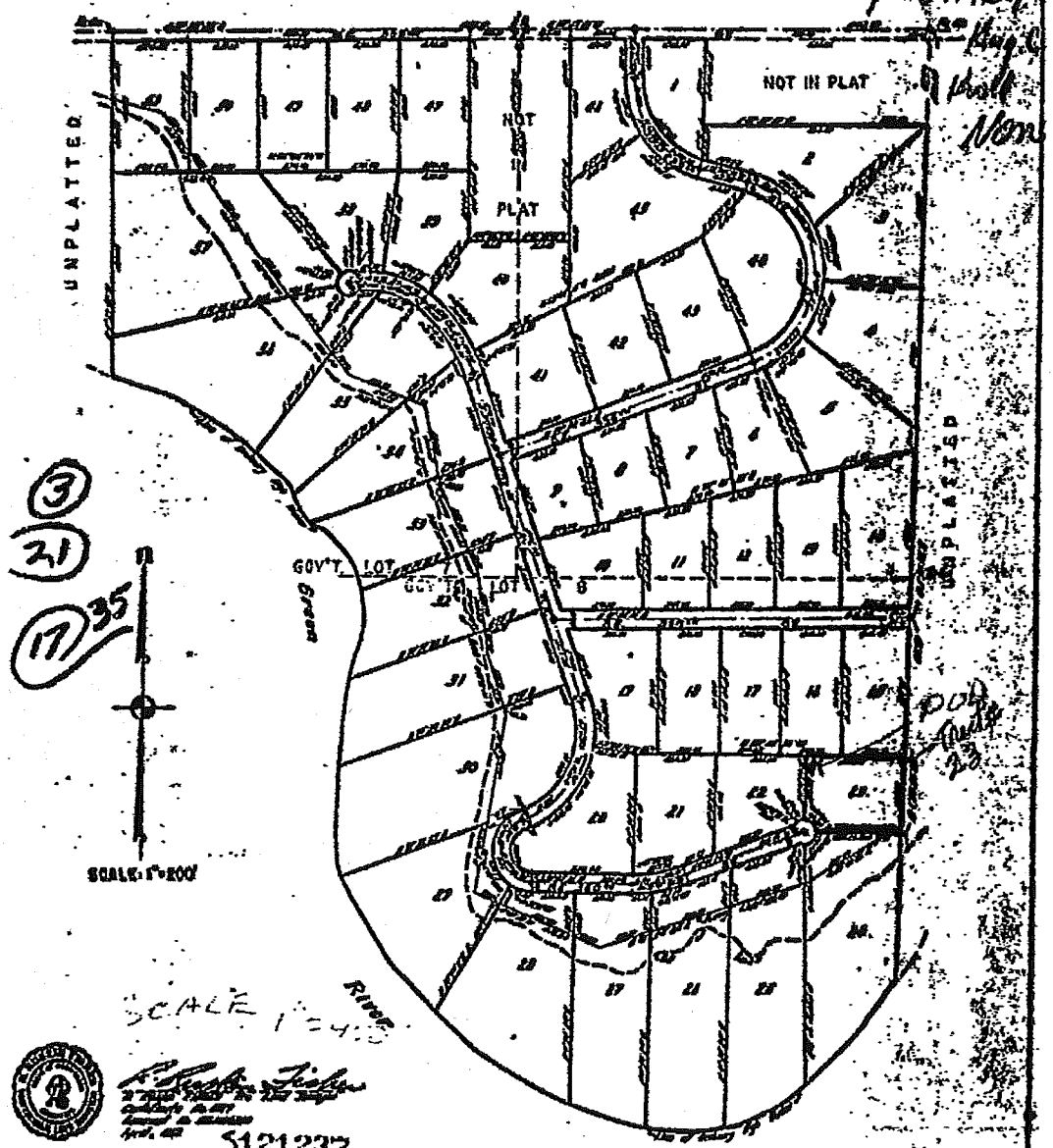
26-6-[illegible]

GREEN RIVER GORGE HOMESITES

SECTION 26, TWP. 21 N, R6E, W.M.

KING COUNTY, WASHINGTON

5036122
Vol 62-36-37
May 26, 1959

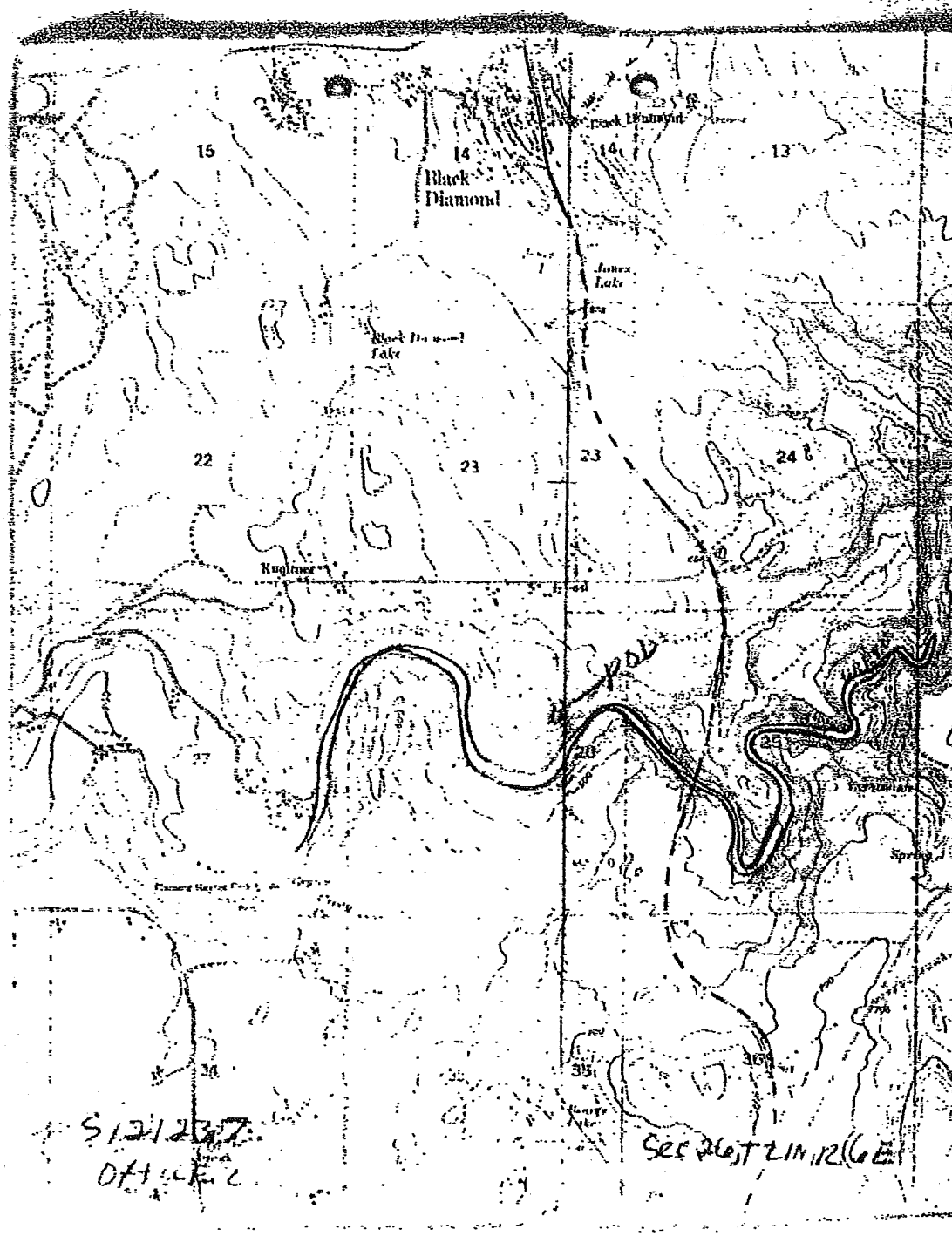


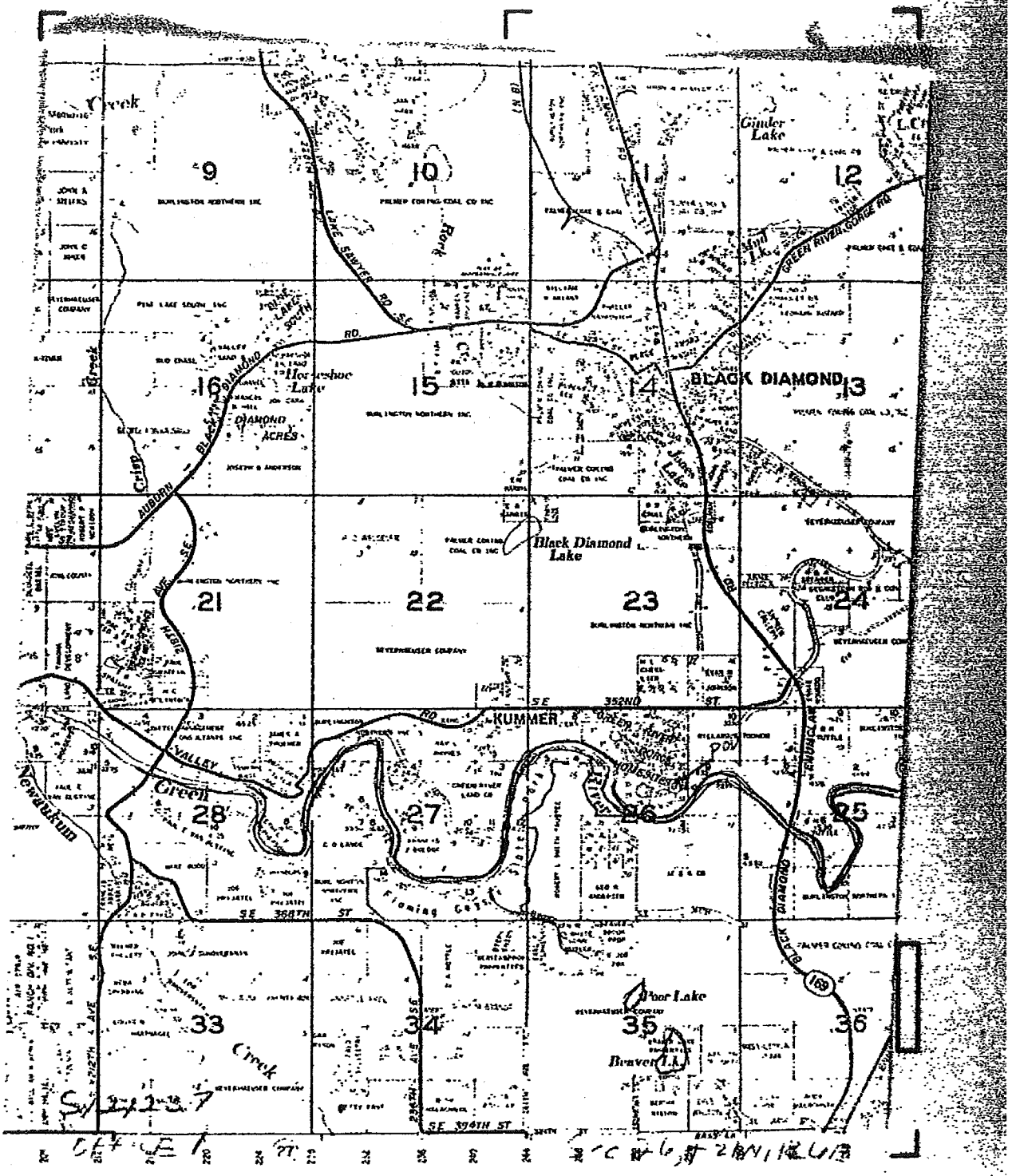
SCALE 1"=400'

S121237

SHEET 2 OF 2 SHEETS

Alvin Dagehart


15
14
Black Diamond
14
13
Black Diamond Lake
22
23
23
24
Kuglmer
POD
27
20
25
36
35
36
S121237
Office
Sec 26, T21N, R16E



Creek
9
10
11
12
Ginder Lake
LAKE SAWYER RD SE
GREEN RIVER GORGE RD
Rock
Mud Lk
16
15
14
13
BLACK DIAMOND
Horseshoe Lake
DIAMOND ACRES
Crisp
AUBURN
Black Diamond Lake
21
22
23
24
SE 352ND ST
KUMMER
VALLEY
Green
28
27
26
25
Newaukum
SE 368TH ST
Flaming Geyser
BLACK DIAMOND
169
Poor Lake
33
34
35
36
Beaver Lk
Creek
SE 394TH ST

PROVISIONS

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Olympia, Washington, this 31st *day of* July, 1975.

JOHN A. BIGGS, *Director*
Department of Ecology

by R. Jerry Bollen
R. JERRY BOLLEN, Assistant Director

ENGINEERING DATA
OK NHH

FOR COUNTY USE ONLY

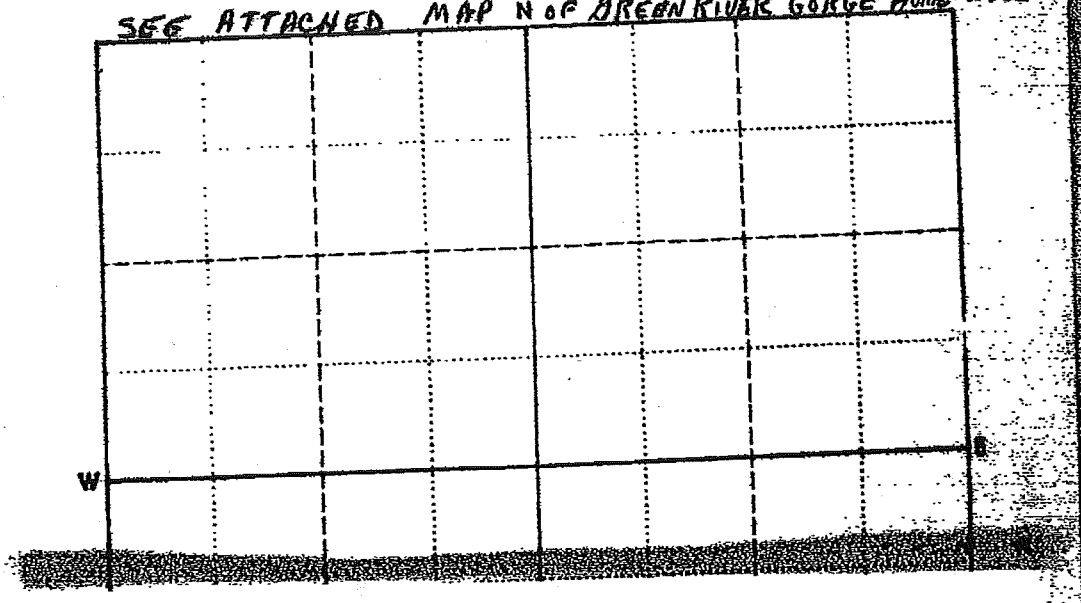
S.F. No. 1414-A-03

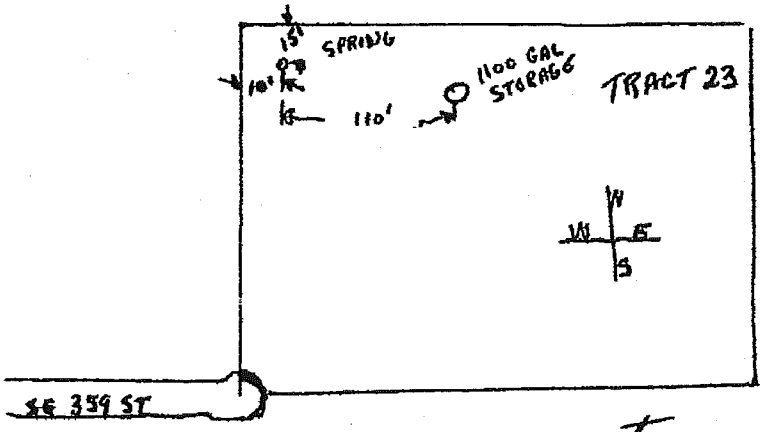
SECTION PLAT

Sec. 26 Twp. 21 N N.R. 6E W.M.

TRACT #23

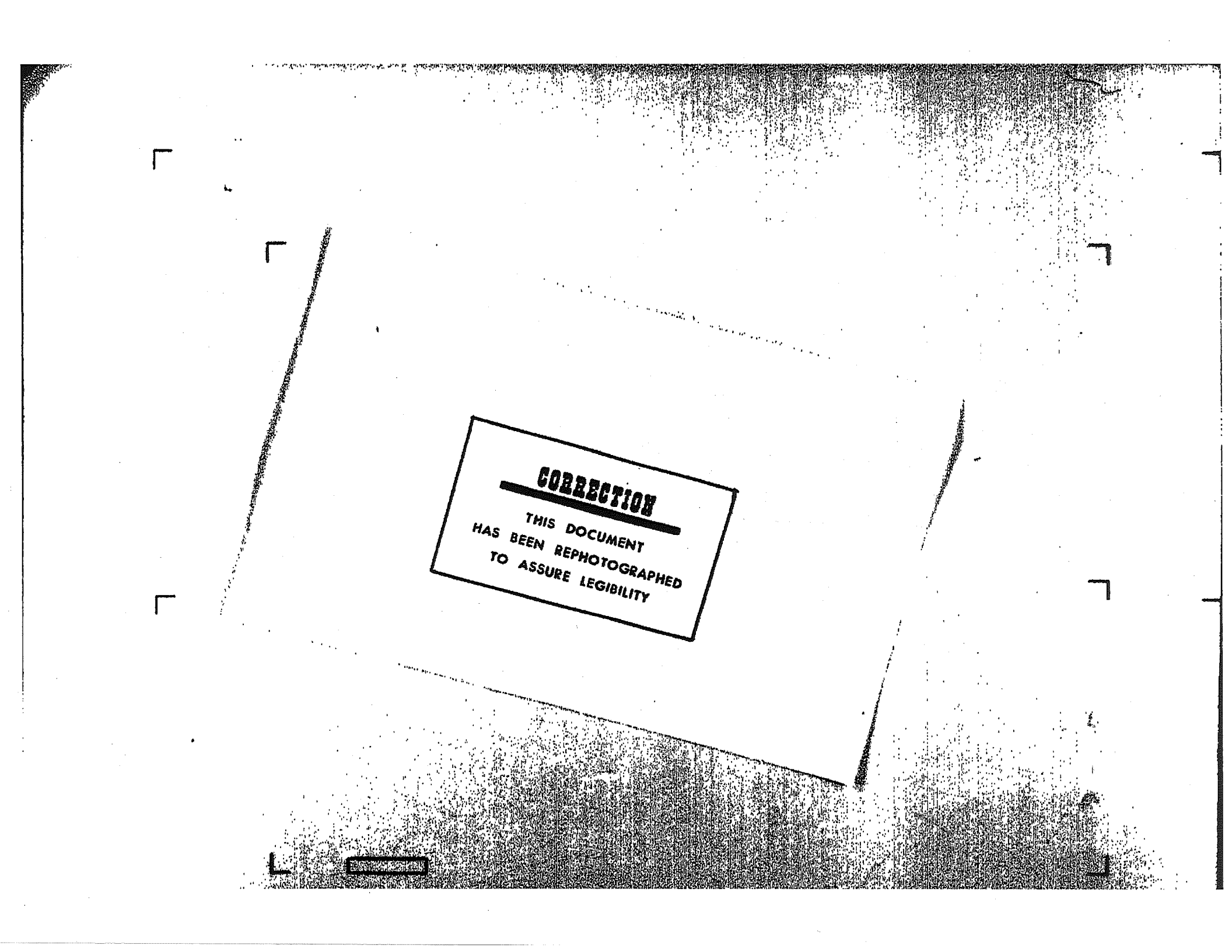
SEE ATTACHED MAP N OF GREEN RIVER GORGE HOME SITES





5121237

Green River Gorge Homesites
Vol. 62, Page 36-37, King Co., Wash.
Sec 26, T21N, R6E


CORRECTION
THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY

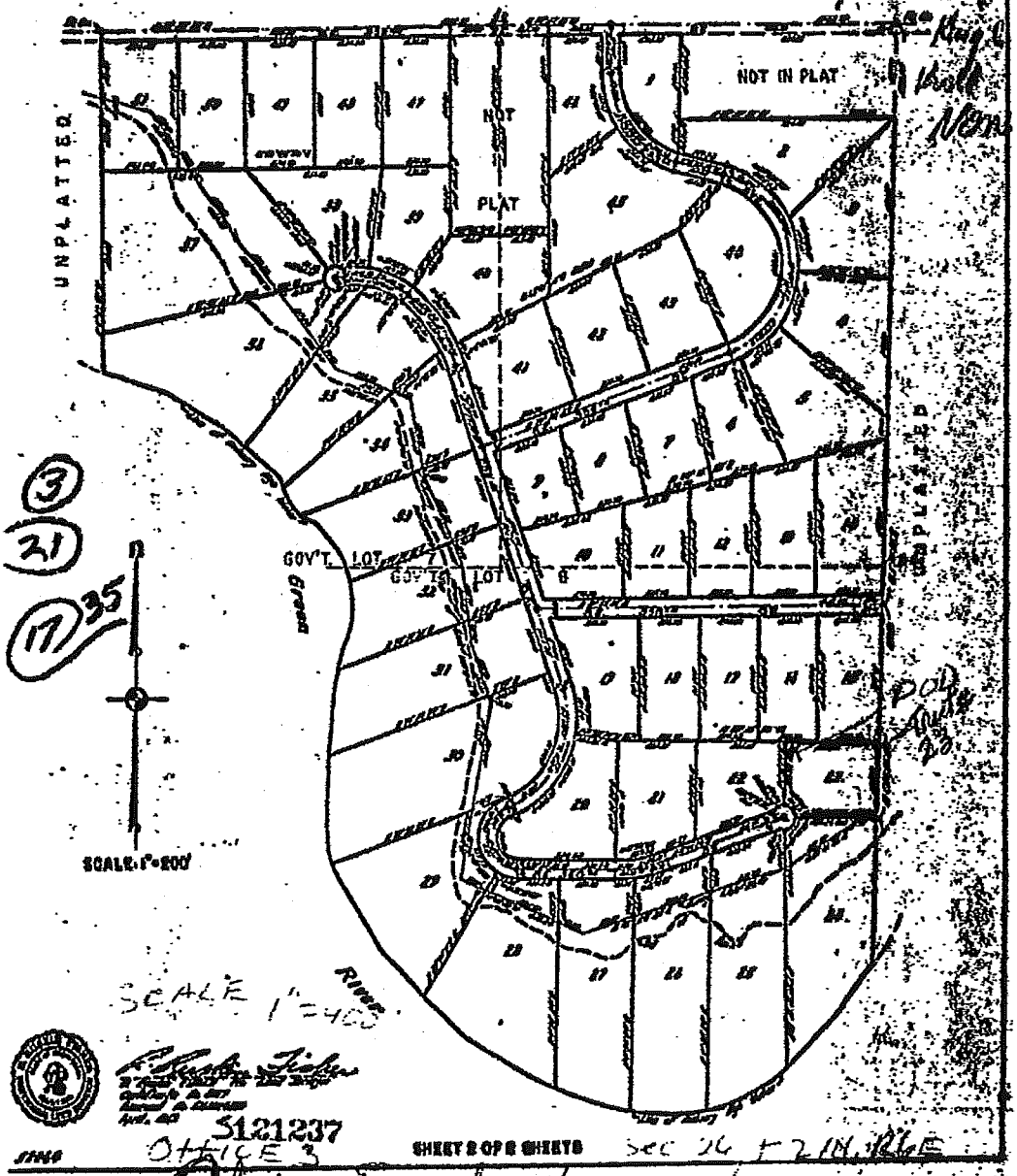
GREEN RIVER GORGE HOMESITES

SECTION 26, TWP. 21 N, R6E, W.M.

KING COUNTY, WASHINGTON

5036122
Vol 62-36-37
May 26, 1959

SCALE 1"=400



3
21
17 35

SCALE 1"=400

5121237

OFFICE 3

SHEET 2 OF 2 SHEETS

Sec 26, T 21 N, R6E

Alvin Degehardt

Tract 23, Green River Gorge Homesites, as per plat recorded in Vol 62 of plats, page 36, records of King Co.
Section 26, TWP, 21 N R 6E, W.M.
King Co. Wash.

25432 S.E 359 ST.

RECEIVED

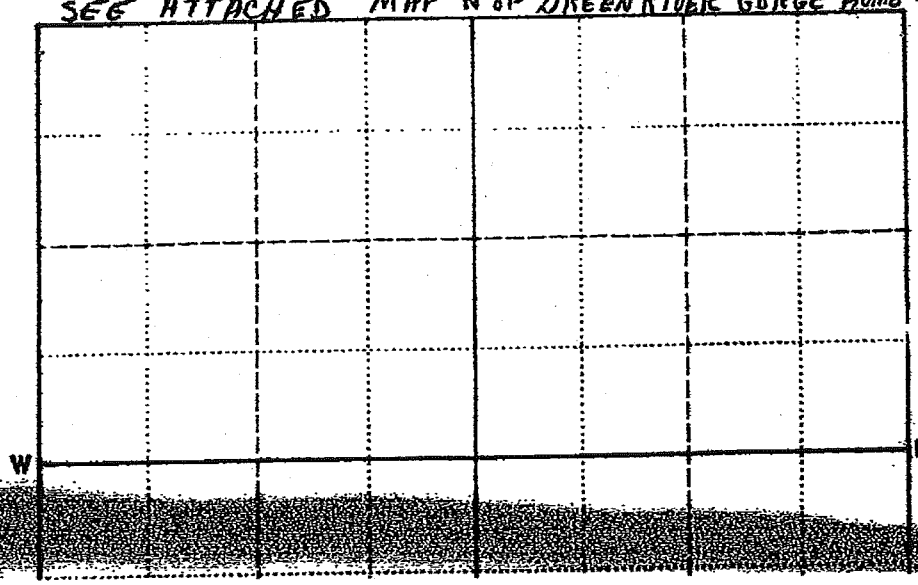
8-F No. 1131-A-OS

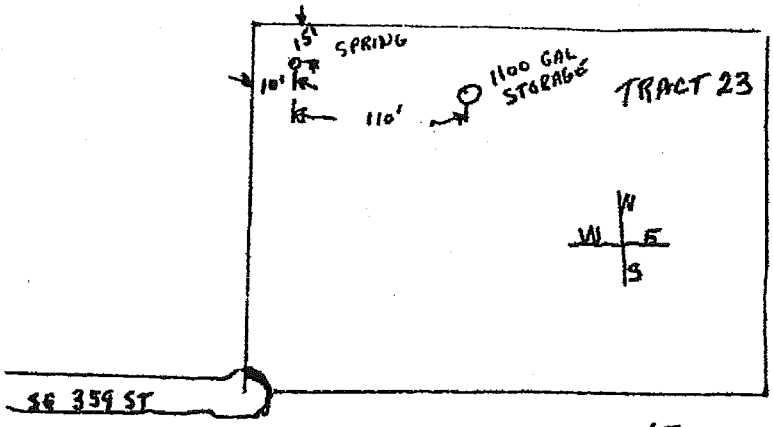
SECTION PLAT

Sec. 26 Twp. 21 N N.R. 6E W.M.

TRACT #23

SEE ATTACHED MAP N OF GREEN RIVER GORGE HOME SITES





S121237

Green River Gorge Homesites
Vol. 62. Page 36-37, King Co., Wash.

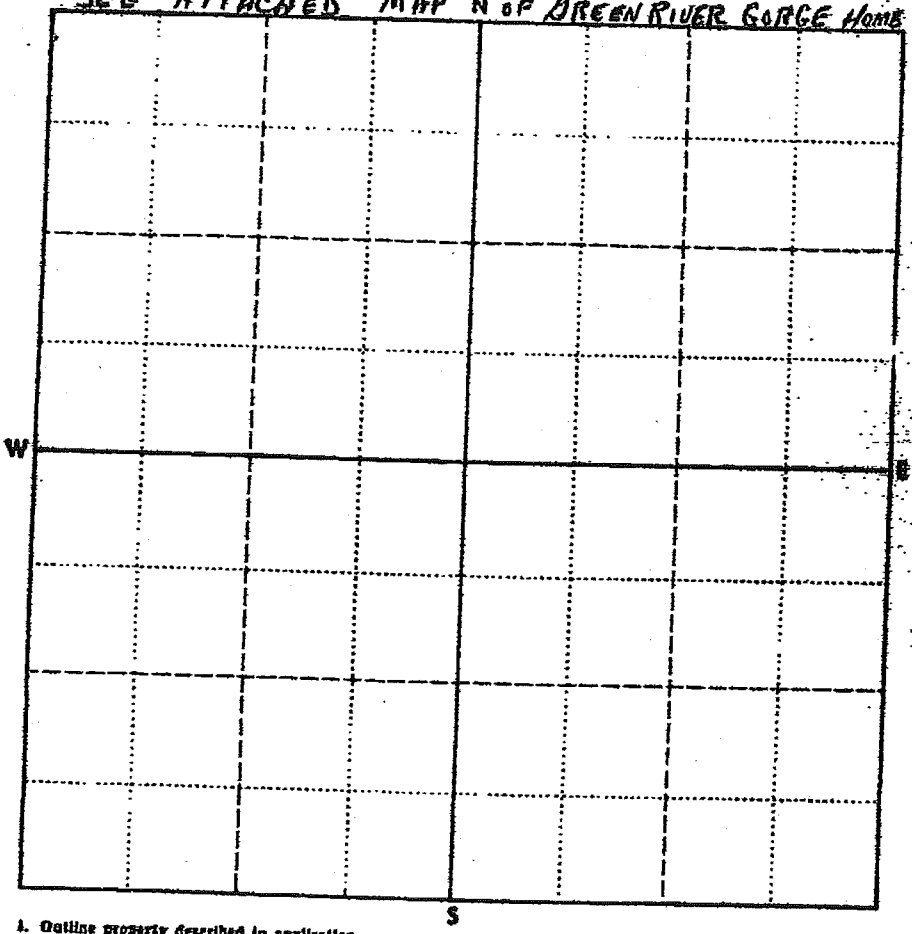
S F No. 1114-A-03

SECTION PLAT

Sec. 26 Twp. 21 N N. R. 6E W. M.

TRACT #23

SEE ATTACHED MAP N of GREEN RIVER GORGE Home Sites



1. Outline property described in application.
2. Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the location of other wells or works within a quarter of a mile.
3. Indicate traveling directions from nearest town.

Scale: 1 inch = 800 feet (each small square = 10 acres)

[illegible]

ARE THERE ANY EXISTING WATER RIGHTS APPURTENANT TO THE LAND IN WHICH THE WATER IS TO BE USED?

☐ YES ☒ NO

IF YES, FROM WHAT SOURCE AND UNDER WHAT AUTHORITY

NONE Recorded

RNB 4/23/91

6. SIGNATURES

Alvin E. Segebartt
APPLICANT'S SIGNATURE

Alvin E. Segebartt
LEGAL LANDOWNER'S SIGNATURE

25432 SE. 359 ST., AUBURN, WA.
LEGAL LANDOWNER'S ADDRESS

IF 10 ACRE-FEET OR MORE OF WATER IS TO BE STORED AND OR IF THE WATER DEPTH WILL BE 10 FEET OR MORE AT THE DEEPEST POINT, A STORAGE PERMIT MUST BE FILED IN ADDITION TO THIS PERMIT. THESE FORMS CAN BE SECURED, TOGETHER WITH INSTRUCTIONS FROM THE DEPARTMENT OF ECOLOGY

REMARKS (TYPE OF SYSTEM PROPOSED):

STATE OF WASHINGTON }
DEPARTMENT OF ECOLOGY } ss.

This is to certify that I have examined the foregoing application together with the accompanying maps and data, and return the same for correction or completion as follows: .....

.....

.....

In order to retain its priority, this application must be returned to the Department of Ecology, with corrections, on or before ..... *19*.....

Witness my hand this ..... *day of* ..... *19*.....

May 22, 1974

State of Washington Department of Ecology

Mr. Alvin Segebarth
25432 S.E. 359th Street
Auburn, Washington 98002

Dear Mr. Segebarth:

SUBJECT: Surface WATER APPLICATION NO. S121237

We acknowledge receipt of affidavit of publication of notice in connection with the above-numbered application.

Regulations require that no action be taken toward issuance of a permit earlier than thirty (30) days after the last date of publication. This period of time is allowed for filing any protests or objections. In some cases it is also necessary for us to await recommendations of the Departments of Fisheries and Game before final action is taken.

Also, the statutes prescribe that a field examination must be made before a permit may be issued. This examination will be carried out during the next visit to your area by one of our field examiners. However, we are not able, at this time, to forecast the date of that visit. Due to present work backlog caused by an increase in applications with severe staff limitations, the average processing time of an application from its acceptance to issuance of permit is now approximately six months.

Sincerely,

Duane E. Wagner

DUANE E. WEGNER
Resources Management Supervisor

DEW: blh

Affidavit of Publication

STATE OF WASHINGTON } ss.
COUNTY OF KING

Robert Olson, being first duly sworn on oath deposes and says that he is the Managing Editor of THE ENUMCLAW COURIER-HERALD, a weekly newspaper. That said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the superior court in the county in which it is published and it is now and has been for more than six months prior to the date of the publications hereinafter referred to, published in the English language continually as a weekly newspaper in Enumclaw, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the annexed

is a true copy of Appropriate public waters

No. S1-21237

as it was published in regular issues (and not in supplement form) of said newspaper for a period of 2 consecutive weeks, commencing on the 9 day of May 1974 and ending on the 16 day of May 1974 both dates inclusive and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of $ 5.20 which amount has been paid in full, at the rate of $2.40 a hundred words for the first insertion and $1.80 a hundred words for each subsequent insertion.

Betty Ford

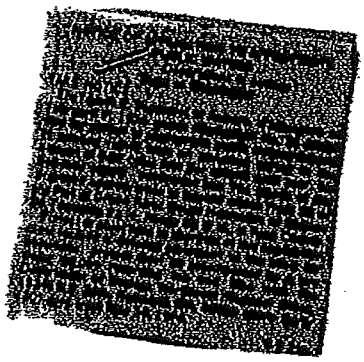
Subscribed and sworn to before me this

16th day of May 1974

Lena F. Waldron

Notary Public in and for the State of Washington, Residing at Enumclaw.

SEAL



OK PPM 5-22-74

Affidavit of Publication

STATE OF WASHINGTON
COUNTY OF KING } ss.

Robert Olson, being first duly sworn on oath deposes and says that he is the Managing Editor of THE ENUMCLAW COURIER-HERALD, a weekly newspaper. That said newspaper is a legal newspaper and has been approved as a legal newspaper by order of the superior court in the county in which it is published and it is now and has been for more than six months prior to the date of the publications hereinafter referred to, published in the English language continually as a weekly newspaper in Enumclaw, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the annexed

is a true copy of Appropriate public waters
No. S1-21237

as it was published in regular issues (and not in supplement form) of said newspaper for a period of 2 consecutive weeks, commencing on the 9 day of May, 1974, and ending on the 16 day of May, 1974, both dates inclusive and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of $ 5.20 which amount has been paid in full, at the rate of $2.40 a hundred words for the first insertion and $1.80 a hundred words for each subsequent insertion.

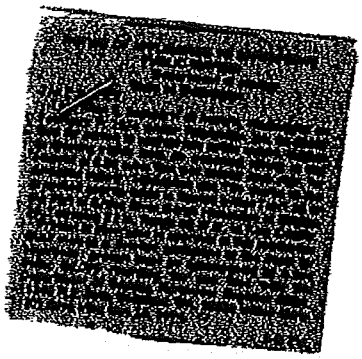
Robert Olson

Subscribed and sworn to before me this

16th day of May, 1974

Notary Public in and for the State of Washington, Residing at Enumclaw.

SEAL



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE

That ALVIN E. SEGEBARTH of Auburn, Washington on February 7, 1974 under Application No. S1-21237 filed for permit to appropriate public waters, subject to existing rights, from an unnamed spring in the amount of 0.02 cubic foot per second each year, for domestic supply - continuous use

The source of the proposed appropriation is located within Tract 23 of the Plat of Green River Gorge Homesites of Section 26, Township 21 N., Range 6E W.M., in King County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections, protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, Northwest Regional Office, 15345 N.E. 36th, Redmond, WA. 98052 within thirty (30) days from May 16, 1974 *(Last date of publication to be entered above by publisher)*

5/9-2tpd

5.20

NOTICE

30 April 1974

Alvin E. Segebartt
25611 SE 159 St.
Auburn, Washington 98002

State of Washington
Department of Ecology

Dear Mr. Segebartt:

SUBJECT: Surface WATER APPLICATION NO. S1-21237

We have received your application for the appropriation of water and it has been assigned the above number. Will you please refer to it by number in future correspondence. We are enclosing a receipt for your application fee.

Enclosed is a notice of your application which must be published once a week for two consecutive weeks in a newspaper of general circulation within County as provided in RCW 90.03.280. Such a paper should have general circulation in the locality where the water is to be diverted and used and must be qualified as a legal newspaper as provided in RCW 65.16. Please draw to the publisher's attention that the actual date of the second publication must appear in the space in the notice over the caption "last date of publication."

To ensure accuracy, it is the responsibility of the applicant to check the notice carefully before having it published. If an error is detected, do not submit the notice for publication, but refer the error to this office for correction and/or resolution.

After publication, send the affidavit of publication to this office. Publication should start within thirty (30) days and the affidavit must be received in this office within sixty (60) days from date of letter or cancellation proceedings will be initiated.

You should also be advised that a permit may be required for your proposed project under the Shoreline Management Act of 1971, Chapter 286, Laws of 1971 Extraordinary Session, before construction may proceed. That act provides that no substantial development shall be undertaken on shorelines of the state without a permit first being obtained. If you have not already done so, you may obtain application forms and further information about the Shoreline Management Act of 1971 from ~~King County~~.

Sincerely,

Duane E. Wegner

DUANE E. WEGNER
Resource Management Supervisor

DEW: jn

Enclosures

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That ALVIN E. SEGEBARTT

of Auburn, Washington on February 7, 1974, under

Application No. S1-21237 filed for permit to appropriate public waters, subject to existing rights,

from an unnamed spring

in the amount of 0.02 cubic foot per second

each year, for domestic supply - continuous use

The source of the proposed appropriation is located within Tract 23 of the Plat of Green River Gorge Homesites

of Section 26, Township 21 N., Range 6E W.M., in King County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections, protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, Northwest Regional Office, 15345 N.E. 36th, Redmond, WA. 98052

within thirty (30) days from

(Last date of publication to be entered above by publisher)

S. F. No. 1312—7-73—2334, 54172.

RECEIPT No. 28363

WASHINGTON STATE
DEPARTMENT OF ECOLOGY

28, 1974

RECEIVED FROM Alvin Dewhurst Auburn

Ten and 00/100 DOLLARS 10.00

FUND:
General ✓ Rec. Rev. Basic Data Other

SOURCE:
Water Code ✓ Publications Adjudications Refunds
Per. and Lic. Investments Registration Other

Cash
Check ✓
M. O.

DW Fam fo

S121237

By [illegible]

Thank You

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy 21/6E/26G

WATER WELL REPORT
STATE OF WASHINGTON

Application No
Permit No 21/06-266

(1) OWNER: Name John Bowles Address 25441 S.E. 357 th. Auburn, Wa.

(2) LOCATION OF WELL: County King SW ¼ NE ¼ Sec. 26 T 21 N, R 6e W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 220 ft. Depth of completed well 220 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Diam. from 9 ft. to 70 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level ? ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	Well has seapage only				

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top soil	0	7
Glacial till	7	15
Silt brown	15	21
Glacial till & bolders	21	68
Shale, Blue	68	81
Sandstone, gray	81	96
Shale, Blue, layers of sandstone and coal, seapage	96	220

Work started 4/26 19 75 Completed 4/28 19 75

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Northwest Pump & Drilling Co.
(Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way S. Auburn, Wa.

[Signed] Richard B DeLaney
(Well Driller)

License No. 0096 Date 4/28 19 75

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

14
26-6-

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

ENTERED Group D Parcel 9028 A

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 053966
UNIQUE WELL I.D. # ACG860
Water Right Permit No. 21-6E-27A 98092

(1) OWNER: Name Carrier Water System Address 24319 SE Green Valley Rd, Auburn

(2) LOCATION OF WELL: County King NE 1/4 NE 1/4 Sec 27 T 21 N, R 6E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 24319 SE Green Valley Rd

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) ____
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 400 feet. Depth of completed well 385 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 6" Diam. from 0 ft. to 165 ft.
Welded ☒ PVC 4" Diam. from -1 ft. to 385 ft.
Liner Installed ☐ ____" Diam. from ____ ft. to ____ ft.
Threaded ☐

Perforations: Yes ☒ No ☐
Type of perforator used saw
SIZE of perforations 1/8 in. by 3 in.
80 perforations from 320 ft. to 380 ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ____ Depth of strata ____
Method of sealing strata off ____

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____
Static level 285 ft. below top of well Date 6-26-96
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest 2-3-4 gal./min. with stem set at 380 ft. for 2 hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	4
Brown hardpan gravel	4	8
Tan hardpan	8	46
Gray hardpan gravel	46	65
Broken gravel	65	68
Brown hardpan	68	93
Gray hardpan - rocks	93	163
Gray sandstone	163	264
Brown decayed rock	264	310
Gray sandstone	310	335
Gray sandstone - seepage	335	380
Gray sandstone	380	393
Coal	393	400
Bentonite	385	400

RECEIVED
JUL 22 1996
Department of Ecology

Work Started 6-6 19. Completed 6-26 19 96

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co, Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) 98055
Address 19415 108th Ave SE, Renton
(Signed) Brad Johnson (WELL DRILLER) License No. 0233
Contractor's Registration No. JOHNSDC207BM Date 6-26 19 96

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (8/93)

Group B Parcel 9028 located per phone call 27-A-S1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

Groundwater Data Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_05259_01

General Location Details:

None: Carrier W.

Unique Well ID: GrpB_05259_01
Parcel ID Number: 2721069028
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 **Basin:** Middle Green River
Township: 21N **Range:** 06E **Section:** 27 **QS:** NE/NE
Local Number: 21N/06E-27A
City: King County **Zipcode:** 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Well **Well Depth:** 0 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

27-A-1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 05/14/2002
Printed: 03/12/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
11280 D	CARRIER,W	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

PRIMARY CONTACT WS# 11280 CARRIER
21414 260TH S E
MAPLE VALLEY, WA 98038

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 000901

CARRIER,W
21414 260TH S E
MAPLE VALLEY, WA 98038

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone:		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [x] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18										19			20	21						22	23	24			
	SOURCE NAME	INTERTIE	SOURCE CATEGORY										USE				TREATMENT						DEPTH		SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	Well 01		X										X				X						41	30	SW NW	12	22N	06E

27-A-1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
11280 D	CARRIER,W	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	2	Undetermined
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	2		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
28. TOTAL SERVICE CONNECTIONS		2	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 5

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

✓Parcel 9055

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 31/06-27A

Permit No

(1) OWNER: Name Mr. Randy Anderson Address 24211 Green Valley Rd. Auburn

(2) LOCATION OF WELL: County King W 330', E 825' NE ¼ NE ¼ Sec. 27 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 200 ft. Depth of completed well 140 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 175 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☒ No ☐
Type of perforator used Halte
SIZE of perforations 1/8 in. by 2 in.
100 perforations from 40 ft. to 72 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☒ No ☒ Size of gravel: bentonite plug on top pea
Gravel placed from 140 ft. to 175 ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 50 ft. below top of well Date 9-3-85
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" 1.5 " 20 " 3 "
" " " AIR JET "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brown surface	0	5
Brown sand & gravel	5	10
Brown clay sand & gravel	10	40
Brown sand & gravel - seepage	40	60
Gray hardpan - gravel - some brown gravel	60	130
Gray clay	130	140
Gray silty sand - clay	140	160
Gray hardpan	160	170
Gray claystone	170	180
Gray hardpan	180	200

RECEIVED
SEP 17 1985
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 8-20, 1985 Completed 9-3, 1985

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 9-3, 1985

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

Parcel 9055

27-A-2

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

21/6 -- 27 H

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No

(1) OWNER: Name Andy Benedetti Address 24215 S.E. Green Valley Rd. Auburn

(2) LOCATION OF WELL: County King — SE ¼ NE ¼ Sec 27 T. 21 N. R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☒ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled ft. Depth of completed well 500 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 4"PVC Diam. from 360 ft. to 500 ft.
Threaded ☐ Diam. from 0 ft. to 416 ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☐
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☒ No ☐ Size of gravel: pea
Gravel placed from 416' ft. to 331' ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 600 ft.
Static level 190 ft. below top of well Date 11-25-83
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 3 gal./min. with 142 ft. drawdown after ½ hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
sandstone coal seams	360'	420'
water 1-2gpm		
gray sand stone	420'	460'
brown sand stone	460'	500'

260' of 6" casing
4"PVC 0- 416' slotted
two around 1' apart to
416' - 260' back filled
with pea gravel 416' to 331'

RECEIVED
APR 16 1984
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

RECEIVED
APR 5 1984
Department of Ecology

Work started 11-8 19 83 Completed 11-18 19 83

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Stoigen Drilling Inc (Person, firm, or corporation) (Type or print)

Address Rt.1 Box 175 Eatonville Wa. 98328

[Signed] Thomas L Kathenberg (Well Driller)

License No. 0240 Date 3-8-84, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1 20

27-A3

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No

Permit No

(1) OWNER: Name Andrew J. Benvedetti Address 24215 SE Green Valley Rd Auburn

(2) LOCATION OF WELL: County King — NE ¼ NE ¼ Sec 27 T 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 105 ft. Depth of completed well 105 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from 0 ft. to 105' ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft to ft.
perforations from ft. to ft.
perforations from ft to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam Slot size from ft to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 96 ft below top of well Date 9-29-87
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield gal./min. with ft drawdown after hrs.
3 " 4 " 2 "
" " " AIR JET "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft drawdown after hrs
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Brown hardpan	0	10
Brown clay-gravel	10	21
Brown hardpan	21	33
Brown sandy gravel-seepage	33	40
Brown & gray hardpan	40	98
Brown gravel-sand-seepage	98	99
Brown gravel	99	103
Brown gravel-sand-water	103	105
Brown hardpan-rock	105	—

have parcel names or addys been checked
24215 SE Green Valley Road
Used to own 9055, now owned by Anderson w/ diff log!

DEPT. OF ECOLOGY

Work started 9-26 1987 Completed 9-29 1987

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print) 9805

Address 19415 108th Ave SE Renton

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 9-29, 1987

(USE ADDITIONAL SHEETS IF NECESSARY)

27-A-4

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
SEP 13 7305-0524
CASH OTHER NONE

Water Right Claims Registration

Water Right Claim

Name Vernon E. Smith (Short Form) 09

Address P.O. Box 238 Black Diamond

Washington Zip Code 98010 Phone No. TU6-1190

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: The South 260 feet of the North 550 feet of the West 135 feet of the East 465 feet of Government Lot 1, Section 27, Township 21 North, Range 6, E.W.M. in King County, Washington. Together with an easement for ingress, egress and utilities over the South 520 feet of the North 550 feet of the West 30 feet of the East 495 feet of Government Lot 1, Section 27, Township 21 North, Range 6 E.W.M. in King County Washington

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 27 T. 21 N. R. 6 E/W.W.M.

County in which lands are located King County

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered — This has been assigned Water Right Claim Registry No.

NOV 0 0039632

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Vernon & Dorothy Smith

Date Sept 12, 1973

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

27-A-S

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
MAY 29 1974 115562
CASH__ OTHER__ NONE__

1. NAME Ronald Allen Swift
ADDRESS 24319 SE Green Valley Road
Auburn, Wa. ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Ground water (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS a well

B. IF SURFACE WATER, THE SOURCE IS

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 10 GPM (CUBIC FEET PER SECOND OR GALLONS PER MINUTE) PRESENTLY USED 10 GPM

B. ANNUAL QUANTITY CLAIMED 1 acre-Foot (ACRE FEET PER YEAR) PRESENTLY USED 1 acre-Foot

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continuously

4. DATE OF FIRST PUTTING WATER TO USE: MONTH November YEAR 1965

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 110 FEET South AND 120 FEET West FROM THE Northeast (NE) CORNER OF SECTION 27
BEING WITHIN East 330 feet of Gov. Lot 1 OF SECTION 27 T. 21 N., R. 6 (E. ~~or W.~~) W.M.
IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT BLOCK OF
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: The east 330 feet of Government lot 1, section 27, Township 21 north, range 6 east, W. M., in King County, Washington, Except portion thereof conveyed to the State of Wash. by deed recorded under auditor's file No. 2718270. COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Domestic supply and stock water

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Appropriation

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED: THIS HAS BEEN ASSIGNED
WATER RIGHT CLAIM REGISTRY NO.
SEP 10 74 1626
John Biggs
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.
X Ronald Allen Swift
DATE 5-25-74
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☒ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

27-A-6

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 21106 - 27 D

Permit No. ....

(1) OWNER: Name John P. Lowey Address 35425 240th Ave SE Auburn

(2) LOCATION OF WELL: County King S175' N 350' S1/2-NW ¼ NE ¼ Sec. 27 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner See attached

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 151 ft. Depth of completed well 151 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 151 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☒ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 135 ft. below top of well Date 2/8/78
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? .....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 8 gal./min. with 4 ft. drawdown after 4 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brown rocks gravel	0	11
Brown hardpan	11	23
Gray brown hardpan	23	50
Brown sand	50	65
Gray hardpan	65	90
Brown hardpan	90	140
Brown gravel (water seepage)	140	151

This log could be the log for the COKE LOKE Group [illegible] 9053 (Both [illegible])

Work started 2/3, 1978 Completed 2/8, 1978

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc. (Person, firm, or corporation) (Type or print)

Address 19415 108th Ave SE Renton 98055

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 2/8, 1978

(USE ADDITIONAL SHEETS IF NECESSARY)

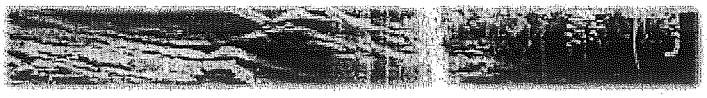
S. F. No. 7356—OS—(Rev 4-71)
ECY-070-28

Group B Parcel 9052/9053

27-B-1

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report.

King County Home News Services Comments Search



Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471704122012201

General Location Details:

Unique Well ID: S_471704122012201
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 27 QS: NW/NE
Local Number: 21N/06E-27B02
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 151 Feet
Surface Elevation: 500 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Name: Losey John P

Well Log Data:

King County well log data is available. Contact Eric Ferguson at eric.ferguson@kingcounty.gov or 206-263-6512 for more information.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Measurement Date	Measurement Time	Depth to Water (feet)	Water Level Elevation (feet)	Measurement Method
6/5/1986	10:30	124.72	375.28	Steel tape
4/7/1987	16:30	124.14	375.86	Steel tape

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton,

Related Information:

27-B-1

King County Home News Services Comments Search

Natural Resources and Parks
Water and Land Resources Division

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_62136_01

General Location Details:

Name: Cole

Unique Well ID: GrpB_62136_01
Parcel ID Number: 2721069053
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 27 QS: NW/NE
Local Number: 21N/06E-27B
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Well Well Depth: 150 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

27-B-1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 06/21/2005
Printed: 03/12/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
62136 A	COKE-LONEY	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

JOHN LONEY [WS - PRIMARY CONTACT]
35425 - 240TH SE
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 014552

JOHN LONEY
35425 - 240TH SE.
AUBURN, WA 98002

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (360) 886-1602		Owner Daytime Phone: (360) 886-1602	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [X] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [X] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [X] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	WELL		X										X				X						150	10	NW NE	27	21N	06E

27-B-1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
62136 A	COKE-LONEY	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	2	2
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	2		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		2	2

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 5

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

Parcel 9054 21/6 — 27/5

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name Gill Bortleson Address 35415 240TH Auburn 98002

(2) LOCATION OF WELL: County King S 1/2 - NW 1/4 NE 1/4 Sec. 27 T. 21 N., R. 6 E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 235 ft. Depth of completed well 235 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from 0 ft. to 235 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 170 ft. below top of well Date 7/12/82
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 10 gal./min. with 40 ft. drawdown after 3 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Surface	0	2
Gray hardpan - boulders	2	18
Brown loose gravel	18	80
Gray loose gravel	80	130
Gray clay	130	180
Gray silty clay	180	216
Gray clay & gravel	216	227
Gray water sand & gravel	227	235
Gray sandstone	235	—

Work started 7/2 19 82 completed 7/12 19 82

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co., Inc.
(Person, firm, or corporation) (Type or print)

Address 19415 108TH Ave SE Renton 98055

[Signed] Brad Johnson
(Well Driller)

License No. 0233 Date 7/12, 19 82

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

located w/ iMAP assessor data

27-B

The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Report

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

Name Howard E. Johansen

Address 27447 SE 401st

Enumclaw, Washington Zip Code 98022 Phone No. 825-5486

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

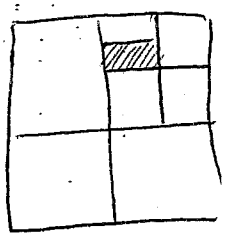
If surface water, please indicate source; give name if known:

Spring, however well intended
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: South half of the northwest quarter of the northeast quarter of Section 27, Township 21 North, Range 6 East, W. M., in King County, Washington.



If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____ (Give name of plat or addition)

In addition, please indicate Sec. 27 T. 21 N. R. 6 E E/W. W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered This has been assigned Water Right Claim Registry No.

MAR 1 0 75 1 38265

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Howard E. Johansen

Date June 28, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

ORIGINAL DOE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

3

27-B-4

S. F. No. 369—1-57—5M. 47579. O.S.

CERTIFICATE RECORD NO. 20, PAGE NO. 9674

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF SURFACE WATER RIGHT

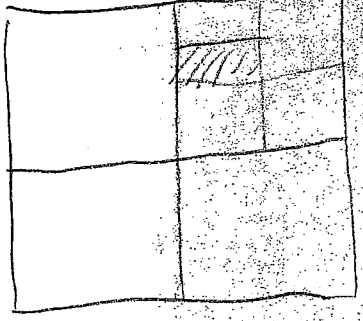
(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.)

This is to certify that EDWARD J. & CAROL J. BOLDEN

of Seattle, *State of* Washington, *has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the waters of* Unnamed spring, *a tributary of* Green River, *with point or points of diversion within the* SW¼NW¼ *Sec.* 27, *Twp.* 21 *N., R.* 6 E., *W. M., under and subject to provisions contained in* appropriation *Permit No.* 13295 *issued by the State Supervisor of Water Resources, and that said right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume* 20, *at Page* 9674, *on the* 6th *day of* July, 1966, *that the priority date of the right hereby confirmed is* September 25, 1963; *that the amount of water under the right hereby confirmed, for the following purposes is limited to an amount actually beneficially used and shall not exceed* 0.01 cubic foot per second for domestic supply

A description of the lands under such right to which the water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

SW¼NW¼ Sec. 27, T. 21 N., R. 6 E.W.M.



The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 6th *day of* July, 1966

State Supervisor of Water Resources.

4

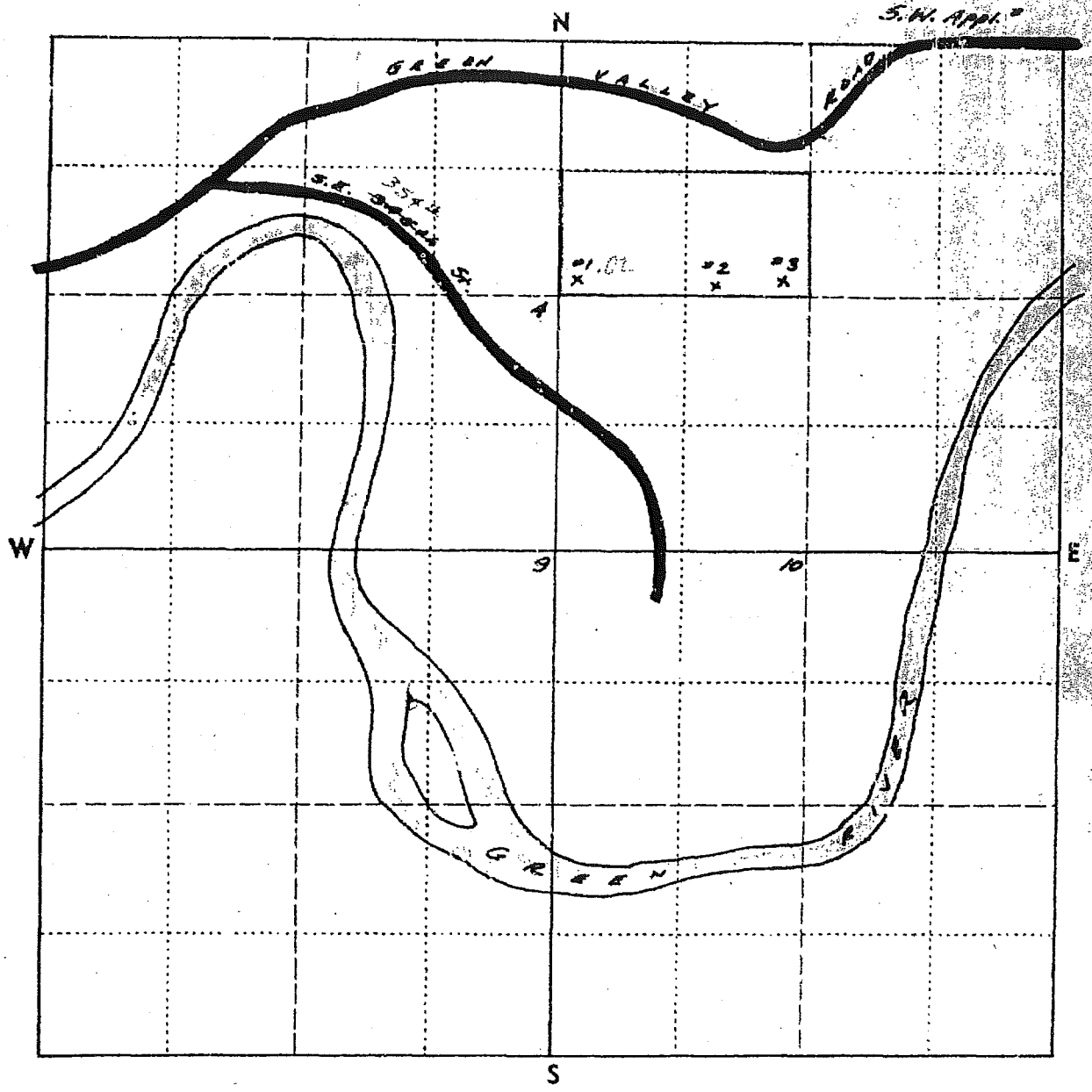
27-B-B

located using attached maps

S. F. No. 1854-A—OE—5-62—5M.

SECTION PLAT

Sec. 27 Twp. 21 N. R. 6 E. N.M.



1. Outline property described in application.
2. Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.
3. Indicate traveling directions from nearest town.

OFFICE Scale: 1 inch = 800 feet (each small square = 10 acres) 18176

Plz check accuracy of loc of Points of Diversion

Affidavit of Publication

STATE OF WASHINGTON
COUNTY OF KING } ss.

Ann Harshfield being first duly sworn on oath, deposes and says that she is the chief clerk of THE KENT NEWS-JOURNAL, a weekly newspaper. That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publication referred to, printed and published in the English language continually as a weekly newspaper in Kent, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the Kent News-Journal has been approved as a legal newspaper by order of the Superior Court of the County in which it is published, to-wit, King County, Washington. That the annexed is a Water Right No. 18839

_____

_____ as it was published in regular issues (and not in supplement form of said newspaper) once each week for a period of three consecutive weeks, commencing on the 27 day of January, 1965, and ending the _____ day of _____, 19____, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of $7.50, which has been paid in full at the rate of $2.40 per folio of one hundred words for the first insertion and $1.80 per folio of one hundred words for each subsequent insertion.

Ann Harshfield

Chief Clerk

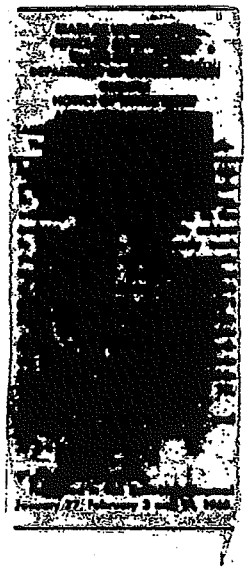
Subscribed and sworn to before me this 27 day of January, 1965.

Mrs. Mc Peel

Notary Public in and for the State of Washington, residing at Kent, King County.

—Passed by the Legislature, 1955, known as Senate Bill 281, effective June 9th, 1955.

—Western Union Telegraph Co. rules for counting words and figures, adopted by the newspapers of the State.



The Department of Ecology does NOT Warrant the Data and/or the Information on this Well Rep

Valley Parcel 9008

21-06-27C

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. 017446
Water Right Permit No.

(1) OWNER: Name MEYER, DALE Address 23419 SE 354 ST AUBURN, WA 98002-

(2) LOCATION OF WELL: County KING - NE 1/4 NW 1/4 Sec 27 T 21 N. R 6 WM
(2a) STREET ADDRESS OF WELL (or nearest address) P O BOX 1154

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one)
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 37 ft. Depth of completed well 37 ft.

(6) CONSTRUCTION DETAILS
Casing installed: 6 " Dia. from 0 ft. to 37 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used ROTARY STAR
SIZE of perforations 1/8 in. by 1 in.
80 perforations from 21 ft. to 24 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No
Diam slot size from ft. to ft.
Diam slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal YES To what depth? 18 ft.
Material used in seal BENTONITE CLAY
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type N/A H.P

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 10 ft. below top of well Date 09/13/88
Artesian Pressure lbs. per square inch Date / /
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? NO If yes, by whom?
Yield gal./min with ft drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal./min. ft. drawdown after hrs.
Air test 25 gal/min. w/ stem set at 25 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation

MATERIAL	FROM	TO
TOPSOIL	0	3
BROWN SAND	3	8
BROWN CEMENTED SAND & GRAVEL	8	19
WATER BEARING SAND & GRAVEL	19	24
BLUE GLACIAL TILL	24	31
SILICA SANDSTONE	31	37

RECEIVED
OCT 14 1988
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 09/13/88 Completed 09/13/88

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my knowledge and belief

NAME NORTHWEST PUMP & DRILLING
(Person, firm, or corporation) (Type or print)

ADDRESS 3245 AUBURN WAY SOUTH

[SIGNED] R. B. [illegible] License No. 0097

Contractor's
Registration No. NORTHPD137PQ Date 09/15/88

27-C-1

Located to address/parcel

S. F. No. 260—3-51—75C. 37753

CERTIFICATE RECORD NO. 11, PAGE NO. 5329

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF SURFACE WATER RIGHT

(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.)

This is to certify that PAUL E. RICHERS

of Seattle, State of Washington, has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the waters of Green River, [redacted],

with point or points of diversion within [redacted] Lot 6 of

Sec. 27, Twp. 21 N., R. 6 E., W. M., under and subject to provisions contained in Appropriation Permit No. 6116 issued by the State Supervisor of Water Resources, and that said right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume 11, at Page 5329, on the 7th day of August, 1953 that the priority date of the right hereby confirmed is March 18, 1952; that the amount of water under the right hereby confirmed, for the following purposes is limited to an amount actually beneficially used and shall not exceed

0.40 of a cubic foot per second for the purpose of the irrigation of 40 acres.

A description of the lands under such right to which the water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

Government Lot 6, except portion conveyed to King County for right of way, by deed recorded under Auditor's File No. 2994908, Records of said county; also Government Lots 7 and 8, except portion thereof conveyed to Samuel Skorey and William L. Luckman for 15 foot roadway by deed recorded under Auditor's File No. 245528, Records of said county; all in Sec. 27, Twp. 21 N., Rge. 6 E.W.M., except road.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 7th day of August, 1953.

M G Walker, Asst
State Supervisor of Water Resources.

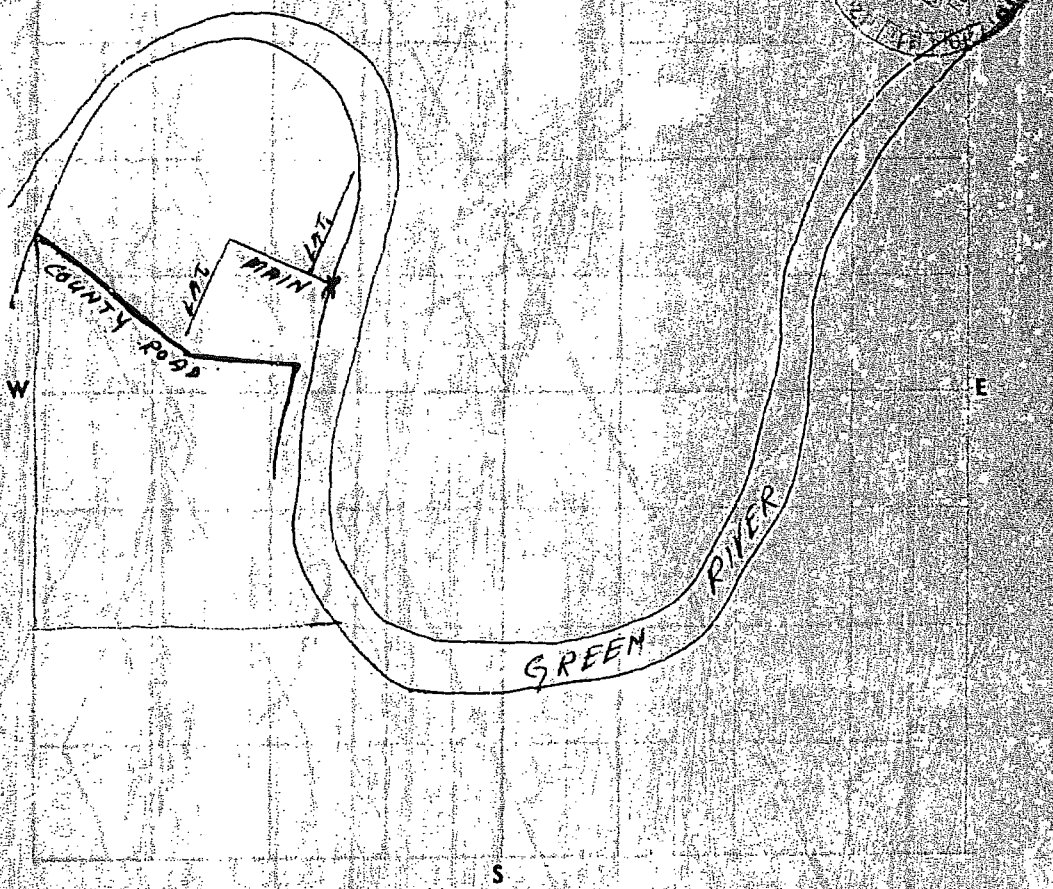
F-3
27-21

ENGINEERING DATA
O.K. MGW

S. F. No. 1834-A—3-51—20M. 27462.

SECTION PLAT

Sec. 27 Twp. 21 N. R. 6E



Be sure to show distance and bearing of point of diversion from nearest 40-acre corner. Also traveling directions from nearest town on main highway.

Scale: 1 inch = 800 feet.

11 miles east of Auburn on Green River Road next to planning Geyser park

1162

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

RECEIVED
DEPARTMENT OF ECOLOGY
JUN 25 74 135561
CASH OTHER NONE

WATER RIGHT CLAIM

1. NAME COLEMAN A. PARAMORE
ADDRESS 22765 S.E. GREEN VALLEY RD
AUBURN WASH. ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: SURFACE (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS _____

B. IF SURFACE WATER, THE SOURCE IS GREEN RIVER - SPRINGS UNNAMED CREEK

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 1000 CUBIC PER SEC PRESENTLY USED DOMESTIC IRRIGATION (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED _____ PRESENTLY USED _____ (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED 5 PRESENTLY IRRIGATED 3

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: 12 MONTHS

4. DATE OF FIRST PUTTING WATER TO USE: MONTH JAN YEAR 1910

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: _____ FEET _____ AND _____ FEET _____ FROM THE 1/4 CORNER OF SECTION 27

BEING WITHIN GOV. LOT #5 OF SECTION 27 T. 21 N., R. 6E (E.OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT _____ BLOCK _____ OF _____
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED:
GOV. LOT #5 SEC 27 - TWP 21 RG 6

COUNTY KING

7. PURPOSE(S) FOR WHICH WATER IS USED: DOMESTIC. IRRIGATION

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: FILE: 658128 660050
JAN 3, 1910

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

FEB 5 75 1 1 / 6 9 4

John Biggs
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Coleman A Paramore

DATE 6-21-74

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/ OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

27-E-1

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

RECEIVED
DEPARTMENT OF ECOLOGY
FEB [illegible]
CASH OTHER [illegible]
$9

Name Jerry J. Logg

Address 22802 SE 224th

Maple Valley Zip Code 98038

Phone No. 432 1491

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

Spring - No Name
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used.

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify)

3) Legal description of lands on which water is used: Attached

If located within the limits of a recorded platted property,

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 27 T. 21 N. R. 6 E/W, W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

APR 474059022

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Jerry J Logg

Date 12-3-74

If claim filed by designated representative print or type full name and mailing address of agent below.

☒ Additional information relating to water quality and/or well construction is available.

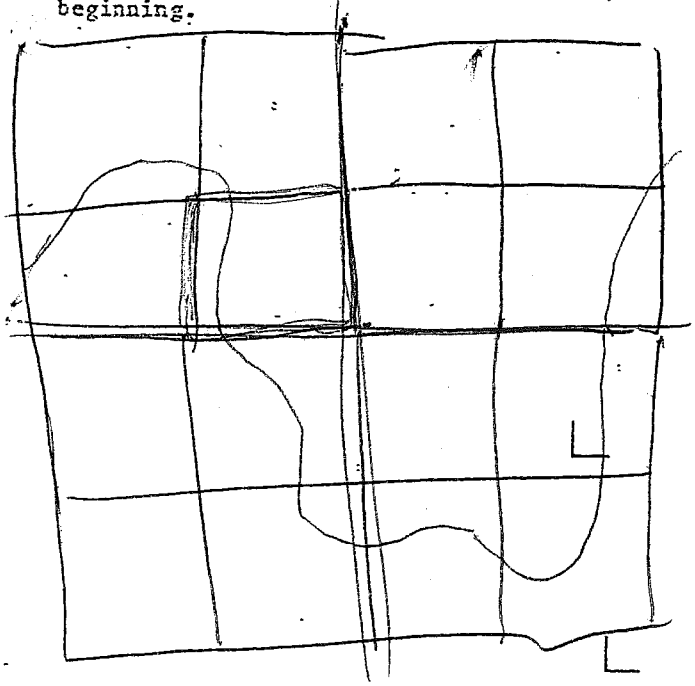
A FEE OF $200 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

27-F-1

That portion of Section 27, Township 21 North, Range 6 East, W.M., in King County, Washington, described as follows:
Beginning at the north quarter of said section;
thence south 0°44'43" west along north and south center line of said Section 1533.88 feet to the north line of the southeast quarter of the northwest quarter of said Section;
thence north 87°44'03" west along said north line 486.03 feet to the southwesterly margin of J. J. Alcorn (also known as Southeast 354th Street), said road margin being 30.00 feet southwesterly of, as measured at right angles to the center line of Traveled Roadway;
thence south 16°43'38" east along said road margin 142.77 feet to the point of beginning;
thence continuing along road margin, south 16°43'38" east 129.37 feet;
thence south 50°20'25" east 60.00 feet;
thence south 2°15'57" west 100 feet;
thence south 87°32'15" west 449.33 feet, more or less, to right bank of Green River;
thence northerly along right bank 304.00 feet, more or less, to a point which point of beginning lies south 87°44'03" east;
thence south 87°44'03" east 321.00 feet, more or less, to the point of beginning.



S. F. No. 369—3-31—75C. 27755.

CERTIFICATE RECORD NO. 13, PAGE NO. 6138

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF SURFACE WATER RIGHT

(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.)

This is to certify that FRANCIS J. BOLDUC

of Auburn, *State of* Washington, *has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the waters of* Green River, ~~[illegible]~~, *with point or points of diversion within* ~~the~~ Government Lots 4 and 9 of *Sec.* 27, *Twp.* 21 *N., R.* 6 E., *W. M., under and subject to provisions contained in* Appropriation *Permit No.* 9316 *issued by the State Supervisor of Water Resources, and that said right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume* 13, *at Page* 6138, *on the* 20th *day of* April, 1955 *that the priority date of the right hereby confirmed is* June 29, 1953; *that the amount of water under the right hereby confirmed, for the following purposes is limited to an amount actually beneficially used and shall not exceed*

0.30 of a cubic foot per second for the purpose of the irrigation of 30 acres.

A description of the lands under such right to which the water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

Consisting of the W½ of SW¼ of NE¼, all of Government Lots 4 and 9, and W½ of Government Lot 10, all in Section 27, Township 21 N., Range 6 E.W.M., except roads and less coal and mineral rights.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 20th *day of* April, 1955.

M G Walker
State Supervisor of Water Resources.

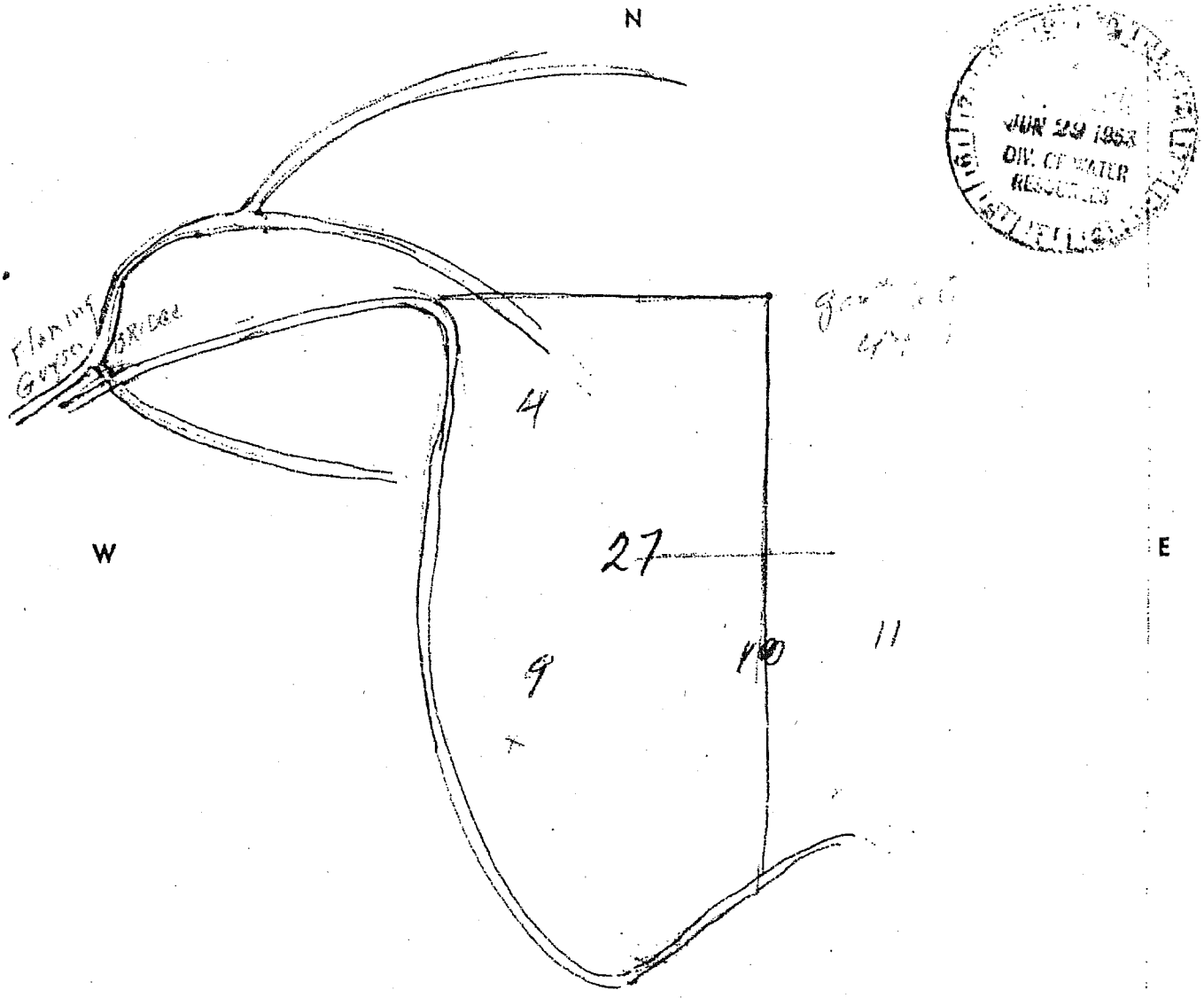
ENGINEERING DATA
O.K. [signature]

BOLDUC also has B4 water right

27-57

C. F. No. 1854-A—2-51—20M. 27462. **SECTION PLAT** BOLDUC

Sec. 27 Twp. 21 N. R. 6 EWM



JUN 29 1953
DIV. OF WATER RESOURCES

Boldue.

S

Be sure to show distance and bearing of point of diversion from nearest 40-acre corner. Also traveling directions from nearest town on main highway.

Scale: 1 inch = 800 feet.

Consisting of the West half of the Southwest ¼ of the Northeast ¼, all in Govt Lots 4 and 9, and the West ½ of Govt. lot 10, all in Section 27, Twp 21, north, Range 6 west except roads and less coal and mineral rights; consisting of approximately 80 acres.

7458 ENTERED WELL REPORT STATE OF WASHINGTON Start Card No. W118628 AER063

(1) OWNER: Name BERTE, FRANK Address P O BOX 500 ENUMCLAW, WA 98022-

(2) LOCATION OF WELL: County KING - SE 1/4 NE 1/4 Sec 28 T 21 N. R 6E WM
(2a) STREET ADDRESS OF WELL (or nearest address) FLAMING GEYSER STATE PARK 21-6E-28H

(3) PROPOSED USE: DOMESTIC

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
NEW WELL Method: ROTARY

(5) DIMENSIONS: Diameter of well 6 inches
Drilled 158.5 ft. Depth of completed well 158.5 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6 " Dia. from +2.5 ft. to 158.5 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: NO
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Diam. slot size from ft. to ft.
Diam. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: YES To what depth? 18 ft.
Material used in seal BENTONITE
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off

(7) PUMP: Manufacturer's Name FLINT & WALLING
Type SUBMERSIBLE H.P. 1

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level 121 ft. below top of well Date 06/18/99
Artesian Pressure lbs. per square inch Date
Artesian water controlled by

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? YES If yes, by whom? HAYES DRILLING
Yield: 13 gal./min with 21.9 ft. drawdown after 1 hrs.

Recovery data

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal/min. ft. drawdown after hrs.
Air test 10 gal/min. w/ stem set at 158 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
TOPSOIL	0	1
BROWN GRAVEL COBBLES & SILT	1	20
BROWN GRAVEL	20	35
BROWN GRAVEL & SAND	35	65
BROWN SAND	65	85
BROWN CLAY & SAND	85	88
BROWN SAND	88	95
BROWN GRAVEL & SAND	95	107
BOULDERS	107	108
BROWN GRAVEL & SAND	108	125
GRAY GRAVEL SAND & WATER	125	

Berte = Hagen
from .map
G.S. el 565
SW 121
444

Work started 06/17/99 Completed 06/18/99

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME HAYES DRILLING, INC.
[Person, firm, or corporation) (Type or print)

ADDRESS 5696 ERSHIG RD. BOW, WA

[SIGNED] Ryan Williams License No. 2190

Contractor's
Registration No. HAYESDI106J5 Date 06/28/99

6795

Use Data and/or the information on this well

located to parcel using imap assesor data 28-A-1.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

N. 833-8691
21/6E/28/A

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 21/06-28A
Permit No.

(1) OWNER: Name Paul Hervey Address 35408 227 Auburn Wa

(2) LOCATION OF WELL: County King — NE ¼ NE ¼ Sec. 28 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner NE Corner Section 28

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 400 ft. Depth of completed well 400 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 186 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☒ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☒ No ☐
Type of perforator used Mills Knife
SIZE of perforations 118 in. by 3 in.
..... perforations from 80 ft. to 90 ft.
..... perforations from 110 ft. to 115 ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name.....
Type..... Model No.....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal puddling clay Bored
Did any strata contain unusable water? Yes ☐ No ☒
Type of water?..... Depth of strata.....
Method of sealing strata off.....

(7) PUMP: Manufacturer's Name.....
Type: ..... H.P.....

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ..... ft.
Static level 80 ft. below top of well Date 3/26/76
Artesian pressure ..... lbs. per square inch Date.....
Artesian water is controlled by..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?.....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 8 gal./min. with 20 ft. drawdown after 2 hrs.
Artesian flow..... g.p.m. Date.....
Temperature of water..... Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Surface	0	5
Gray brown gravel & clay	5	14
Brown gravel	14	23
Brown hardpan gravel	23	62
Brown sandy clay	62	74
Brown hardpan (water seepage)	74	80
Brown hardpan gravel	80	88
Gray hardpan clay gravel	88	115
Blue gray clay	115	216
Gray sandstone	216	370
Brown sandstone (coal)	370	385
Gray sandstone	385	400

G.S. 520'
SW 80
Water el. 440'
Bedrx (SS) 216'
Bedrx elev 304'

Work started 3/22 1976 Completed 3/26 1976

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Johnson Drilling Co. Inc (Person, firm, or corporation) (Type or print)

Address 19415 108 Ave SE Renton

[Signed] Brad Johnson (Well Driller)

License No. 0233 Date 3/28, 1976

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

28-A-2

located to parcel using address & imap assessor data

The Department of Ecology does NOT warrant the Data and/or the information on this Well Report.

V Parcel 4057

21-6E-28A

WATER WELL REPORT

ECOLOGY Original & 1st copy - Ecology, 2nd copy - owner, 3rd copy - driller

Construction/Decommission ("x" in circle) 143612
- (•) Construction
- ( ) Decommission *ORIGINAL CONSTRUCTION Notice of Intent Number*

CURRENT
Notice of Intent No. W159076

Unique Ecology Well ID Tag No. ABO599

Water Right Permit No

Property Owner Name Tim & Nancy Rasmussen

Well Street Address 35223 227th Ave SE

City Auburn County: King

Location NE 1/4 - 1/4 NE 1/4 Sec 28 Twn 21 R 6 (EWM) or WWM *circle one*

Lat/Long: (s,t,r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 282106 9054

PROPOSED USE: (•) Domestic ( ) Industrial ( ) Municipal ( ) DeWater ( ) Irrigation ( ) Test Well ( ) Other

TYPE OF WORK: Owner's number of well (if more than one)
(•) New Well ( ) Reconditioned *Method* ( ) Dug ( ) Bored ( ) Driven ( ) Deepened ( ) Cable (•) Rotary ( ) Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 160 ft
Depth of completed well 144 ft

CONSTRUCTION DETAILS
Casing Installed: (•) Welded 6" Diam from 0 ft to 144 ft
( ) Liner installed _____" Diam from _____ ft to _____ ft
( ) Threaded _____" Diam from _____ ft to _____ ft

Perforations: ( ) Yes (•) No
Type of perforator used
SIZE of perfs ____ in by ____ in and no of perfs ____ from ____ ft to ____ ft

Screens: ( ) Yes (•) No ( ) K-Pac Location
Manufacturer's Name
Type Model No
Diam ____ Slot Size ____ from ____ ft to ____ ft
Diam ____ Slot Size ____ from ____ ft to ____ ft

Gravel/Filter packed: ( ) Yes (•) No ( ) Size of gravel/sand
Materials placed from ____ ft to ____ ft

Surface Seal: (•) Yes ( ) No To what depth? 18 ft
Materials used in seal bentonite
Did any strata contain unusable water? ( ) Yes (•) No
Type of water? Depth of strata
Method of sealing strata off

PUMP: Manufacturer's Name
Type H P

WATER LEVELS: Land-surface elevation above mean sea level ____ ft
Static level 130 ft below top of well Date 1-9-04
Artesian pressure ____ lbs per square inch Date
Artesian water is controlled by (cap,valve, etc)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ( ) Yes (•) No If yes, by whom?
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Yield ____ gal/min with ____ ft drawdown after ____ hrs
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test ____ gal/min with ____ ft drawdown after ____ hrs
Airtest 1 gal/min with stem set at 143 ft for 2 hrs
Artesian flow ____ g p m Date
Temperature of water ____ Was a chemical analysis made? ( ) Yes (•) No

CONSTRUCTION OR DECOMMISSION PROCEDURE
Formation Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information Indicate all water encountered (USE ADDITIONAL SHEETS IF NECESSARY)

MATERIAL	FROM	TO
Surface	0	3
Sand-gravel-brown	3	8
Hardpan brown	8	37
Sand-gravel-brown	37	85
Hardpan-boulder-gray	85	114
Hardpan-clay-gray	114	140
Sand-gravel-seepage-brown	140	144
Decayed rock-shale gray	144	160

GS elev 515
SW 130
water elev 385
GS elev 515
Bedrock elev. 371

D
4
OGY

Start Date 12-22-03 Completed Date 1-9-04

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

(•) Driller ( ) Engineer ( ) Trainee Name (Print) Brad Johnson
Driller/Engineer/Trainee Signature Brad Johnson
Driller or Trainee License No. 0233

Drilling Company Johnson Drilling Co. Inc.
Address 19415 108th Ave SE
City, State, Zip Renton, WA 98055
Contractor Registration No. JOHNSOC267QM Date 1-9-04

If trainee, licensed driller's Signature and License no.

Ecology is an Equal Opportunity Employer ECY 050-1-20 (Rev 4/01)

located using parcel # on well log

28-A-3

Parcel 1077

ENTERED

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. 053755

UNIQUE WELL I.D. # ABZ 086

Water Right Permit No. _____

(1) **OWNER:** Name Dwight Thickfield Address 19319 occidental S, Seattle, WA 98148

(2) **LOCATION OF WELL:** County King 35415 NE 1/4 NE 1/4 Sec 28 T. 21 N., R. 6 E W.M.

(2a) **STREET ADDRESS OF WELL** (or nearest address) 35 4XX 227th SE, Auburn

(3) **PROPOSED USE:** ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) **TYPE OF WORK:** Owner's number of well (if more than one) _____

Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) **DIMENSIONS:** Diameter of well 6 inches. Drilled 520 feet. Depth of completed well 520 ft.

(6) **CONSTRUCTION DETAILS:**

Casing Installed: 6" Diam. from 0 ft. to 83 ft.
Welded ☒ PVC 4" Diam. from -1 ft. to 520 ft.
Liner Installed ☐
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☒ No ☐
Type of perforator used saw
SIZE of perforations 1/8 in. by 3 in.
100 perforations from 360 ft. to 520 ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) **PUMP:** Manufacturer's Name _____
Type: _____ H.P. _____

(8) **WATER LEVELS:** Land-surface elevation above mean sea level _____ ft.
Static level 240 ft. below top of well Date 6-14-95
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 1-2 gal./min. with stem set at 500 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) **WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	3
Brown sand, gravel	3	8
Brown hardpan gravel	8	23
Gray hardpan gravel	23	39
Gray clay	39	63
Gray decayed rock	63	80
Gray sandstone	80	215
coal	215	222
Gray sandstone	222	314
Shale	314	360
Gray sandstone (seepage)	360	506
Gray-brown sandstone - soft	506	520

RECEIVED
JUN 19 1995
DEPT. OF ECOLOGY

GSelv. 515
SW 240
Water elv. 275'
Bedrock (ss) 80'
Bedrock el. 435'

Work Started _____, 19. Completed 6-14, 19 95

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) 98055

Address 19415 108th Ave SE, Renton

(Signed) R. Johnson (WELL DRILLER) License No. 0233

Contractor's Registration No. JOHNSOC207QM Date 6-14, 19 95

(USE ADDITIONAL SHEETS IF NECESSARY)

ECL 050-1-20 (2/93)

phone call / open house
located to parcel
using imap assessor data

28-A-4

The Department of Ecology does NOT warrant the data and/or the interpretation on this report

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

[X] Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

[ ] Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
April 25, 1977	S1-22852	S1-22852P	S1-22852C

NAME
FREDERICK A. & CAROL A. MATHERS

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
35311 - 227th Avenue S. E.	Auburn	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Unnamed spring

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
.02		2.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Domestic supply - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION–WITHDRAWAL
980 feet west and 550 feet south from northeast corner of Sec. 28

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
NE¼NE¼	28	21	6 E.	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

That portion of the NE¼NE¼, Sec. 28, T. 21 N., R. 6 E.W.M., in King County, Washington, described as follows:

Beginning at the Northeast corner of said Sec. 28; thence South 89°21'30" West along the North line thereof 1344.63 feet, more or less, to the Northwest corner of said subdivision; thence South 0°53'19" East along the West line of said subdivision, 317.72 feet to the true point of beginning; thence continuing South along said West line 317.72 feet; thence North 88°21'36" East 890.34 feet, more or less, to the centerline of that certain easement recorded under Recording No. 7210170320; thence North along said centerline to a point which bears North 88°51'30" East of the true point of beginning; thence South 88°51'30" West 979.72 feet, more or less, to the true point of beginning;

TOGETHER WITH a 60 foot easement for ingress, egress and utilities as described in easement recorded under Recording Nos. 7210170320, 7507300456, 7507300457 and 7507300458.

28-A-5

located using attached maps

PROVISIONS

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond *Washington, this* 31st *day of* January, *19* 78

Department of Ecology

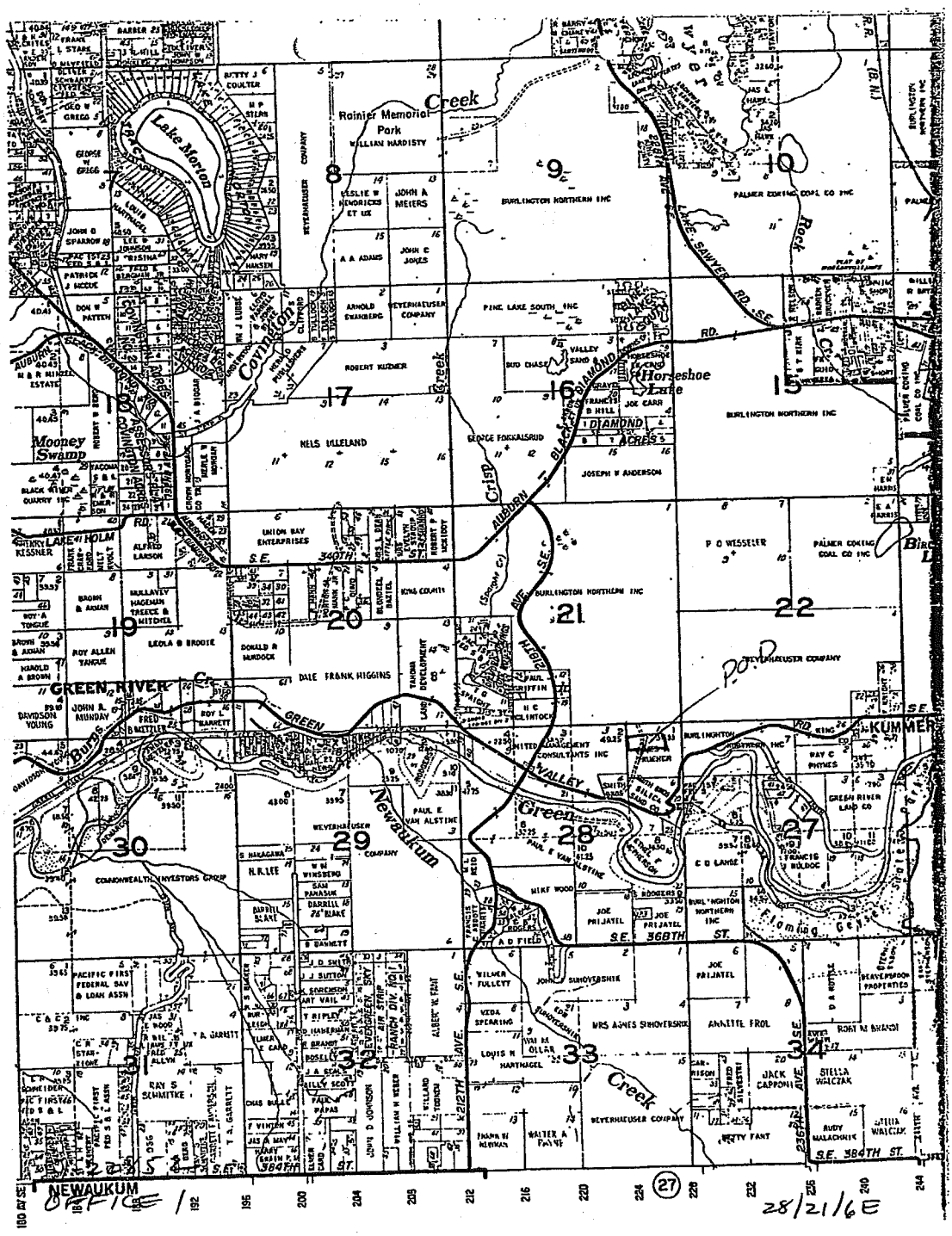
by Robert K. McCormick

ROBERT K. McCORMICK, Regional Manager

ENGINEERING DATA

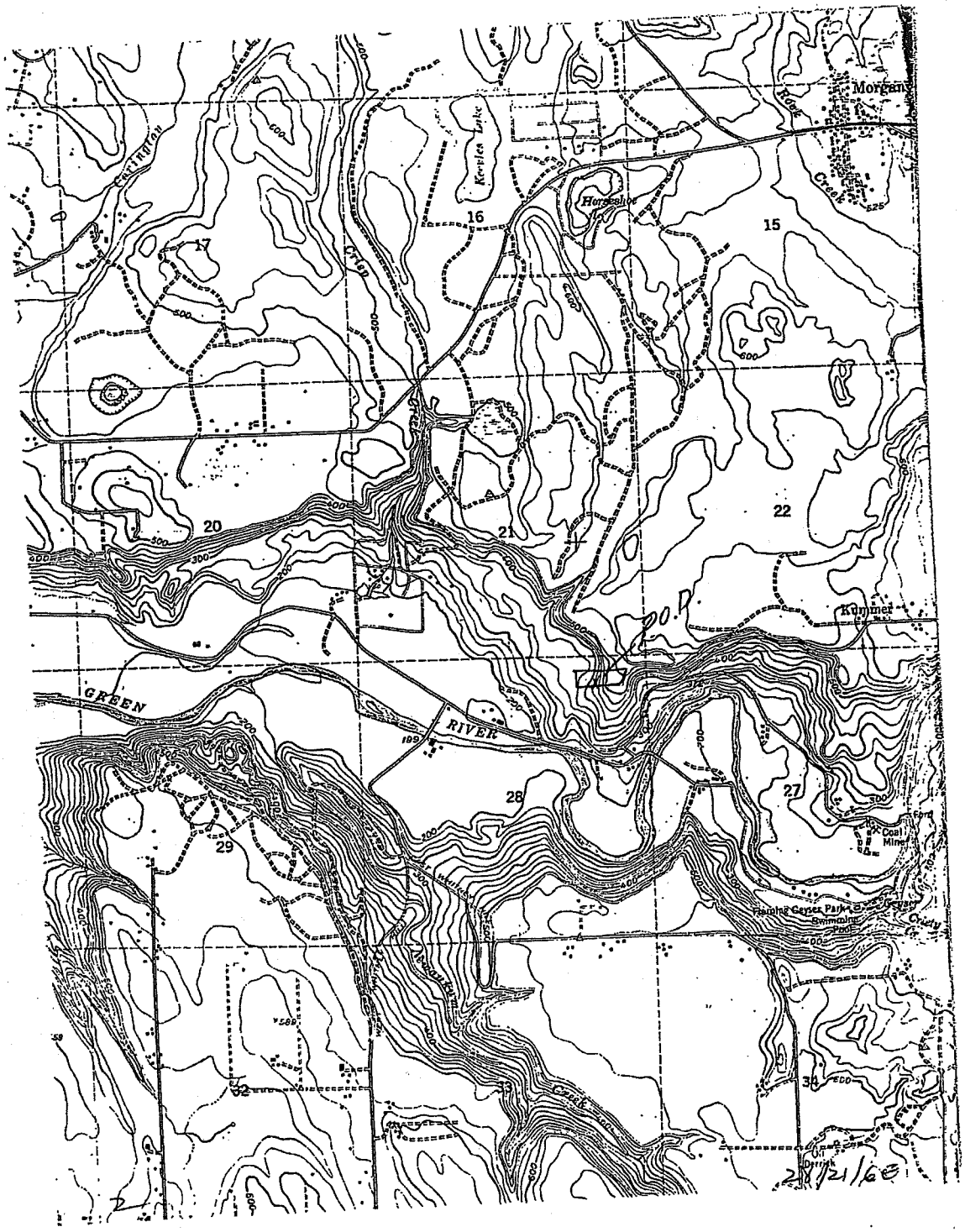
OK

FOR COUNTY USE ONLY



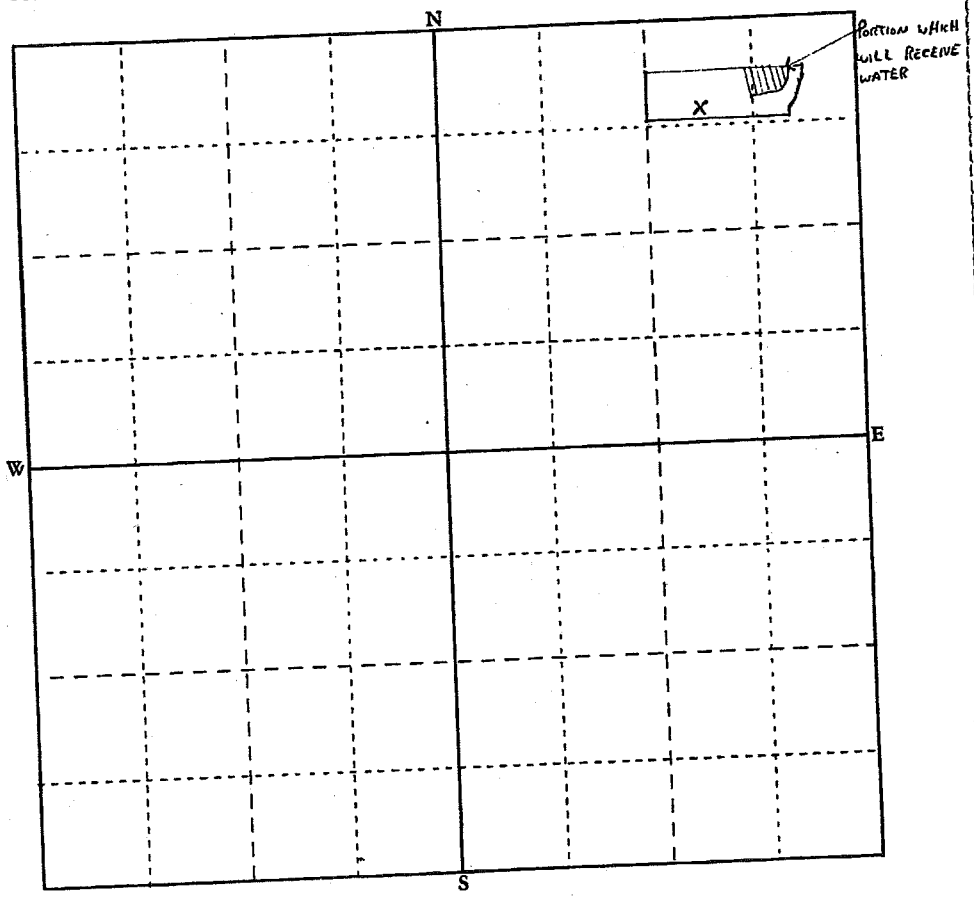
OFFICE 1

28/21/6E


Morgan
Rock
Creek
Horseshoe
Keeles Lake
Carington
Crisp
Creek
16
15
17
20
21
22
Kummer
GREEN
RIVER
28
27
29
Coal Mine
Ford
Framing Geyser Park
Swimming Pool
Geyser
Creek
32
33
34
Oil Derrick
28/21/6E

SECTION MAP

Sec. 28 Twp. 21 N. R. 6 E



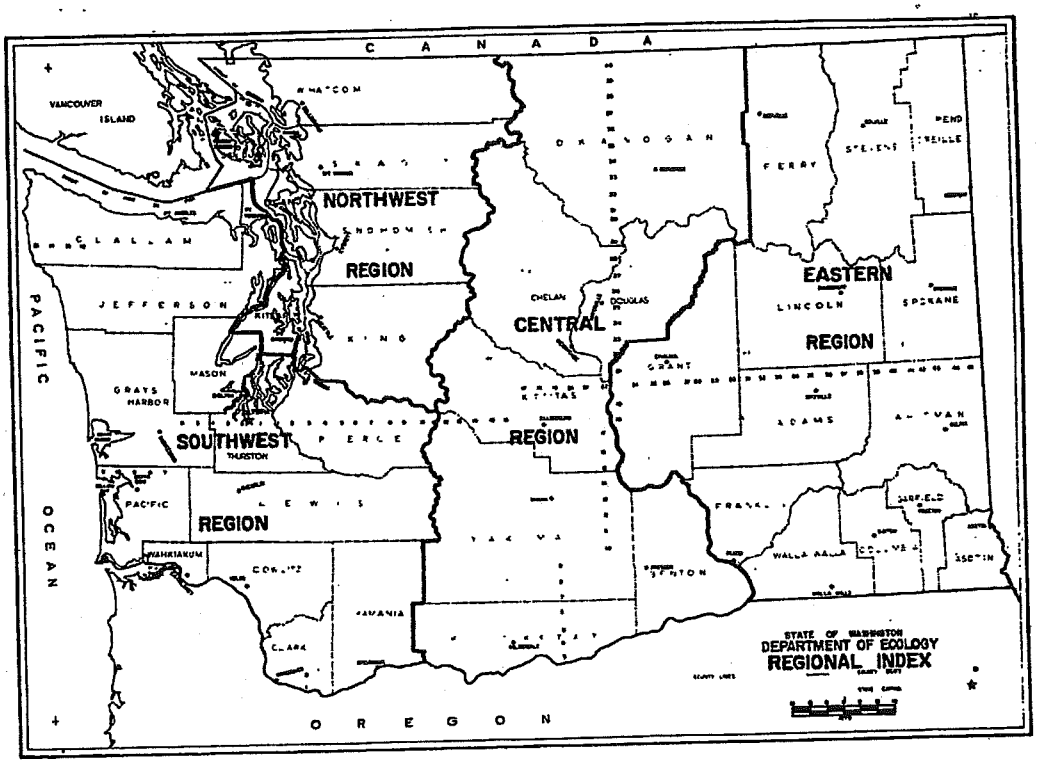
Scale: 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.

Indicate traveling directions from nearest town in space below.

28/21/6E

3



Your water right application will processed by the Regional Office of the Department of Ecology having jurisdiction in the area in which your water works are located. Please submit your completed application form, maps, sketches and $10.00 examination fee to the appropriate Regional Office.

Northest Regional Office
4350 150th Avenue N.E.
Redmond, Washington 98052
Tel. (206) 885-1900

Central Regional Office
2802 Main Street
Union Gap, Washington 98903
Tel. (509) 248-0981

Southwest Regional Office
7272 Clearwater Lane
Olympia, Washington 98504
Tel. (206) 753-2970

Eastern Regional Office
103 East Indiana Avenue
Spokane, Washington 99207
Tel. (509) 456-2926

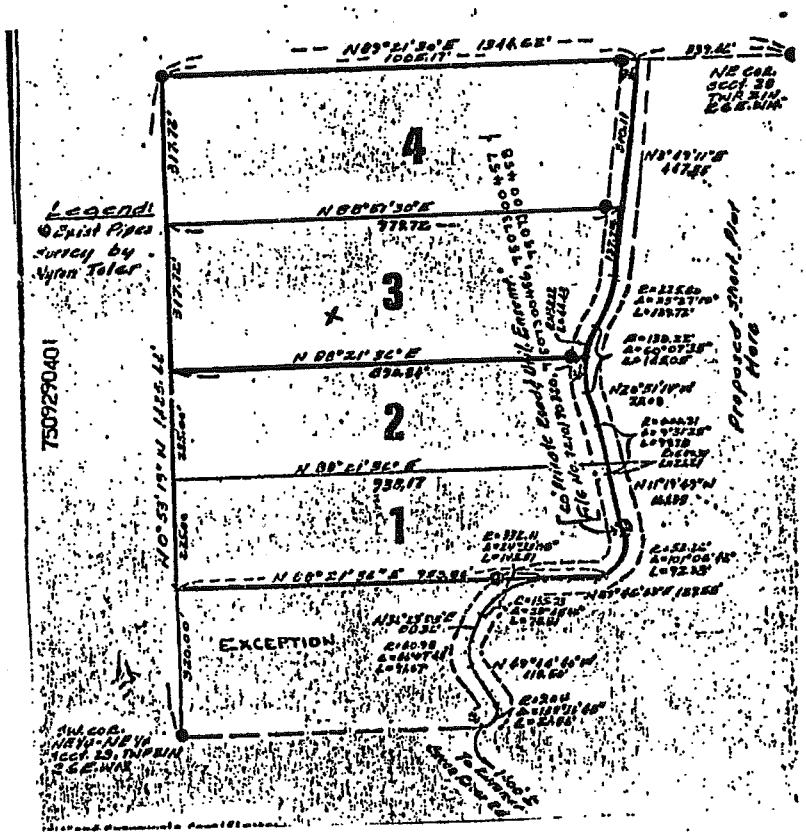
The appropriate Regional Office will be happy to answer any further questions you may have.

S1-22852

TWP 21
RGE. 6

MORTGAGOR Mathers
PLAT MAP Vol _____ PG _____

Attachment 3A



X Approx. location of withdrawal.

This map does not purport to show all highways, roads or easements affecting said property; no liability is assumed for variations in dimensions and location.

S12: 852

2/21/69

4

RECEIVED
APR 25 '77
DEPT. OF ECOLOGY
REGIONAL OFFICE
REDMOND, WA. 98052

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That FREDERICK A. MATHERS

of SUMNER/WASHINGTON on April 25, 1977 under

Application No. S1-22852 filed for permit to appropriate public waters, subject to existing rights,

from UNNAMED SPRING

in the amount of .02 CUBIC FEET PER SECOND

each year, for DOMESTIC SUPPLY - CONTINUOUSLY

The source of the proposed appropriation is located within NE 1/4 NE 1/4

of Section 28 Township 21 N., Range 6 E W.M., in KING County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, Northwest Regional Office, ~~15345 N.E. 24th~~ 4350-150th Avenue N. E., Redmond, WA. 98052

within thirty (30) days from [redacted]
(Last date of publication to be entered above by publisher)

Affidavit of Publication

STATE OF WASHINGTON
COUNTY OF KING } ss.

Anita Teernstra being first duly sworn on oath, deposes and says that she is the chief clerk of THE AUBURN GLOBE-NEWS, a newspaper published four (4) times a week. That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publication referred to, printed and published in the English language continually as a newspaper published four (4) times a week in Kent, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the Auburn Globe-News has been approved as a legal newspaper by order of the Superior Court of the County in which it is published, to-wit, King County, Washington. That the annexed is a Notice of Application

.....

..... as it was published in regular issues (and not in supplement form of said newspaper) once each issue for a period of 2 consecutive issues, commencing on the 4th day of May, 19 77, and ending the 11th day of May, 19 77, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of $ 20.42, which has been paid in full at the rate of per folio of one hundred words for the first insertion and per folio of one hundred words for each subsequent insertion.

Anita Teernstra

.....

Subscribed and sworn to before me this 11th day of May, 19 77

Lee Bailey
Notary Public in and for the State of Washington, residing at Kent, King County.

— Passed by the Legislature, 1955, known as Senate Bill 281, effective June 9th, 1955.

— Western Union Telegraph Co. rules for counting words and figures, adopted by the newspapers of the State.

V.P.C. Form No. 87

PUB. U/C
6-10-77
AS

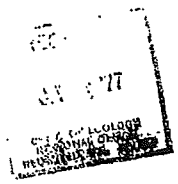
STATE OF WASHINGTON
DEPARTMENT
OF
ECOLOGY
NOTICE OF APPLICATION
TO APPROPRIATE
PUBLIC WATERS

TAKE NOTICE: That FREDERICK A. MATHERS of SUMNER/WASHINGTON on April 25, 1977 under Application No. S1-22952 filed for permit to appropriate public waters, subject to existing rights from UNNAMED SPRING in the amount of .02 CUBIC FEET PER SECOND each year for DOMESTIC SUPPLY - CONTINUOUSLY. The source of the proposed appropriation is located within NE¼ NE¼ of Section 28, Township 21 N, Range 6 E W.M. in KING County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, Northwest Regional Office, 4350 150th Avenue N.E., Redmond, WA. 98052 within thirty (30) days from May 11, 1977.

Fredick A. Mathers
Rt 3 Box 2170
Sumner, Wa. 98390

Published in The Auburn Globe-News May. 4, 1977 and May 11, 1977. A1589



April 28, 1977

Frederick & Carol Mathers
C/O Rt. 3, Box 2170
Sumner, Washington 98390

State of Washington
Department of Ecology

Dear Mr. &Mrs. Mathers:

SUBJECT: Surface WATER APPLICATION NO. S1-22852

We have received your application for the appropriation of water and it has been assigned the above number. Will you please refer to it by number in future correspondence. We are enclosing a receipt for your application fee.

Enclosed is a notice of your application which must be published once a week for two consecutive weeks in a newspaper published within King County as provided in RCW 90.03.280. Such a paper should have general circulation in a locality where the water is to be diverted and used and must be qualified as a legal newspaper as provided in RCW 65.16. Please draw to the publisher's attention that the actual date of the second publication must appear in the space in the notice over the caption "last date of publication."

To assure accuracy, it is the responsibility of the applicant to check the notice carefully before having it published. If an error is detected, do not submit the notice for publication, but refer the error to this office for correction and/or resolution.

After publication, send the affidavit of publication to this office. Publication should start within thirty (30) days and the affidavit must be received in this office within sixty (60) days from date of letter or cancellation proceedings will be initiated.

You should also be advised that a permit may be required for your proposed project under the Shoreline Management Act of 1971, Chapter 286, Laws of 1971 Extraordinary Session, before construction may proceed. That act provides that no substantial development shall be undertaken on shorelines of the state without a permit first being obtained. If you have not already done so, you may obtain application forms and further information about the Shoreline Management Act of 1971 from King County.

Sincerely,

Duane E. Wegner

DUANE E. WEGNER
Resource Management Supervisor

DEW: sr

Enclosures
NW-35
ECY 040-1-6

Northwest Washington Regional Office 4350 150th Avenue Northeast Redmond, Washington 98052 Telephone (206) 885-1900

April 28, 1977

Frederick & Carol Mathers
C/O Rt. 3, Box 2170
Sumner, Washington 98390

State of Washington
Department of Ecology

Dear Mr. &Mrs. Mathers:

SUBJECT: Surface WATER APPLICATION NO. S1-22852

We have received your application for the appropriation of water and it has been assigned the above number. Will you please refer to it by number in future correspondence. We are enclosing a receipt for your application fee.

Enclosed is a notice of your application which must be published once a week for two consecutive weeks in a newspaper published within King County as provided in RCW 90.03.280. Such a paper should have general circulation in a locality where the water is to be diverted and used and must be qualified as a legal newspaper as provided in RCW 65.16. Please draw to the publisher's attention that the actual date of the second publication must appear in the space in the notice over the caption "last date of publication."

To assure accuracy, it is the responsibility of the applicant to check the notice carefully before having it published. If an error is detected, do not submit the notice for publication, but refer the error to this office for correction and/or resolution.

After publication, send the affidavit of publication to this office. Publication should start within thirty (30) days and the affidavit must be received in this office within sixty (60) days from date of letter or cancellation proceedings will be initiated.

You should also be advised that a permit may be required for your proposed project under the Shoreline Management Act of 1971, Chapter 286, Laws of 1971 Extraordinary Session, before construction may proceed. That act provides that no substantial development shall be undertaken on shorelines of the state without a permit first being obtained. If you have not already done so, you may obtain application forms and further information about the Shoreline Management Act of 1971 from King County.

Sincerely,

Duane E. Wegner

DUANE E. WEGNER
Resource Management Supervisor

DEW: sb

Enclosures
NW-35
ECY 040-1-6

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

65270

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE:

That FREDERICK A. MATHERS

of SUMNER/WASHINGTON on April 25, 1977 under

Application No. S1-22852 filed for permit to appropriate public waters, subject to existing rights,

from UNNAMED SPRING

in the amount of .02 CUBIC FEET PER SECOND

each year, for DOMESTIC SUPPLY - CONTINUOUSLY

The source of the proposed appropriation is located within NE 1/4 NE 1/4

of Section 28, Township 21 N., Range 6 E W.M., in KING County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two dollar ($2.00) recording fee and filed with the Department of Ecology, Northwest Regional Office, ~~15345 N.E. 24th~~, Redmond, WA. 98052
4350-150th Avenue N. E.

within thirty (30) days from [redacted]
(Last date of publication to be entered above by publisher)

King County | Home | News | Services | Comments | Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471707122023201

General Location Details:

None "not given"
likely A-5 spring
"Mathers"
35311-227th Ave

Unique Well ID: N_471707122023201
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 28 QS: NW/NE
Local Number: 21N/06E-28B01S
City: King County
Zipcode: 98092
Data Source: U.S. Geological Survey
Who are these data sources?
Location Type: Spring
Well Depth:
Surface Elevation: 365 Feet
What is surface elevation?
Location Accuracy: QTRQTRSEC
What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

For questions about the Water and Land

Related Information:

Water and Land Resources Topics

Groundwater Management

28-A-6

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy 21/62/28/4

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name JOHN W. FORRISTALL Address P.O. Box 174 - Kent, WA 98031

(2) LOCATION OF WELL: County King — NE ¼ NE ¼ Sec. 28 T. 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 345 ft. Depth of completed well 340 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from -0- ft. to 192 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean
Static level 220 ft. below top
Artesian pressure lbs. per squa
Artesian water is controlled by

(9) WELL TESTS: Drawdown is lowered below
Was a pump test made? Yes ☐ No ☒ If yes,
Yield: gal./min. with ft. dr
" "
" "

Recovery data (time taken as zero when pum measured from well top to water level)

Time	Water Level	Time	Water Leve
Less than	1 gpm		
Recovery	50 gallon per		

Date of test 180 gallons ave
Bailer test gal./min. with ft. dra
Artesian flow g.p.m. Date
Temperature of water Was a chemical ana

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Top soil	-0-	4'
Brown sand & gravel with BINDER - open hole drilling	4	89
fine floating sand in water	89	90
grey clay	90	95
grey clay & gravel	95	164
light brown mastic clay	164	185
grey clay & gravel	185	195
choc colored sandstone	195	198
light brown sandstone	198	235
streak of vegetation	—	—
grey sandstone	235	270
white sandstone	270	340
soft sandstone caves in	340	345

~ g.s. 3 465 el
- 90
375 gray clay

3
465
195
270 elev

19 75 Completed Sept 19 75

ATEMENT:

der my jurisdiction and this report is wledge and belief.

Driling
or corporation) (Type or print)
E 192 Maple Valley
Finley
(Well Driller)
Date Sept 17, 1975

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

located using ~~map assessor~~ and g.w. claim data 28-A-7

The Department of Ecology does NOT warrant the Data and/or the information on this well

State of Washington
Department of Ecology

RECEIVED
DEPT OF ECOLOGY
JAN 16 1974 067643
CASH ___ OTHER ___ NONE ___

Water Right Claims Registration

Water Right Claim

Name John W. Forristall (Short Form) 09

Address Post Office Box 174

Kent, Washington Zip Code 98031 Phone No. TL 4 3020

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____
(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☐ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: The South 320 feet of the East 300 feet of the Northeast quarter of the Northeast quarter, Section 28, Township 21 North, Range 6 East, W. M. King County Washington

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 28 T. 21 N., R. 6E E/W, W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

Fa 28N054590

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X John W. Forristall

Date January 17th, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

_____

_____

☒ Additional information relating to water quality and/or well construction is available.

A FEE OF $20.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

28-A-1

State of Washington
Department of Ecology

RECEIVED
DEPARTMENT OF ECOLOGY
JAN 16 7406763

CASH OTHER / NONE

Water Right Claims Registration

Water Right Claim

Name John V. Cornstall (Short Form) 09

Address Post Office Box 174

Kent, Washington Zip Code 98031 Phone No. UL 4 3020

1) Source from which the right to take and make use of water is claimed: ☒ Surface Water ☐ Ground Water

If surface water, please indicate source; give name if known:

Name unknown. An unnamed spring.

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☐ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used:

The Northeast quarter of the Northeast quarter, Section 28, Township 21 North,

Range 6, East, W. M. King County Washington

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____
(Give name of plat or addition)

In addition, please indicate Sec. 28 T. 21 N. R. 6E E/W, W.M.

County in which lands are located King.

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered: FEB 28 1974

This has been assigned Water Right Claim Registry No. 05 4577

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X John V. Cornstall

Date January 17th, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $200 MUST ACCOMPANY THIS WATER RIGHT CLAIM

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

ORIGINAL DOE

check location (currently 1/4 1/4)
with A7
Parcel 9052

28-A-8

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☒ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☐ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
February 17, 1978.	SI-23057	SI-23057P	SI-23057C

NAME
K. & S. ENTERPRISES INC., Richard G. Williams

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
18703 S. E. 373rd	Auburn	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Unnamed spring

TRIBUTARY OF (IF S. TRACE RATEPS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
0.06		4.5

QUANTITY, TYPE OF USE, PERIOD OF USE
Group domestic supply - continuously (5 services).

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION/WITHDRAWAL
900 feet east and 100 feet south of NW corner of Sec. 28

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, E. OR W.M.	W.R.I.A.	COUNTY
NW¼NE¼	28	21	6 E.	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Portion of Govt Lot 2, Sec. 28, T. 21 N., R. 6 E.W.M., in King County, Washington, lying Northerly of County Road No. 128 and Westerly of a line beginning at a point on the North line of Govt Lot 2, 955.92 feet East of Northwest corner thereof; thence South 15°29'15" West 1380.35 feet; thence South 89°21'36" West 65.17 feet; thence South 10°01'15" West to Northerly margin of County Road No. 128 and termination of said line LESS beginning at the intersection of North line of County Road No. 128; thence North along West line 150 feet; thence Easterly parallel with North line said road 50 feet; thence South parallel with West line Government Lot 2, 150 feet to county road; thence Westerly along North margin 50 feet to point of beginning.

Beers Property Sec. 28, T. 21 N., R. 6 E.W.M.
Portion of Govt Lot 2 lying Northerly of County Road No. 128 and Easterly of line beginning at a point on North line of Govt Lot 2, 955.92 feet East of NW corner thereof; thence S 15°29'15" W 1380.35 feet thence S 89°21'36" W 65.17 feet; thence S 10°10'15" W to northerly margin of County Road No. 128 and terminating said line. LESS beginning at intersection of North line of County Road No. 128 with the East line of County Road No. 444; thence Easterly along north line of County Road No. 128 to West line of Govt Lot 1; thence North 726 feet; thence West 730 feet; thence Southerly to beginning.

(SEE REVERSE SIDE) CERTIFICATE

located using attached maps

28-B-1

PROVISIONS

Diversion intake shall be tightly screened at all times with wire mesh having openings with dimensions not greater than 0.125 (1/8) inch. Water approach velocity to the screen shall be less than 1 foot per second and approaching 0.5 foot per second, as measured one foot in front of the screen.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90 03 380 90 03 390, and 90.44 020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

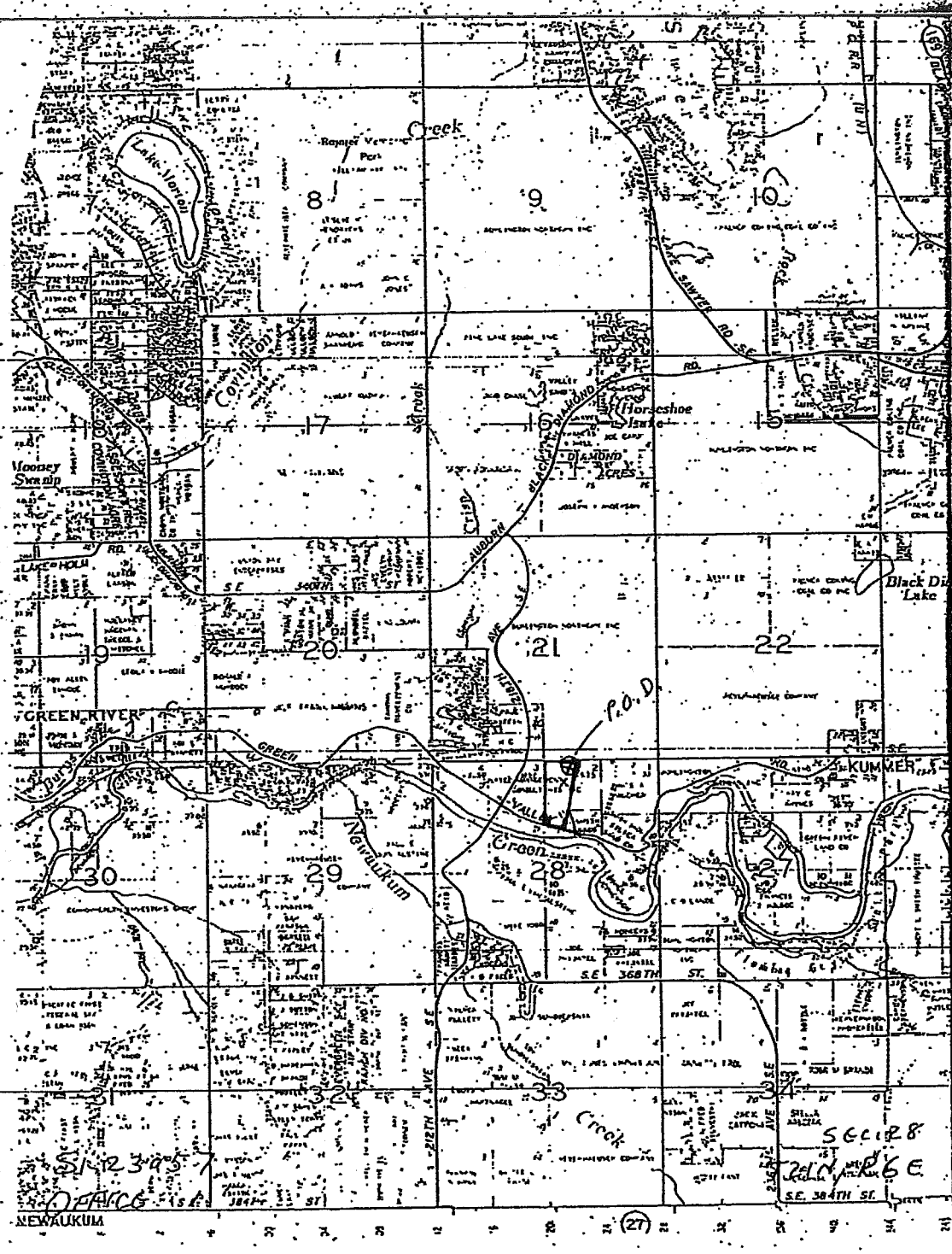
Given under my hand and the seal of this office at Redmond *Washington, this* 15th *day of* January *19*82

Department of Ecology

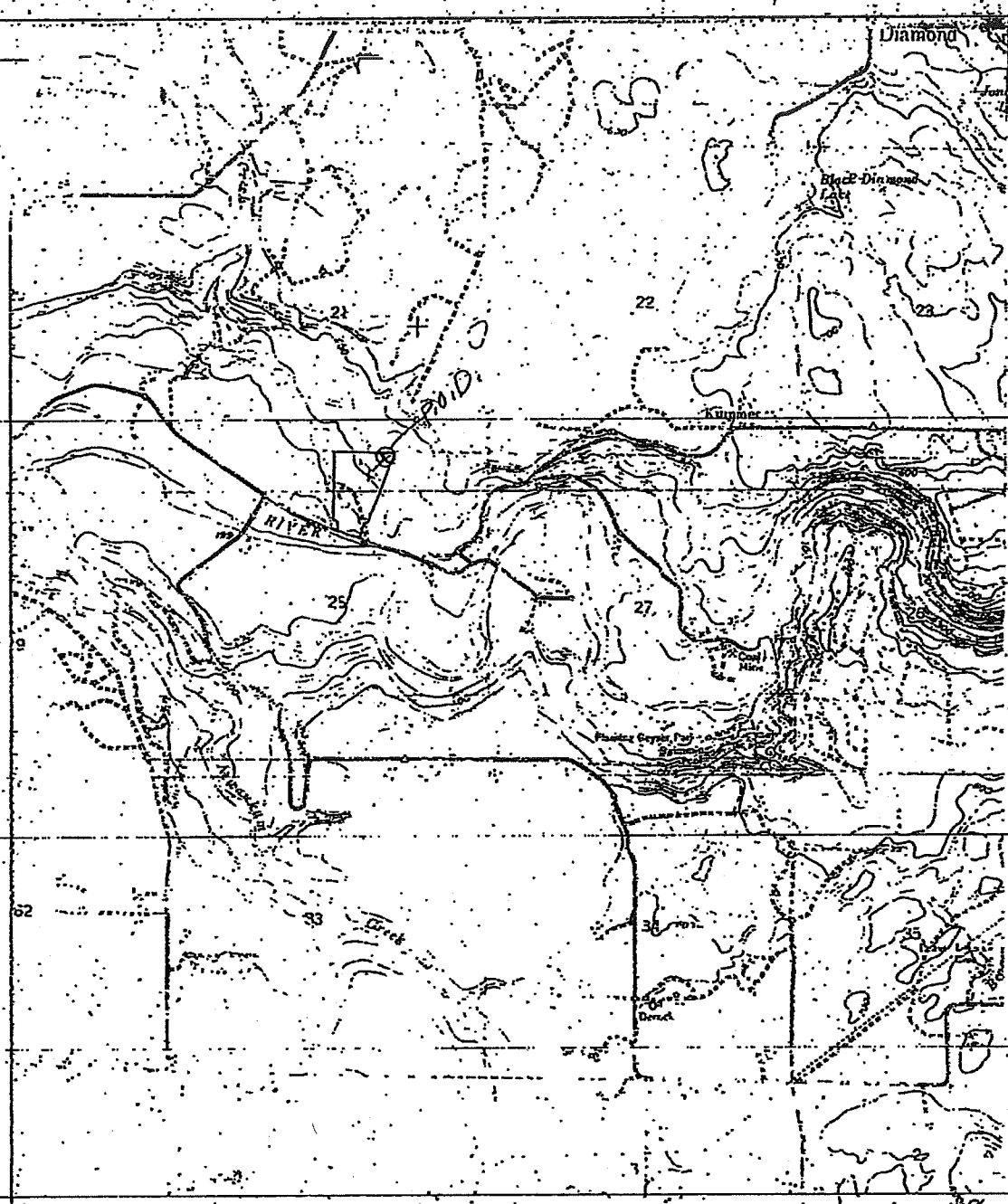
ENGINEERING DATA
OK

by Robert K. McCormick
ROBERT K. McCORMICK, Regional Manager

FOR COUNTY USE ONLY



Creek
Lake Morton
Rainier Vermont Park
8
9
10
Cowlington
Horseshoe Lake
DIAMOND ACRES
17
16
15
Mooney Swamp
LAKE HOLM RD.
S.E. 340TH ST.
AUBURN
Black Di Lake
19
20
21
22
GREEN RIVER
P.O.D.
KUMMER
Green
Newaukum
30
29
28
27
S.E. 368TH ST.
31
32
33
34
Creek
S.E. 384TH ST.
NEWAUKUM
(27)

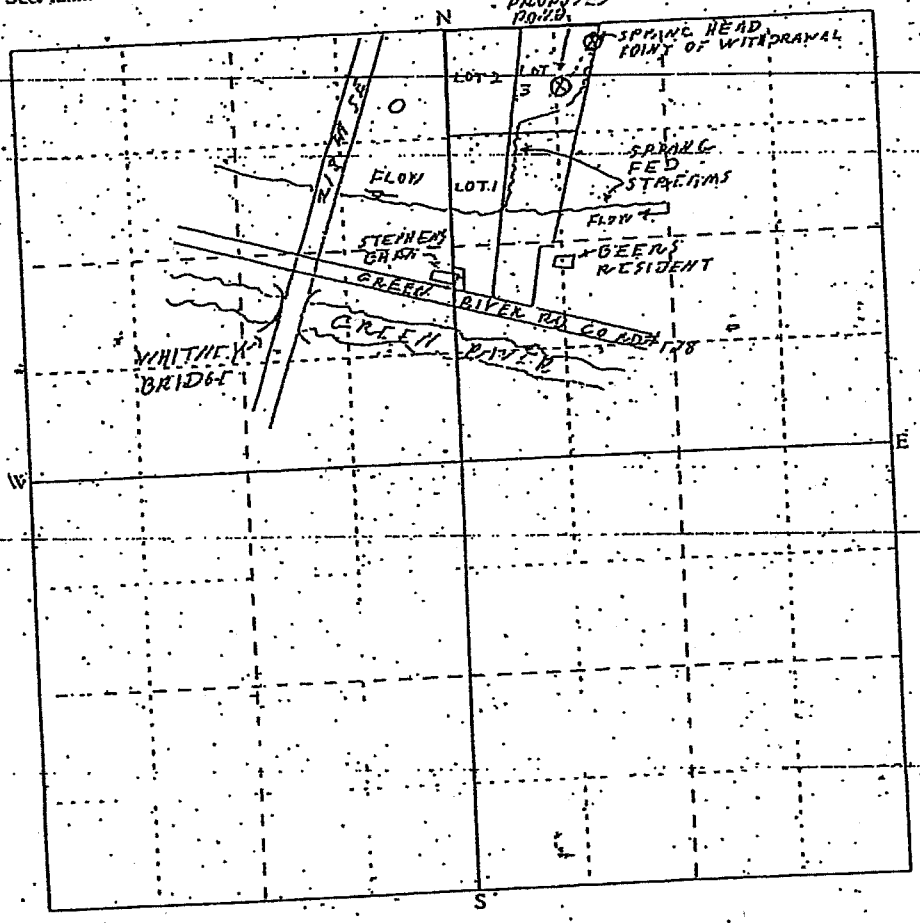


SI-23057
OFFICE 2

SEC. 28
T21N, R6E

SECTION MAP

Sec. 28 Twp. 21 N. N. R. 6



Scale - 1 inch = 800 feet (each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.

Indicate traveling directions from nearest town in space below.

Auburn is Westerly on the Green River Rd. approximately 8 miles. Black Diamond is Easterly on the Green River Rd. approximately 4 miles.

RECEIVED
DEPT. OF ECOLOGY
WATER RESOURCES
OLYMPIA, WA 98504

Details here

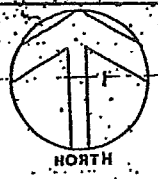
SEC. 28.
T21N, R6E

S1-23057
OFFICE 5.

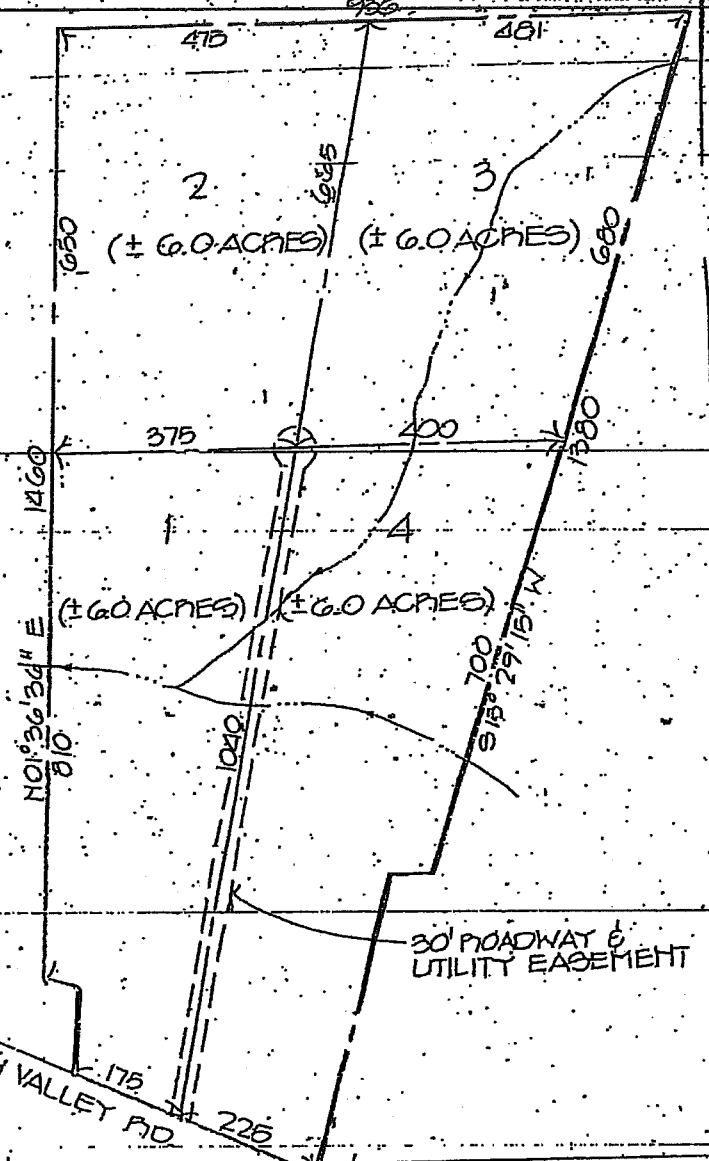
PROPOSED SUBDIVISION

DEPT. FILE NO. 178109

REVISION DATE



SCALE: 1" = 200'



LEGAL DESCRIPTION

PORTION OF GOV'T. LOT 2 LYING NORTHERLY OF COUNTY ROAD NO. 128 AND WESTERLY OF A LINE BEGINNING @ A POINT ON THE NORTH LINE OF GOV'T. LOT 2, 955.92 FT. EAST OF THE NW CORNER THEREOF; THENCE S 15°29'15" W 1380.35 FT.; THENCE S 89°21'36" W 65.17 FT.; THENCE S 10°01'15" W TO THE NORTHERLY MARGIN OF CO. ROAD NO 128 AND TERMINATION OF SAID LINE; LESS BEGINNING INTERSECTION OF NORTH LINE OF COUNTY ROAD NO. 128 THENCE NORTH ALONG THE WEST LINE 150 FT.; THENCE EASTERLY TO PARALLEL WITH THE NORTH LINE OF SAID ROAD 50 FT.; THENCE SOUTH PARALLEL WITH THE WEST LINE OF GOV'T LOT 2 150 FT. TO COUNTY ROAD; THENCE WESTERLY ALONG NORTH MARGIN 50 FT. TO THE POINT OF BEGINNING

SI-23 ~~85-7~~ 3057

OFFICE 6

SEC. 28
T. 2 N, R 6 E.

Affidavit of Publication

STATE OF WASHINGTON
COUNTY OF KING } ss

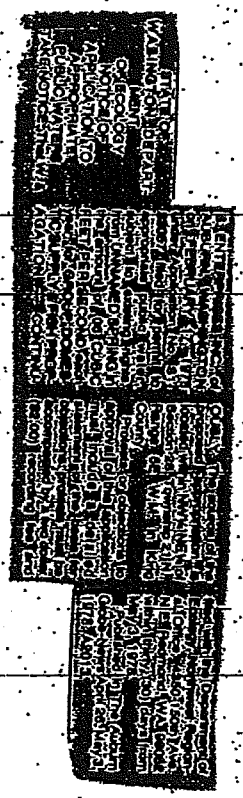
Anita Teernstra being first duly sworn on oath, deposes and says that she is the chief clerk of THE AUBURN GLOBE-NEWS, a newspaper published four (4) times a week. That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publication referred to, printed and published in the English language continually as a newspaper published four (4) times a week in Kent, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper That the Auburn Globe-News has been approved as a legal newspaper by order of the Superior Court of the County in which it is published, to-wit, King County.

Washington That the annexed is a Dept of Ecology

as it was published in regular issues (and not in supplement form of said newspaper) once each issue for a period of 2 consecutive issues, commencing on the 26 day of April .19 78 and ending the 3 day of May .1978. both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period That the full amount of the fee charged for the foregoing publication is the sum of $ 13.32 which has been paid in full at the rate of per folio of one hundred words for the first insertion and per folio of one hundred words for each subsequent insertion

Subscribed and sworn to before me this 28. day of April .19 78

Notary Public in and for the State of Washington, residing at Kent, King County



OK 708
5-10-78
JP

Passed by the Legislature, 1955, known as Senate Bill 281, effective June 9th, 1955

Western Union Telegraph Co rules for counting words and figures, adopted by the newspapers of the State

VPC Form No. 47

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATERS

TAKE NOTICE

That W. & S. ENTERPRISES INC.,

of AUBURN, WASHINGTON on FEBRUARY 17, 1978 under

Application No. S1-25057 filed for permit to appropriate public waters, subject to existing rights,

from UNNAMED SPRING

in the amount of .06 CUBIC FEET PER SECOND

each year, for GROUP DOMESTIC SUPPLY & FISH PROPAGATION - CONTINUOUSLY

The source of the proposed appropriation is located within NW 1/4 NE 1/4

of Section 28 Township 21 N., Range 6E W.M., in KING County.

Protests or objections to approval of this application must include a detailed statement of the basis for objections; protests must be accompanied by a two-dollar ($2.00) recording fee and filed with the Department of Ecology, Northwest Regional Office, [redacted] Redmond, WA. 98052

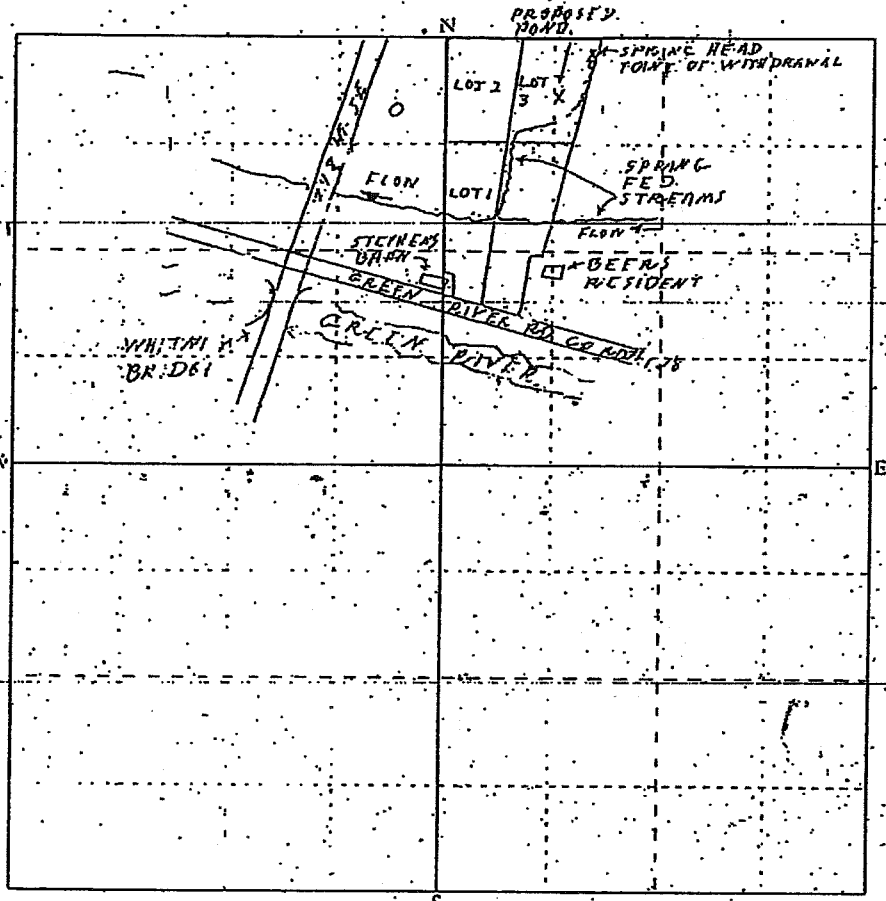
within thirty (30) days from [redacted] (Last date of publication to be entered above by publisher)

ECY 070-24

NOTICE

SECTION MAP

Sec. 28 Twp. 21 N. N. R. 6

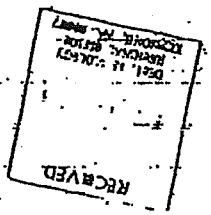


Scale 1 inch = 800 feet - each small square = 10 acres)

Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.

Indicate traveling directions from nearest town in space below

Auburn is easterly on the Green River Rd. approximately 8 miles Black Diamond is easterly on the Green River Rd. approximately 4 miles



Details here

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): GrpB_02451_01

General Location Details:

Name: W&S #1

Unique Well ID: GrpB_02451_01
Parcel ID Number: 2821069071
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: none
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 28 QS: NW/NE
Local Number: 21N/06E-28B
City: King County Zipcode: 98092
Data Source: Seattle - KC Health Who are these data sources?
Location Type: Spring Well Depth: 0 Feet
Surface Elevation: 0 Feet What is surface elevation?
Location Accuracy: Parcel What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
3/8/1999	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		0.8 mg/L MDL:	

Measurement Date	Measurement Time	Task Code	Sample Type	No. of Analyte
3/18/2002	23:59	WA_DoH_WQ_testing	Normal Environmental	1

Analyte Name	Analyte Type	Detected	Result	Qualifiers
NITRATE-N	Conv		0.8 mg/L MDL:	

28-B-1

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter 0
Updated: 07/22/1999
Printed: 03/12/2008
WFI Printed For: On-demand
Submission Reason: Non-Periodic update

RETURN TO: Northwest Regional Office, 20435 72nd Ave S STE 200, Kent, WA, 98032

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
02451 E	W. & S. #1	KING	B	

6. PRIMARY CONTACT NAME & MAILING ADDRESS

MAX BOERS [CONTACT]
PO BOX 998
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS **8. Owner Number** 008183

W. & S. #1
NEED PRIMARY CONTACT O TITLE: OWNER ORG - PRI
ATTN MAX BOERS
PO BOX 998
BLACK DIAMOND, WA 98010

STREET ADDRESS IF DIFFERENT FROM ABOVE
ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone:		Owner Daytime Phone:	
Primary Contact Mobile/Cell Phone:		Owner Mobile/Cell Phone:	
Primary Contact Evening Phone:		Owner Evening Phone:	
Fax:	E-mail:	Fax:	E-mail:

WAC 246-290-420(9) requires that water systems provide 24-hour contact information for emergencies.

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number: _____

12. WATER SYSTEM CHARACTERISTICS (mark ALL that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [ ] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [x] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

0

15	16	17	18 SOURCE CATEGORY										19			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	SOURCE NAME LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	USE PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	Spring 01					X							X					X								28	21N	06E

28 - B - 1

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
02451 E	W. & S. #1	KING	B	

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)	0	5	Undetermined
A. Full Time Single Family Residences (Occupied 180 days or *more* per year)	5		
B. Part Time Single Family Residences (Occupied *less than* 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *more than* 180	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied *less than* 180	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	
28. TOTAL SERVICE CONNECTIONS		5	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or *more* days p: 13

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students daycare children and/or employees are present each month?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	Take one sample every 12 months		
	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
34. NITRATE SCHEDULE (One Sample per source by time period)			S01

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ DATE: _____

PRINT NAME: _____ TITLE: _____

STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
NOV 12 7 3 058737

1. NAME: Lister O. Johnson CASH ☐ OTHER NONE

ADDRESS 42329 196th S.E.

Enumclaw, Wa ZIP CODE: 98022

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Surface (SURFACE OR GROUND WATER)

W.R.I.A. Ø9 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS

B. IF SURFACE WATER, THE SOURCE IS several small springs

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 1 gal per min PRESENTLY USED ½ gal per min (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 12.066 Acre feet PRESENTLY USED 6 acre feet (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED PRESENTLY IRRIGATED

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED. Each day

4. DATE OF FIRST PUTTING WATER TO USE: 1ØØ MONTH YEAR 1901

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 400 FEET South AND 400 FEET East FROM THE NE Corner of the NE¼ of the NW¼ of the NE¼ ~~NE¼ of the NE¼~~ CORNER OF SECTION

BEING WITHIN OF SECTION 28 of the NW¼ of 21 North R. 6 E (E OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY LOT BLOCK OF

(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: NE¼ of the NW ¼ of the NE ¼ of Government Lot 2, Section 28, Township 21 North, Range 6 E.W.M.

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Residential and animal

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Ownership

DO NOT USE THIS SPACE

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER-USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED JAN 3 1974 046134

THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.

ASSISTANT DIRECTOR, DIVISION OF WATER MANAGEMENT, DEPARTMENT OF WATER RESOURCES

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X Lister O. Johnson

DATE Nov 19 1973

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL
DWR

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF WATER RESOURCES
DIVISION OF WATER MANAGEMENT
UNION AVE BUILDING OLYMPIA WASHINGTON 98501

28-B-2

located using pt of w desc.

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471658122025601

General Location Details:

Unique Well ID: S_471658122025601
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 28 QS: NE/NW
Local Number: 21N/06E-28C02
City: King County
Zipcode: 98092
Data Source: Historic - unknown source
Who are these data sources?
Location Type: Other
Well Depth: 93 Feet
Surface Elevation: 180 Feet
What is surface elevation?
Location Accuracy: QTRQTRSEC
What are these location accuracies?

Name: "Unknown"

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

no DOE log — located using imap data only 28-B-3

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): S_471710122025701

General Location Details:

Unique Well ID: S_471710122025701
Name: Stephens James
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 21 QS: SE/SW
Local Number: 21N/06E-21P02
City: King County Zipcode: 98092
Data Source: Historic - unknown source Who are these data sources?
Location Type: Well Well Depth: 40 Feet
Surface Elevation: 225 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

28-C-1

located using iMAP only - no DOE log

21/6E/28 B

Start Card No. 025152

File Original and First Copy with Department of Ecology
Second Copy—Owner's Copy
Third Copy—Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Water Right Permit No. _____

(1) OWNER: Name Samuel E Fletcher Address 22469 SE 297th, Kent

(2) LOCATION OF WELL: County KING NW¼NE¼ Sec 28 T. 21 N., R 6 W.M.

(2a) STREET ADDDRESS OF WELL (or nearest address) 21277 Green Valley Rd, Auburn

(3) PROPOSED USE: [X] Domestic [ ] Industrial [ ] Municipal [ ] Irrigation [ ] Test Well [ ] Other [ ] DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned [ ] New well [X] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Driven [ ]
Reconditioned [ ] Rotary [X] Jetted [ ]

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 25 feet. Depth of completed well 25 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: Ga * Diam. from 0 ft. to 25 ft.
Welded [X] * Diam. from _____ ft. to _____ ft.
Liner installed [ ]
Threaded [ ] * Diam. from _____ ft. to _____ ft.

Perforations: Yes [ ] No [X]
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes [ ] No [X]
Manufacturer's Name _____
Type _____ Model No. _____
Diam. _____ Slot size _____ from _____ ft. to _____ ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes [ ] No [X] Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes [X] No [ ] To what depth? 18 ft.
Material used in seal puddling clay
Did any strata contain unusable water? Yes [ ] No [X]
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 15 ft. below top of well Date 1-2-90
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [X] If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest 25 gal./min. with stem set at 25 ft. for 2 hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes [ ] No [X]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Surface	0	1
Brown gravel-sand	1	18
Gray gravel-clay	18	24
Gray water gravel	24	29
Gray clay	29	40

RECEIVED
JAN 29 1991
DEPT. OF ECOLOGY

Work started 1-2 19 Completed 1-2 1990

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Johnson Drilling Co, Inc. (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 19415 108th Ave SE Renton 98055

(Signed) Rod Johnson (WELL DRILLER) License No. 0233

Contractor's Registration No. JOHNSC 207DM Date 1-2 1990

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050 1-20 (10/87) -1329-

28-C-2

The Department of Ecology does NOT warra[illegible]e Data and/or the information on this well Re

State of Washington
Department of Ecology

Water Right Claims Registration

Water Right Claim

09

Name Wayne P. Hurt

Address 21225 S.E. Green Valley Road

Auburn, Washington Zip Code 98002

Phone No. 833-7783
965-3205

1) Source from which the right to take and make use of water is claimed: ☐ Surface Water ☒ Ground Water

If surface water, please indicate source; give name if known:

_____

(River, stream, lake, pond, spring, etc.)

2) Purpose(s) for which water is used:

☒ Domestic ☒ Stockwatering ☒ Irrigation (lawn and garden) ☐ Other Use (specify) _____

3) Legal description of lands on which water is used: The E. 200' of the W. 350' of that portion of Gov. Lot 4, Sec. 28, Twp. 21N, R. 6 E WM Lying S.W. of the Green Valley Rd., King County

If located within the limits of a recorded platted property:

Lot _____ Block _____ of _____ (Give name of plat or addition)

In addition, please indicate Sec. 28 T. 21 N., R. 6E E/W, W.M.

County in which lands are located King

DO NOT USE THIS SPACE

The filing of a statement of claim does not constitute an adjudication of any claim to the right to use of waters as between the water use claimant and the state or as between one or more use claimants and another or others. This acknowledgment constitutes receipt for the filing fee.

Date Registered

This has been assigned Water Right Claim Registry No.

EB 1075124975

Director, Department of Ecology

I hereby swear that the above information is true and accurate to the best of my knowledge and belief.

X Wayne P. Hurt

Date June 26, 1974

If claim filed by designated representative print or type full name and mailing address of agent below.

☐ Additional information relating to water quality and/or well construction is available.

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

ORIGINAL DOE

Return all three copies with carbons intact, along with your fee to:
Department of Ecology, Water Right Claims Registration, Olympia, Washington 98504

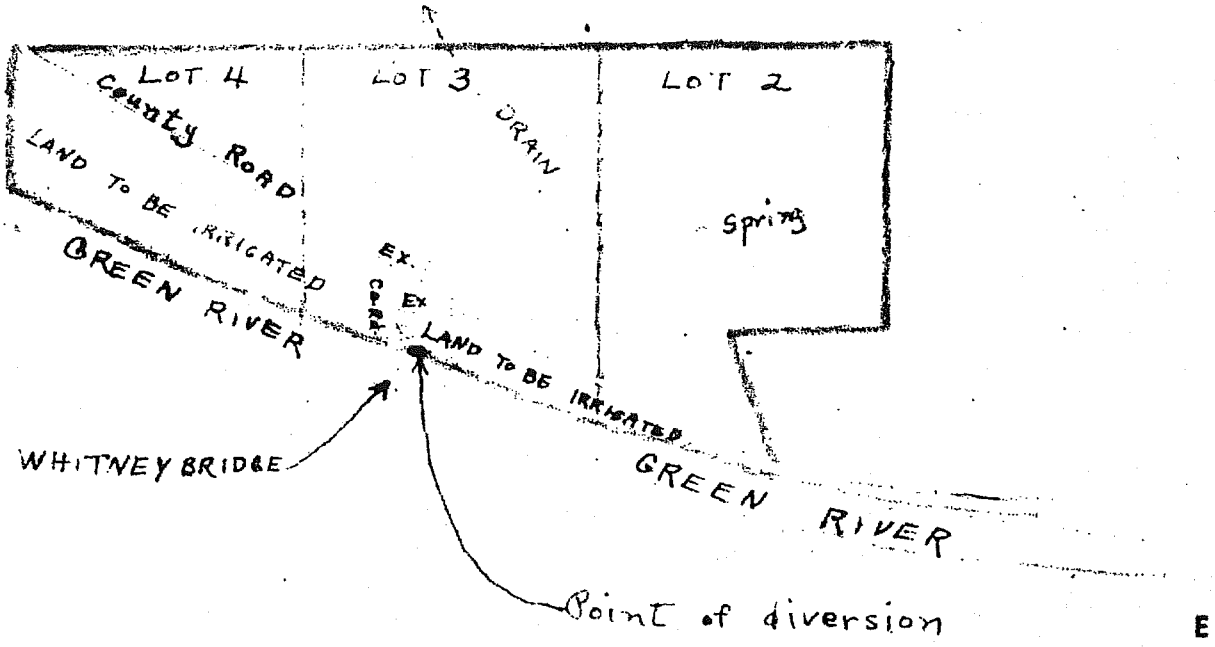
located to parcel from legal desc.

28-D-1

S. F. No. 1854-A—3-46—12M 11474. **SECTION PLAT**

Government Lots 2, 3, 4

Sec. 29 Twp. 21 N. R. 6 EAST



S

Be sure to show distance and bearing of point of diversion from nearest 40-acre corner. Also traveling directions from nearest town on main highway.

Scale: 1 inch = 800 feet.

point of diversion about 40 feet east of WHITNEY BRIDGE

Farm is ten miles east of Auburn, Wash., on GREEN RIVER ROAD

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
DEPARTMENT OF ECOLOGY
MAR 20 73 034862
CASH ___ OTHER ___ NONE ___

1. NAME LEON A. BEAUREGARD
ADDRESS 21209 GREEN VALLEY RD.
AUBURN WASH. ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: GROUND WATER (SURFACE OR GROUND WATER)
W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS WELL

B. IF SURFACE WATER, THE SOURCE IS NOT APPL.

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 1 GAL PER MIN. PRESENTLY USED 0.03 GAL PER MIN (CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 432,000 GAL PER YEAR PRESENTLY USED 12960 GAL PER YEAR (ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED NOT APPL. PRESENTLY IRRIGATED ___

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: DAILY.

4. DATE OF FIRST PUTTING WATER TO USE: MONTH APR YEAR 1966

5. LOCATION OF THE POINT(S) OF DIVERSION/WITHDRAWAL: 35 FEET EAST AND 150 FEET SOUTH FROM THE CENTER OF SAID PROP. ~~CORNER~~ CENTER OF SECTION 28

BEING WITHIN NW¼ SE¼ OF SECTION 28 T. 21 N., R. 6 E. W.M. (E.OR W.) W.M.

IF THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT ___ BLOCK ___ OF ___
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: THE WEST 150 FEET OF THAT PORTION OF GOV. LOT 4 IN SEC 28, TOWNSHIP 21 NORTH, RANGE 6 EAST W.M., LYING SOUTH WESTERLY OF GREEN VALLEY AND BLACK DIAMOND COUNTY ROAD NO. 128.

COUNTY KING COUNTY.

7. PURPOSE(S) FOR WHICH WATER IS USED: HOUSEHOLD USE.

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: APPROPRIATION

DO NOT USE THIS SPACE
THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.
DATE RETURNED ___ THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
MAR 20 73 025508
DIRECTOR - DEPARTMENT OF ECOLOGY

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF
X Leon A. Beauregard
DATE March 14-1973
IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE

A FEE OF $2.00 MUST ACCOMPANY THIS WATER RIGHT CLAIM

RETURN ALL THREE COPIES WITH CARBONS INTACT ALONG WITH YOUR FEE TO
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

ORIGINAL DWR

located to parcel using legal desc. 28-21-6

D-3

King County Home News Services Comments Search

Natural Resources and Parks »
Water and Land Resources Division »

Groundwater Data Search

GW Home | New iMAP Search | New Text Search

Add this page to your Internet Explorer favorites!
Your search criteria were: Unique Well ID(s): N_471706122032901

General Location Details:

Name: "not given"

Unique Well ID: N_471706122032901
Parcel ID Number:
Washington Dept. of Ecology Well Tag: Unknown
Critical Acquifer Recharge Area Code: 2
Groundwater Management Area: South King County
WRIA: 09 Basin: Middle Green River
Township: 21N Range: 06E Section: 28 QS: NW/NW
Local Number: 21N/06E-28D02
City: King County Zipcode: 98092
Data Source: U.S. Geological Survey Who are these data sources?
Location Type: Well Well Depth:
Surface Elevation: 164 Feet What is surface elevation?
Location Accuracy: QTRQTRSEC What are these location accuracies?

Well Log Data:

King County well log data is not available.
A link to the Washington Dept. of Ecology (WA DOE) Well Logs is not available.

Water Level Data:

Water level data is not available.

Water Quality Data:

Water quality data is not available.

For best results, users of the MAP button must have high-speed Internet connections.

Get Data | Map

For questions about the information on this Web page, please contact Laurence Stockton, Groundwater Program. For help with technical issues when using this page, please contact Harkeerat Kang, GIS, Visual Communications & Web Unit.

Related Information:

Water and Land Resources Topics

Groundwater Management

For questions about the Water and Land

No DOE log available - located using iMAP only 28-D3 D-2

G. P. No. 189—1939—Sal. 12200.

CERTIFICATE RECORD NO. 4 PAGE NO. 1759

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF WATER RIGHT

(For rights perfected under original, enlargement or secondary permits.)

(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and the regulations of the State Supervisor of Hydraulics thereunder.)

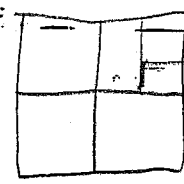
This is to certify, that Smith Bros.

of Auburn, *State of* Washington, *has made proof to the satisfaction of the State Supervisor of Hydraulics of Washington, of a right to the use of the waters of* Green River, *a tributary of* ,

for the purposes of Silica Washing Plant

under Appropriation *Permit No.* 2870 *issued by the State Supervisor of Hydraulics, and that said right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Hydraulics of Washington and entered of record in Volume* 4, *at Page* 1759, *on the* 20th *day of* December, 1941; *that the right hereby confirmed dates from* September 29, 1939; *that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed* 0.5 of a cubic foot per second.

A description of the lands under such right to which the water hereby confirmed is appurtenant, and the place where such water is put to beneficial use, is as follows:



Beginning at a point on the North boundary of the Kummer-Auburn-Green River Road where the West line of the SE¼ of NE¼ of Sec. 28, Twp. 21 N., Rge. 6 E.W.M. intersects said boundary line of said road; thence Southeasterly along said North boundary line of said road a distance of 648 ft.; thence North 500 ft.; thence West 630 ft., more or less, to the West line of the SE¼ of NE¼ of said Sec. 28; thence South along said West line to the point of beginning, containing 7 acres, more or less.

Section	Township	Range	LEGAL SUBDIVISION	FOR OTHER USES
28	21 N.	6 E.W.M.	Land described above	Silica washing plant

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Section 39, Chapter 117, Session Laws 1917.

WITNESS the seal and signature of the State Supervisor of Hydraulics affixed this 20th *day of* December, 1941.

[signature]

State Supervisor of Hydraulics.

28-H-2

located using attached maps

March 19, 1968

Ralph W. Bergstrom
Route 1, Box 1012
Auburn, Washington 98002

Re: Surface Water Application No. 20796

Dear Sir:

Your application to appropriate water from an unnamed spring within Sec. 27, T. 21 N., R. 6 E.W.M. has been received and given the above number. Please refer to that number in your reply.

Under separate cover we are sending to you the legal notice, together with information pertinent to its publication.

Before we shall be able to issue a permit, however, it will be necessary that you clarify the legal description of the land upon which the water is to be used. The legal description entered under item 12 of the application is stated in terms of the Black Diamond Kummer Road and the John Colob Road No. 325. The locations of these roads are not on record in this office, and it is therefore necessary that we have these road locations or an official map thereof on file with your application. Therefore, it is necessary that you furnish an assessor's plat of E½NE¼ of Sec. 28, T. 21 N., R 6 E.W.M. which shows the Black Diamond Kummer Road and the John Colob Road No. 325 and which shows, at least, two section of subsection corners.

On that copy of the assessor's plat, please outline the land upon which the water is to be used and, if the area is included, mark the location of the spring and your point of diversion.

Also, please furnish this office a copy of the legal, mete-and-bound description of your property exactly as it appears on your deed (not tax statement).

Your early attention to this matter would be appreciated.

Very truly yours,

DEPARTMENT OF WATER RESOURCES

SONJA P. HYSON, Engineering Aide
Division of Water Management

SPH:jc

Route 1 Box 1012
Auburn, Washington 98002
April 1, 1968

RECEIVED
DEPARTMENT OF WATER RESOURCES
APR 2 1968
A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

Department of Water Resources
335 General Administation Building
Olympia, Washington 98501

Reference: Surface water application # 20796.

Dear Sirs:

Your letter of March 19, 1968 requested a map showing the location of the property on which the water is to be used and a mete-and-bound description of the property.

Attached is a map, from the county, showing the property in question outlined in red. Note that the one boundary road has my notation in red "228 th. Place S.E.". This at one time was apparently the John Goleb Road # 325. The county has no record of John Goleb Road #325; the local King County Road crew use a road directory on which this road is noted as being 228 th. Place S.E. The spring location is also added in red with approximate distances from section line and road.

Following is the mete-and-bound description of the property as it appears on the deed:

That portion of the east half of the northeast quarter of section 28, township 21,north,Range 6E.W.M., described as follows: Beginning at the intersection of the northerly margin of John Goleb Road No.325, with the east line of said section; thence north along the east line of said section to an intersection with the southerly margin of Black Diamond - Kummer County Road; Thence southwesterly along the southeasterly margin of Black Diamond-Kummer Road to an intersection with the northerly margin of John Goleb Road #325, Thence easterly along said margin to the point of beginning; King County, Washington.

I hope that the attached map and added data clarifies the matter.

Sincerely yours,
Ralph W. Bergstrom
Ralph W. Bergstrom

Affidavit of Publication

STATE OF WASHINGTON
COUNTY OF KING } ss.

Dorothy Phibbs ... being first duly sworn on oath, deposes and says that she is the Chief Clerk of THE AUBURN GLOBE-NEWS, a weekly newspaper. That said newspaper is a legal newspaper and it is now and has been for more than six months prior to the date of publication referred to, printed and published in the English language continually as a weekly newspaper in Kent, King County, Washington, and it is now and during all of said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the Auburn Globe-News has been approved as a legal newspaper by order of the Superior Court of the County in which it is published, to-wit, King County, Washington. That the annexed is a Notice of Surface Water Right Application # 20796 ... as it was published in regular issues (and not in supplement form of said newspaper) once each week for a period of two consecutive weeks, commencing on the 3rd day of April, 19 68, and ending the 10th day of April, 19 68, both dates inclusive, and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of $ 10.00, which has been paid in full at the rate of $3.20 per folio of one hundred words for the first insertion and $2.40 per folio of one hundred words for each subsequent insertion.

Dorothy Phibbs
Chief Clerk

Subscribed and sworn to before me this 1st day of April 19 68

Mona M. Peck
Notary Public in and for the State of Washington, residing at Kent, King County

---

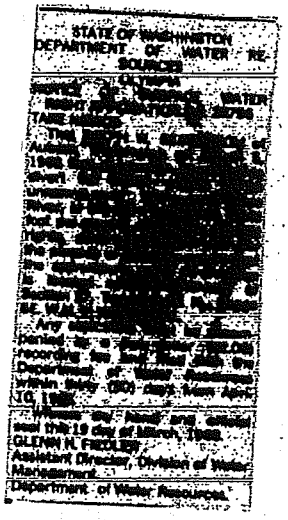
– Passed by the Legislature, 1955, known as Senate Bill 281, effective June 9th, 1955.

– Western Union Telegraph Co. rules for counting words and figures, adopted by the newspapers of the State.

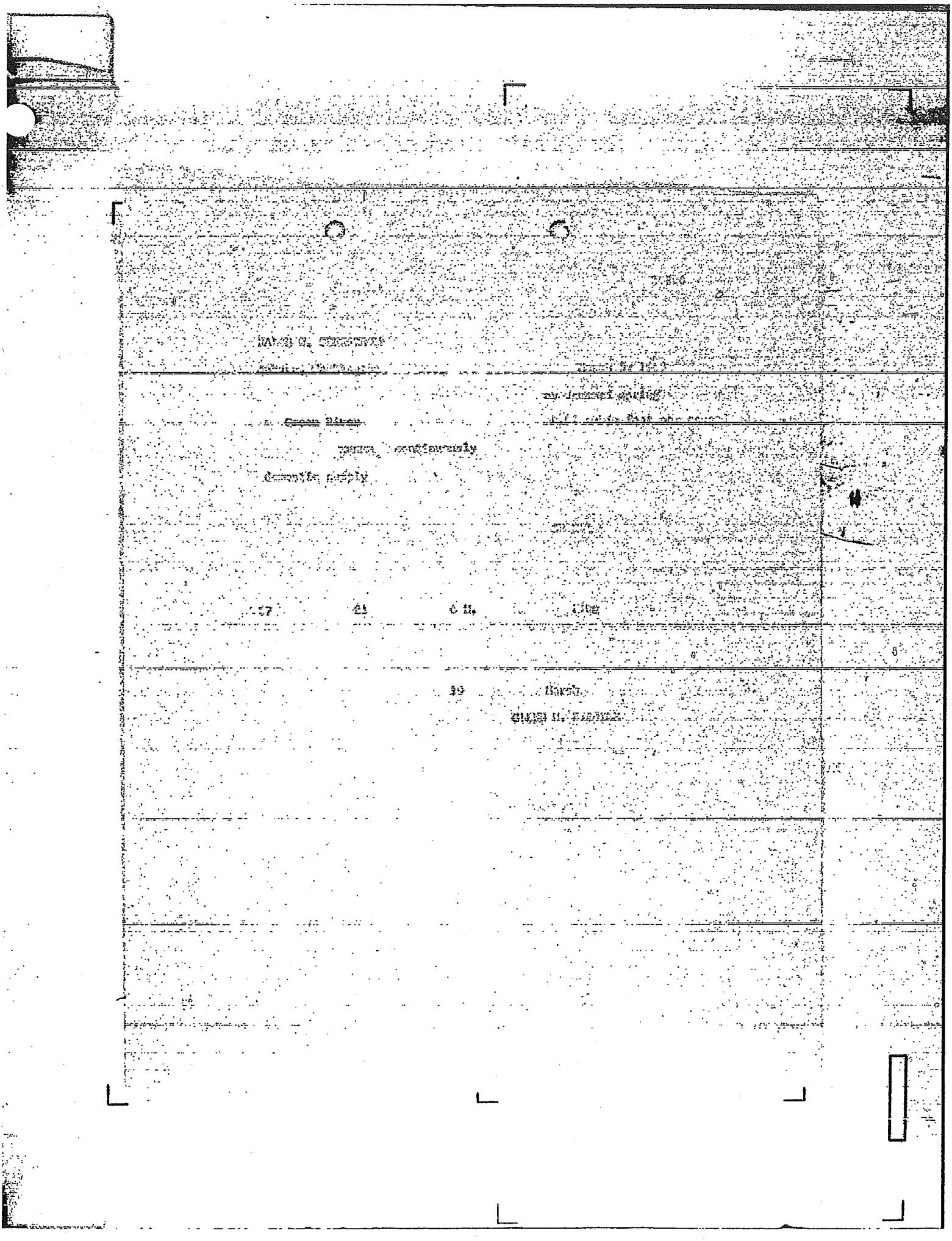
RECEIVED
DEPARTMENT OF WATER RESOURCES

APR 22 1968

A. M. 7 8 9 10 11 12 1 2 3 4 5 6 P. M.



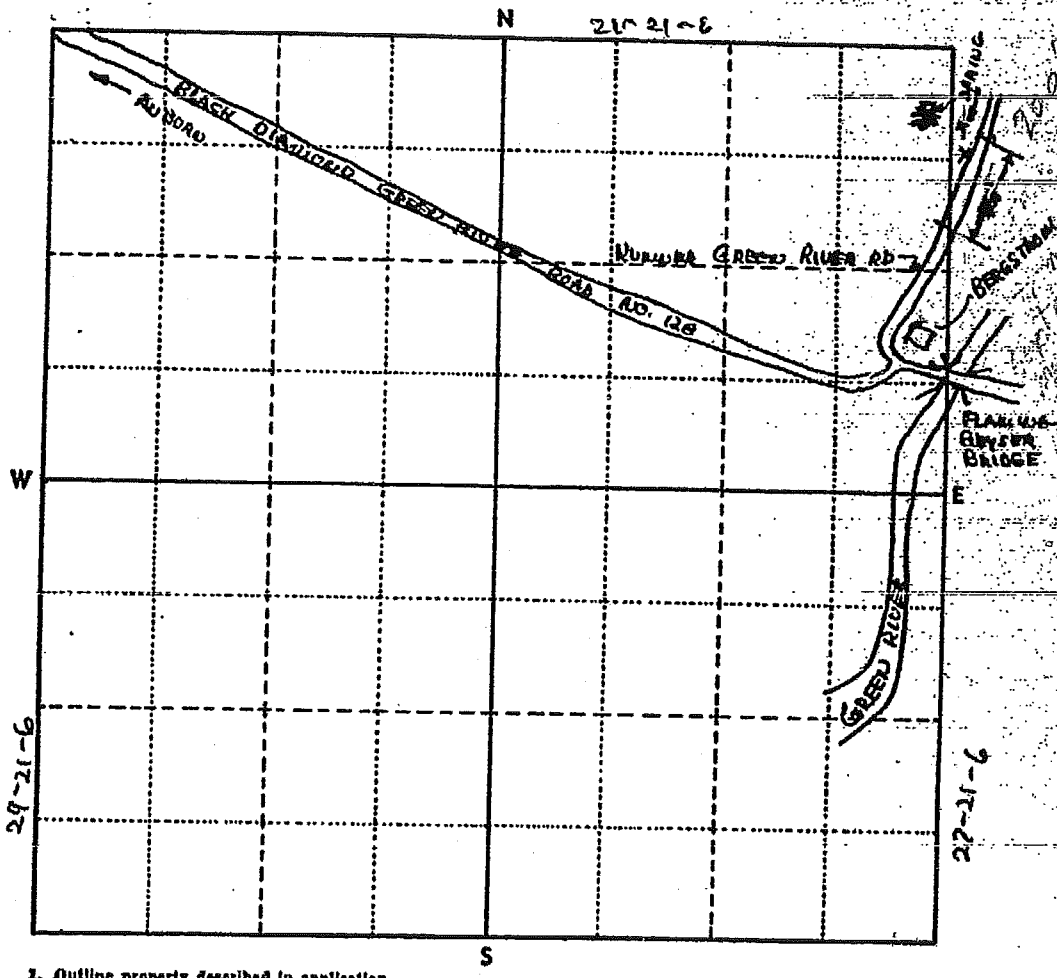
STATE OF WASHINGTON
DEPARTMENT OF WATER RESOURCES
OLYMPIA
NOTICE OF SURFACE WATER RIGHT APPLICATION # 20796
TAKE NOTICE:
[illegible]
Any [illegible] recording fee [illegible] Department of Water Resources within thirty (30) days from April 10, 1968.
Witness my hand and official seal this 19 day of March, 1968.
GLENN H. FIEDLER
Assistant Director, Division of Water Management
Department of Water Resources



U. S. F. No. 1851-A—OS

SECTION PLAT

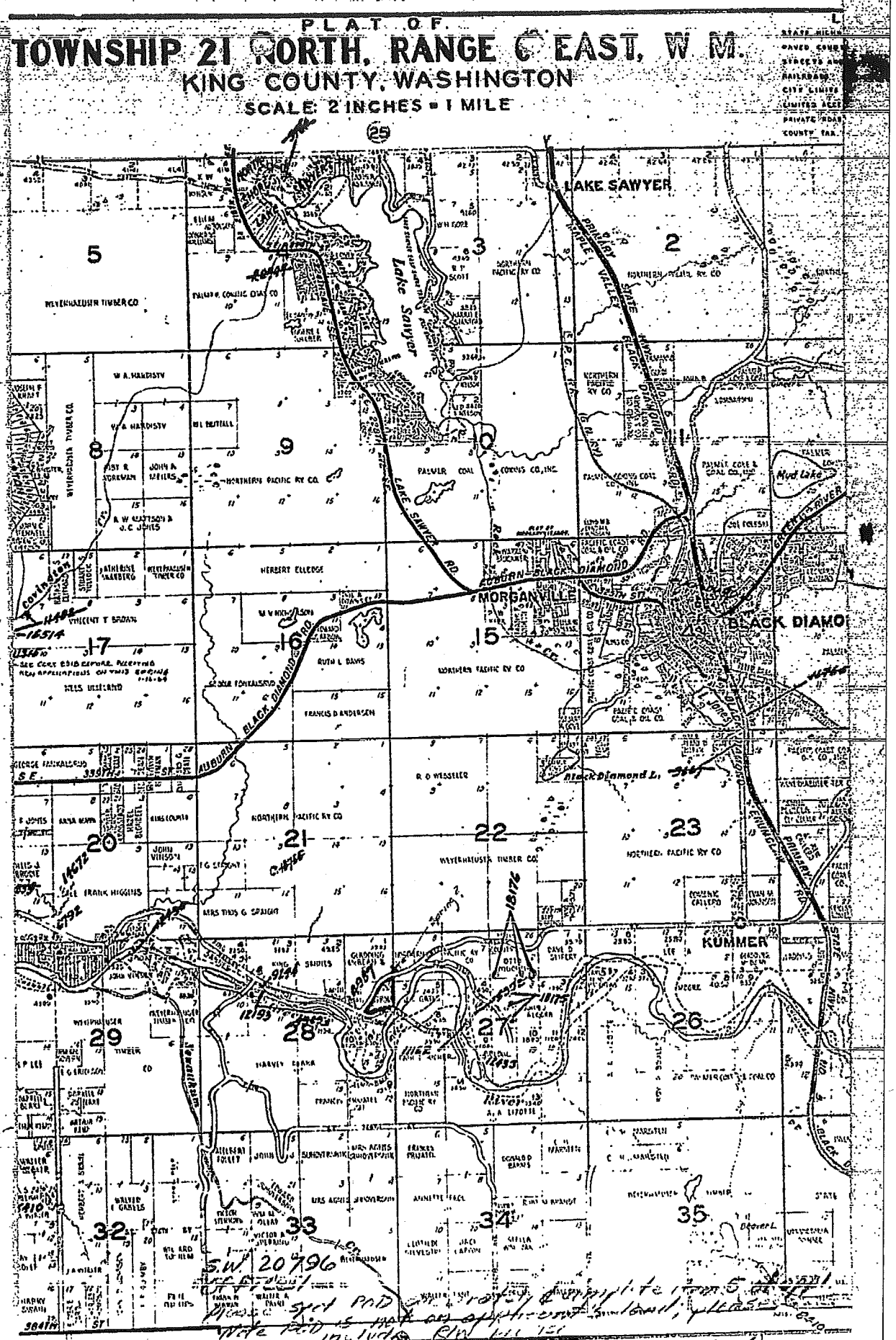
Sec. 28 Twp. 21 N. R. 6 E.



1. Outline property described in application.
2. Show by a cross (X) the location of point of diversion (surface water source) or point of withdrawal (ground water source). For ground water applications, show by a circle (O) the locations of other wells or works within a quarter of a mile.
3. Indicate traveling directions from nearest town.

Office 2 Scale: 1 inch = 800 feet (each small square = 10 acres)

From auburn go east on Black Diamond Green River Road 11 miles to the flaming Geyser Bridge at the intersection of this road with the Kummer Green River road find location of pipe line termination. Follow Kummer Green River Road to East boundary of section 28, continue approximately ~~500~~ 100 feet to 350 gallon collection tank - find spring about 50 feet behind tank on hillside.


PLAT OF
TOWNSHIP 21 NORTH, RANGE 6 EAST, W M.
KING COUNTY, WASHINGTON
SCALE: 2 INCHES = 1 MILE
LAKE SAWYER
Lake Sawyer
MORGANVILLE
BLACK DIAMO
KUMMER
Black Diamond L.
Mud Lake
AUBURN-BLACK DIAMOND RD.
LAKE SAWYER RD.
PRIMARY STATE HWY
NORTHERN PACIFIC RY CO
WEYERHAEUSER TIMBER CO
PALMER COAL
HERBERT ELLEDGE
RUTH L DAVIS
FRANCIS D ANDERSEN
R O WESSELER
HARVEY BLAKE
S.W. 20796

S.T. No. 369—OS—7-67

CERTIFICATE RECORD NO. 22 PAGE NO. 10571

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF SURFACE WATER RIGHT

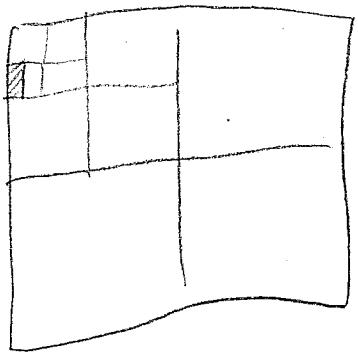
(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Water Resources thereunder.)

This is to certify that RALPH H. BERGSTROM

of Auburn, *State of* Washington, *has made proof to the satisfaction of the Department of Water Resources of Washington, of a right to the use of the waters of* an unnamed spring, *a tributary of* Green River *with point or points of diversion within the* [illegible] *Sec.* 27, *Twp.* 21 *N., R.* 5 E., *W. M., under and subject to provisions contained in* Appropriation *Permit No.* 15417 *issued by the Department of Water Resources, and that said right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the Department of Water Resources of Washington and entered of record in Volume* 22, *at Page* 10571, *on the* 16th *day of* December, 1968 *that the priority date of the right hereby confirmed is* August 5, 1968; *that the amount of water under the right hereby confirmed, for the following purposes is limited to an amount actually beneficially used and shall not exceed* 0.01 cubic foot per second, 1 acre-foot per year during entire year continuously for domestic supply.

A description of the lands under such right to which the water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

That portion of the E½NE¼ of Sec. 28, T. 21 N., R. 6 E.W.M.; lying northerly of 220th Place S.E. (John Golob Road No. 325) and lying easterly and southerly of Black Diamond-Kummer County Road (Kummer Green River Road) (Green Valley Road).



The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

This certificate of surface water right is specifically subject to relinquishment for nonuse of water as provided in Section 18, Chapter 233, Laws of 1967.

WITNESS the seal and signature of the Assistant Director, Division of Water Management, Department of Water Resources affixed this 16th *day of* December, 1968

Glen H. Snider
Assistant Director
Division of Water Management
Department of Water Resources

located using attached maps

28-11-14

S. F. No. 159—3-31—73C. 27753.

CERTIFICATE RECORD NO. 10 , PAGE NO. 4954

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF SURFACE WATER RIGHT

(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.)

This is to certify that KING A. SANNES

of Auburn , State of Washington , has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the waters of Green River , [redacted] , with point or points of diversion within the Government Lots 2, 3, and 4 Sec. 28 , Twp. 21 N., R. 6 E., W. M., under and subject to provisions contained in Appropriation Permit No. 6257 issued by the State Supervisor of Water Resources, and that said right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume 10 , at Page 4954 , on the 6th day of November , 1952 that the priority date of the right hereby confirmed is December 2, 1949 ; that the amount of water under the right hereby confirmed, for the following purposes is limited to an amount actually beneficially used and shall not exceed

0.30 of a cubic foot per second for the purpose of the irrigation of 40 acres.

A description of the lands under such right to which the water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

All of Government Lot 2, Sec. 28, Twp. 21 N., Rge. 6 E.W.M., except the following described tract:

Beginning where the North line of Green River and Black Diamond Road No. 123 enters the East line of County Road No. 444; thence Easterly along the North line of County Road No. 128 to the West line of Government Lot 1, Sec. 28, Twp. 21 N., Rge. 6 E.W.M., thence North 726 feet; thence West 730 feet; thence Southerly to the point of beginning.

All of Government Lots 3 and 4 in Sec. 28, Twp. 21 N., Rge. 6 E.W.M., LESS: All County Roads. ALSO LESS: Commencing at the Northwest corner of Sec. 28, Twp. 21 N., Rge. 6 E.W.M.; thence East along the North line of said Sec. 28, 17.15 ft. to a point; thence South 55° East 1960.20 ft. to a point; thence South 30° 35' West 20.00 ft. to true point of beginning; thence South 30° 35' West 110.40 ft.; thence South 71° 55' East 377.51 ft.; thence North 55° East 370 ft., more or less, to the place of beginning. ALSO LESS: A parcel 100 ft. by 300 ft., commencing at a point on the Northeasterly boundary of Green River Road directly in line with the center of the Whitney Road; thence Easterly along said Green River Road a distance of 150 ft.; thence at right angles with said Green River Road and Northeasterly a distance of 100 ft.; thence Northwesterly and parallel with said Green River Road a distance of 300 ft.; thence Southwesterly and parallel with the Southeasterly side of this rectangular tract to the Green River Road, a distance of 100 ft.; thence Southeasterly along said Green River Road a distance of 150 ft. to the point of beginning.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 6th day of November , 1952.

Elmo Burchard
State Supervisor of Water Resources.

ENGINEERING DATA
DN MJW

28-C-4

28 F1
located using
attached map

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Cannot locate

Application No. 21/06-21 P
Permit No. by paid or well log

(1) OWNER: Name Doug Fletcher Address 19516 S.E. 241st Place, Kent, WA

(2) LOCATION OF WELL: County King SE ¼ SW ¼ Sec. 28 T. 21 N., R. 6E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 27 ft. Depth of completed well 27 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 27 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite & cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 14 ft. below top of well Date 10/24/78
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 15 gal./min. with 5 ft. drawdown after 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
top soil	0	1
brown sand & gravel	1	15
brown till	15	20
water bearing sand& gravel	20	27

Work started 10/23/78, 19 Completed 10/23/78, 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Northwest Pump & Drilling Co. (Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn, WA

[Signed] R. B. DeRoner II (Well Driller)

License No. 0097 Date 10/24/78, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

28-C-3

21/06-28 H

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No .....
Permit No. .....

(1) OWNER: Name DR. AARON KEMP Address 222 No. State Street, Kent, WA 98031

(2) LOCATION OF WELL: County KING — SE ¼ NW ¼ Sec. 28 T. 21 N., R. 6 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 30 ft. Depth of completed well 30 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6" Diam. from 0 ft. to 30 ft.
Threaded ☐ ....." Diam. from ..... ft. to ..... ft.
Welded ☒ ....." Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite & cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off .....

(7) PUMP: Manufacturer's Name .....
Type: ..... H.P. .....

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 11 ft. below top of well Date 1-27-82
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test 25 gal./min. with 6 ft. drawdown after 1 hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
topsoil, brown, dry	0	4
sand & gravel, dry, brown	4	15
sand & gravel, brown, damp	15	20
water bearing sand & gravel	20	30

MAR - 3 1982
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

Work started 1-27-82, 19..... Completed 1-27-82, 19.....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME NORTHWEST PUMP & DRILLING CO. (Person, firm, or corporation) (Type or print)

Address 3245 Auburn Way South, Auburn, WA 98002

[Signed] R. B. DeRemer (Well Driller)

License No. 0097 Date 1/27/82, 19.....

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

located using 1/4 1/4

F2
28-4-1

The Department of Ecology does NOT warrant the Data and/or the information on this Well Report

S. F. No. 1854-A—1939—1M. 1654

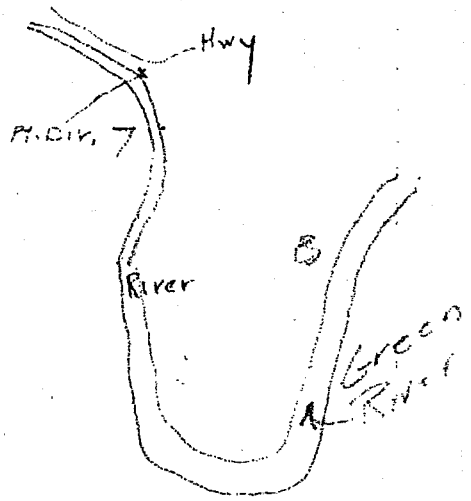
SECTION PLAT

Sec. 28 Twp. 21 R. 6E

Scale: 1 inch = 800 feet.

4 3 2

1



Be sure to show distance and bearing of point of diversion from nearest 40-acre corner. Also traveling directions from nearest town on main highway.

4987

10 mi. E of Auburn on Green River Hwy

APPENDIX 10

Water Balance

Appendix 10

Pre-Developed Conditions

Basin	Total Area (ac)	Soil Type (acres) Till	Outwash
Horseshoe Lake Shallow Aquifer Basin			
Basin 1 all	55.4	-	55.4
Basin 2 Qvr + till RO	104.9	-	104.9
Basin 3N Qvr + till RO	19.1	-	19.1
subtotal	***179.4***	***-***	***179.4***
Pre-Olympia Aquifer Deeper Recharge Basin			
Basin 2 Qvt RCH	4.0	4.0	-
Basin 3N Qvt RCH	113.4	113.4	-
Basin 3S all	57.6	45.7	11.9
Basin 4A - Western	131.4	131.4	-
Basin 4A - Qvic	7.2	-	7.2
Basin 4B - Northwestern Till	61.0	61.0	-
Basin 4B non-LID Qvic+Qvr	26.9	-	26.9
Basin 5 all	107.7	107.7	-
subtotal	***509.2***	***463.2***	***46.0***
Qvic-LID Shallow Aquifer Basin			
Basin 4B - Qvic_LID + 4B Eastern till RO	133.3	-	133.3
subtotal	***133.3***	***-***	***133.3***
Qpog2 Deeper Recharge Basin			
Basin 4C+4D+6 all	184.5	184.5	-
Basin 4A - Eastern	102.7	102.7	-
Basin 4B - Eastern Till RCH	7.8	7.8	-
subtotal	***295.0***	***295.0***	***-***
Total	**1,116.9**	**758.2**	**358.7**

Appendix 10

Pre-Developed Conditions Water Balance Summary

Basin	Acres	PPT (ac-ft)	ET (ac-ft)	RCH from OW (ac-ft)	RCH from TILL (ac-ft)	RCH from TILL RO onto OW (ac-ft)	Total RCH (ac-ft)	RO (ac-ft)	
Horseshoe Lake Shallow Recharge Basin									
Basin 1 all	55.4	249.5	107.8	161.5	-	-	161.5	(19.8)	
Basin 2 Qvr + till RO	104.9	472.5	204.2	305.8	-	6.1	311.9	(37.5)	
Basin 3N Qvr + till RO	19.1	86.0	37.2	55.7	-	172.7	228.4	(6.8)	
subtotal	***179.4***	***808.0***	***349.2***	***523.0***	***-***	***178.8***	***701.8***	***(64.1)***	
Pre-Olympia Aquifer Deeper Recharge Basin									
Basin 2 Qvt RCH	4.0	18.0	7.8	-	5.6	-	5.6	(1.4)	
Basin 3N Qvt RCH	113.4	510.8	220.8	-	157.8	-	157.8	(40.5)	
Basin 3S all	57.6	259.4	112.1	34.7	63.6	69.6	167.9	(20.6)	
Basin 4A - Western	131.4	591.8	255.8	-	182.9	-	182.9	153.2	
Basin 4A - Qvic	7.2	32.4	14.0	21.0	-	-	21.0	(2.6)	
Basin 4B - Northwestern Till	61.0	274.8	118.7	-	84.9	-	84.9	71.1	Footnote(1)
Basin 4B non-LID Qvic+Qvr	26.9	121.2	52.4	78.4	-	-	78.4	(9.6)	
Basin 5	107.7	485.1	209.7	-	149.9	-	149.9	125.6	
subtotal	***509.2***	***2,293.5***	***991.2***	***134.1***	***644.6***	***69.6***	***848.3***	***275.1***	
Qvic-LID Shallow Aquifer Basin									
Basin 4B - Qvic_LID + till RO from Eastern till	133.3	600.4	259.5	388.6	-	11.9	400.5	(47.7)	
subtotal	***133.3***	***600.4***	***259.5***	***388.6***	***-***	***11.9***	***400.5***	***(47.7)***	
Qpog2 Deeper Recharge Basin									
Basin 4C+4D+6	184.5	831.0	359.2	-	256.8	-	256.8	215.1	
Basin 4A - Eastern	102.7	462.6	199.9	-	142.9	-	142.9	119.7	
Basin 4B - Eastern Till Qvt RCH	7.8	35.1	15.2	-	10.9	-	10.9	(2.8)	
subtotal	***295.0***	***1,328.7***	***574.3***	***-***	***410.5***	***-***	***410.5***	***332.0***	
TOTAL	1,116.9	5,030.7	2,174.2	1,045.6	1,055.2	260.3	2,361.1	495.4	

(1) Till RO from 4B Northwestern Till would contribute to Qpog RCH offsite, but because infiltration of the RO occurs offsite, it is not included in the total Qpog RCH calculation

Appendix 10

Developed Conditions

Basin	Total Area (ac)	Hard Surface (acres)	Outwash		Till		zero check
			Forest (acres)	Grass (acres)	Forest (acres)	Grass (acres)	
Horseshoe Lake Shallow Aquifer Basin							
Basin 1	55.4	43.5	5.4	6.5	-	-	0.00
Basin 2 Qvr + Till Fill	104.9	80.7	-	14.3	-	9.9	0.00
Basin 3N Qvr	19.1	10.9	3.0	5.2	-	-	0.00
subtotal	***179.4***	***135.1***	***8.4***	***26.0***	***-***	***9.9***	***(0)***
Pre-Olympia Aquifer Deeper Recharge Basin							
Basin 2 Till	4.0	3.3	-	-	-	0.7	0.00
Basin 3N Till	113.4	42.0	-	-	49.3	22.1	0.00
Basin 3S All	57.6	34.6	-	3.7	6.4	12.9	0.00
Basin 4 (inc 4A West and 4B excect LID and east)	226.5	65.8	9.9	7.0	115.8	28.0	0.00
Basin 5 all	107.7	17.7	-	-	79.3	10.7	0.00
subtotal	***509.2***	***163.4***	***9.9***	***10.7***	***250.8***	***74.4***	***-***
Qvic-LID Shallow Aquifer Basin							
Basin 4 Qvic_LID	133.3	91.5	1.1	40.7	-	-	0.00
subtotal	***133.3***	***91.5***	***1.1***	***40.7***	***-***	***-***	***0.0***
Qpog2 Deeper Recharge Basin							
Basin 4 (inc 4A east, 4B east, 4C	201.8	95.1	-	-	51.3	55.4	0.00
Basin 6 all	93.2	8.5	-	-	80.4	4.3	0.00
subtotal	***295.0***	***103.6***	***-***	***-***	***131.7***	***59.7***	***-***
Total	**1,116.9**	**493.6**	**19.4**	**77.4**	**382.5**	**144.0**	**0.0**
							-

Appendix 10

Preferred Action Developed Conditions Water Balance Summary

Basin	Acres	PPT (ac-ft)	ET (ac-ft)	RCH from OW (ac-ft)	RCH from TILL[1] (ac-ft)	Total RCH (ac-ft)	RO (ac-ft)
Horseshoe Lake Shallow Recharge Basin							
Basin 1	55.4	249.5	50.5	34.7	-	34.7	164.4
Basin 2 Qvr [1]	104.9	472.5	92.7	41.7	13.8	55.5	324.4
Basin 3N Qvr	19.1	86.0	21.3	23.9		23.9	40.8
subtotal	***179.4***	***808.0***	***164.5***	***100.3***	***13.8***	***114.0***	***529.6***
Pre-Olympia Aquifer Deeper Recharge Basin							
Basin 2 Qvt RCH	4.0	18.0	3.3	-	1.0	1.0	13.7
Basin 3N Qvt RCH	113.4	510.8	158.7	-	99.4	99.4	252.7
Basin 3S	57.6	259.4	61.7	10.8	26.9	37.6	160.1
Basin 4 (inc 4A West and 4B excect LID and east)	226.5	1,020.2	343.5	49.3	200.1	249.4	427.3
Basin 5	107.7	485.1	182.9	-	125.3	125.3	176.9
subtotal	***509.2***	***2,293.5***	***750.1***	***60.0***	***452.6***	***512.6***	***1,030.8***
Qvic-LID Shallow Aquifer Basin							
BasinQvic_LID	133.3	600.4	127.4	121.8	-	121.8	351.2
subtotal	***133.3***	***600.4***	***127.4***	***121.8***	***-***	***121.8***	***351.2***
Qpog2 Deeper Recharge Basin							
Basin 4 (inc 4A east, 4B east, 4C	201.8	908.9	250.0	-	148.5	148.5	510.5
Basin 6	93.2	419.8	168.9	-	117.9	117.9	133.0
subtotal	***295.0***	***1,328.7***	***418.9***	***-***	***266.4***	***266.4***	***643.4***
TOTAL	**1,116.9**	**5,030.7**	**1,460.9**	**282.1**	**732.7**	**1,014.8**	**2,555.0**

[1] Recharge from till in Basin 2 Shallow is through about 9.9 AC of till fill over Qvr - eventually recharging shallow aquifer

Basin 1 Developed Condition Summary Table

Basin 1 Shallow AC **55.40**

	Developed Conditions						
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc. set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)	
Oct	23.2	3.6	3.6	3.8		15.8	0.0
Nov	34.1	2.8	2.8	6.4		24.8	0.0
Dec	34.5	2.5	2.5	6.6		25.3	0.0
Jan	32.9	3.3	3.3	6.1		23.5	0.0
Feb	24.8	3.1	3.1	4.4		17.3	0.0
Mar	24.4	5.6	5.6	3.5		15.4	0.0
Apr	19.5	5.9	5.9	1.9		11.7	0.0
May	15.1	6.1	5.9	0.4		8.6	0.0
Jun	13.6	5.7	5.2	0.3		7.6	0.0
Jul	6.4	4.4	2.8	0.0		2.0	0.0
Aug	7.5	3.6	3.3	0.0		4.0	0.0
Sep	13.4	3.8	3.8	1.3		8.3	0.0
TOTAL	**249.5**	**50.5**	**47.8**	**34.7**		**164.4**	**0.0**

Basin 1 Monthly Water Budget for Outwash Grass Under Developed Conditions

OW-Grass AC **6.50**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	2.7	1.0	0.5	1.0	0.5	3.8	2.1	0.2	0.1	0.0
Nov	7.4	4.0	0.7	0.4	0.7	0.4	6.3	3.4	0.4	0.2	0.0
Dec	7.5	4.0	0.6	0.3	0.6	0.3	6.5	3.5	0.4	0.2	0.0
Jan	7.1	3.9	0.8	0.4	0.8	0.4	6.0	3.2	0.4	0.2	0.0
Feb	5.4	2.9	0.8	0.4	0.8	0.4	4.3	2.3	0.3	0.1	0.0
Mar	5.3	2.9	1.6	0.9	1.6	0.9	3.4	1.9	0.2	0.1	0.0
Apr	4.2	2.3	2.1	1.1	2.1	1.1	2.1	1.1	0.1	0.1	0.0
May	3.3	1.8	2.4	1.3	2.4	1.3	0.8	0.4	0.1	0.0	0.0
Jun	2.9	1.6	2.4	1.3	2.4	1.3	0.5	0.3	0.0	0.0	0.0
Jul	1.4	0.8	2.4	1.3	1.4	0.8	0.0	0.0	-1.0	-0.5	0.0
Aug	1.6	0.9	2.0	1.1	1.6	0.9	0.0	0.0	-0.4	-0.2	0.0
Sep	2.9	1.6	1.5	0.8	1.5	0.8	1.3	0.7	0.1	0.0	0.0
TOTAL	**54.1**	**29.3**	**18.3**	**9.9**	**16.9**	**9.2**	**35.0**	**18.9**	**0.8**	**0.4**	**0.0**

Basin 1 Monthly Water Budget for Outwash Forest Under Developed Conditions

OW-forest AC **5.40**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH [ppt-et] (in)	RCH ow (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	2.3	1.2	0.5	1.2	0.5	3.9	1.7	0.0	0.0	(0.0)
Nov	7.4	3.3	0.7	0.3	0.7	0.3	6.7	3.0	0.0	0.0	0.0
Dec	7.5	3.4	0.6	0.3	0.6	0.3	6.9	3.1	0.0	0.0	0.0
Jan	7.1	3.2	0.8	0.4	0.8	0.4	6.3	2.8	0.0	0.0	(0.0)
Feb	5.4	2.4	0.8	0.4	0.8	0.4	4.6	2.0	0.0	0.0	0.0
Mar	5.3	2.4	1.7	0.8	1.7	0.8	3.6	1.6	0.0	0.0	(0.0)
Apr	4.2	1.9	2.5	1.1	2.5	1.1	1.7	0.8	0.0	0.0	0.0
May	3.3	1.5	3.8	1.7	3.3	1.5	0.0	0.0	(0.5)	(0.2)	0.0
Jun	2.9	1.3	4.2	1.9	2.9	1.3	0.0	0.0	(1.2)	(0.6)	0.0
Jul	1.4	0.6	3.7	1.7	1.4	0.6	0.0	0.0	(2.3)	(1.1)	0.0
Aug	1.6	0.7	1.8	0.8	1.6	0.7	0.0	0.0	(0.2)	(0.1)	0.0
Sep	2.9	1.3	1.6	0.7	1.6	0.7	1.3	0.6	0.0	0.0	0.0
TOTAL	**54.1**	**24.3**	**23.4**	**10.5**	**19.1**	**8.6**	**34.98**	**15.7**	**(4.3)**	**(1.9)**	**(0.0)**

Basin 1 Monthly Water Budget for Outwash Impervious Under Developed Conditions

OW-imp AC **43.50**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	18.2	0.7	2.6	0.7	2.6	0.0	0.0	4.3	15.7	0.0
Nov	7.4	26.8	0.6	2.2	0.6	2.2	0.0	0.0	6.8	24.6	0.0
Dec	7.5	27.1	0.5	2.0	0.5	2.0	0.0	0.0	6.9	25.1	0.0
Jan	7.1	25.8	0.7	2.5	0.7	2.5	0.0	0.0	6.4	23.3	0.0
Feb	5.4	19.5	0.6	2.3	0.6	2.3	0.0	0.0	4.7	17.2	0.0
Mar	5.3	19.2	1.1	3.9	1.1	3.9	0.0	0.0	4.2	15.3	0.0
Apr	4.2	15.3	1.0	3.7	1.0	3.7	0.0	0.0	3.2	11.7	0.0
May	3.3	11.9	0.9	3.1	0.9	3.1	0.0	0.0	2.4	8.8	0.0
Jun	2.9	10.7	0.7	2.5	0.7	2.5	0.0	0.0	2.2	8.1	0.0
Jul	1.4	5.0	0.4	1.4	0.4	1.4	0.0	0.0	1.0	3.6	0.0
Aug	1.6	5.9	0.5	1.7	0.5	1.7	0.0	0.0	1.2	4.2	0.0
Sep	2.9	10.5	0.6	2.2	0.6	2.2	0.0	0.0	2.3	8.3	0.0
TOTAL	**54.1**	**195.9**	**8.3**	**30.1**	**8.3**	**30.1**	**0.0**	**0.0**	**45.8**	**165.8**	**0.0**

Basin 2 Qvt RCH to Qpo Developed Condition Summary Table

Basin 2 Qpo AC **4.00**

	Developed Conditions						
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc. set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)	
Oct	1.7	0.3	0.3	0.0	0.1	1.3	**0.0**
Nov	2.5	0.2	0.2	0.0	0.2	2.1	**0.0**
Dec	2.5	0.2	0.2	0.0	0.2	2.1	**0.0**
Jan	2.4	0.2	0.2	0.0	0.2	2.0	**0.0**
Feb	1.8	0.2	0.2	0.0	0.1	1.5	**0.0**
Mar	1.8	0.4	0.4	0.0	0.1	1.3	**0.0**
Apr	1.4	0.4	0.4	0.0	0.1	1.0	**0.0**
May	1.1	0.4	0.4	0.0	0.0	0.7	**0.0**
Jun	1.0	0.3	0.3	0.0	0.0	0.6	**0.0**
Jul	0.5	0.2	0.2	0.0	0.0	0.2	**0.0**
Aug	0.5	0.2	0.2	0.0	0.0	0.3	**0.0**
Sep	1.0	0.3	0.3	0.0	0.0	0.7	**0.0**
TOTAL	**18.02**	**3.35**	**3.27**	**0.00**	**0.97**	**13.69**	**0.0**

Table - Basin 2 Qvt RCH to Qpo Monthly Water Budget for Impervious Under Developed Conditions

Impervious AC **3.30**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	1.4	0.7	0.2	0.7	0.2	0.0	0.0	4.3	1.2	**0.0**
Nov	7.4	2.0	0.6	0.2	0.6	0.2	0.0	0.0	6.8	1.9	**0.0**
Dec	7.5	2.1	0.5	0.1	0.5	0.1	0.0	0.0	6.9	1.9	**0.0**
Jan	7.1	2.0	0.7	0.2	0.7	0.2	0.0	0.0	6.4	1.8	**0.0**
Feb	5.4	1.5	0.6	0.2	0.6	0.2	0.0	0.0	4.7	1.3	**0.0**
Mar	5.3	1.5	1.1	0.3	1.1	0.3	0.0	0.0	4.2	1.2	**0.0**
Apr	4.2	1.2	1.0	0.3	1.0	0.3	0.0	0.0	3.2	0.9	**0.0**
May	3.3	0.9	0.9	0.2	0.9	0.2	0.0	0.0	2.4	0.7	**0.0**
Jun	2.9	0.8	0.7	0.2	0.7	0.2	0.0	0.0	2.2	0.6	**0.0**
Jul	1.4	0.4	0.4	0.1	0.4	0.1	0.0	0.0	1.0	0.3	**0.0**
Aug	1.6	0.4	0.5	0.1	0.5	0.1	0.0	0.0	1.2	0.3	**0.0**
Sep	2.9	0.8	0.6	0.2	0.6	0.2	0.0	0.0	2.3	0.6	**0.0**
TOTAL	**54.1**	**14.9**	**8.3**	**2.3**	**8.3**	**2.3**	**0.0**	**0.0**	**45.8**	**12.6**	**0.0**

Table - Basin 2 Qvt RCH to Qpo Monthly Water Budget for Till Grass Under Developed Conditions

Till-Grass AC **0.70**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	0.3	1.0	0.1	1.0	0.1	1.8	0.1	2.2	0.1	**0.0**
Nov	7.4	0.4	0.7	0.0	0.7	0.0	3.0	0.2	3.7	0.2	**0.0**
Dec	7.5	0.4	0.6	0.0	0.6	0.0	3.1	0.2	3.8	0.2	**0.0**
Jan	7.1	0.4	0.8	0.0	0.8	0.0	2.8	0.2	3.5	0.2	**0.0**
Feb	5.4	0.3	0.8	0.0	0.8	0.0	2.1	0.1	2.5	0.1	**0.0**
Mar	5.3	0.3	1.6	0.1	1.6	0.1	1.6	0.1	2.0	0.1	**0.0**
Apr	4.2	0.2	2.1	0.1	2.1	0.1	1.0	0.1	1.2	0.1	**0.0**
May	3.3	0.2	2.4	0.1	2.4	0.1	0.4	0.0	0.5	0.0	**0.0**
Jun	2.9	0.2	2.4	0.1	2.4	0.1	0.2	0.0	0.3	0.0	**0.0**
Jul	1.4	0.1	2.4	0.1	1.4	0.1	0.0	0.0	(1.0)	(0.1)	**0.0**
Aug	1.6	0.1	2.0	0.1	1.6	0.1	0.0	0.0	(0.4)	(0.0)	**0.0**
Sep	2.9	0.2	1.5	0.1	1.5	0.1	0.6	0.0	0.7	0.0	**0.0**
TOTAL	**54.1**	**3.2**	**18.3**	**1.1**	**16.9**	**1.0**	**16.7**	**1.0**	**19.1**	**1.1**	**0.0**

Basin 2 Qvr+till-fill RCH to Shallow Aquifer Developed Condition Summary Table

Basin 2 Shallow AC **104.90**

	Developed Conditions						
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc. set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)	
Oct	44.0	6.8	6.8	4.5	1.5	31.2	0.0
Nov	64.6	5.4	5.4	7.6	2.5	49.2	0.0
Dec	65.3	4.8	4.8	7.7	2.6	50.2	0.0
Jan	62.3	6.3	6.3	7.1	2.3	46.6	0.0
Feb	47.0	5.9	5.9	5.1	1.7	34.3	0.0
Mar	46.2	10.6	10.6	4.1	1.4	30.2	0.0
Apr	37.0	10.9	10.9	2.4	0.8	22.8	0.0
May	28.6	10.6	10.6	1.0	0.3	16.7	0.0
Jun	25.7	9.6	9.6	0.6	0.2	15.3	0.0
Jul	12.2	7.4	5.4	0.0	0.0	4.7	0.0
Aug	14.2	7.1	6.4	0.0	0.0	7.1	0.0
Sep	25.4	7.3	7.3	1.5	0.5	16.0	0.0
TOTAL	**472.49**	**92.66**	**89.94**	**41.67**	**13.78**	**324.38**	**0.0**

Table 1a - Basin 2 Qvr+till-fill RCH to Shallow Aquifer Monthly Water Budget for Outwash Grass Under Develope

OW-Grass AC **14.30**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	6.0	1.0	1.2	1.0	1.2	3.8	4.5	0.2	0.3	0.0
Nov	7.4	8.8	0.7	0.8	0.7	0.8	6.3	7.6	0.4	0.5	0.0
Dec	7.5	8.9	0.6	0.7	0.6	0.7	6.5	7.7	0.4	0.5	0.0
Jan	7.1	8.5	0.8	1.0	0.8	1.0	6.0	7.1	0.4	0.4	0.0
Feb	5.4	6.4	0.8	1.0	0.8	1.0	4.3	5.1	0.3	0.3	0.0
Mar	5.3	6.3	1.6	2.0	1.6	2.0	3.4	4.1	0.2	0.3	0.0
Apr	4.2	5.0	2.1	2.4	2.1	2.4	2.1	2.4	0.1	0.2	0.0
May	3.3	3.9	2.4	2.9	2.4	2.9	0.8	1.0	0.1	0.1	0.0
Jun	2.9	3.5	2.4	2.9	2.4	2.9	0.5	0.6	0.0	0.0	0.0
Jul	1.4	1.7	2.4	2.8	1.4	1.7	0.0	0.0	-1.0	-1.2	0.0
Aug	1.6	1.9	2.0	2.4	1.6	1.9	0.0	0.0	-0.4	-0.4	0.0
Sep	2.9	3.5	1.5	1.8	1.5	1.8	1.3	1.5	0.1	0.1	0.0
TOTAL	**54.1**	**64.4**	**18.3**	**21.8**	**16.9**	**20.2**	**35.0**	**41.7**	**0.8**	**1.0**	**0.0**

Table 1c - Basin 2 Qvr+till-fill RCH to Shallow Aquifer Monthly Water Budget for Impervious Under Developed Co

Impervious AC **80.70**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	33.8	0.7	4.8	0.7	4.8	0.0	0.0	4.3	29.1	0.0
Nov	7.4	49.7	0.6	4.0	0.6	4.0	0.0	0.0	6.8	45.7	0.0
Dec	7.5	50.2	0.5	3.6	0.5	3.6	0.0	0.0	6.9	46.6	0.0
Jan	7.1	47.9	0.7	4.7	0.7	4.7	0.0	0.0	6.4	43.2	0.0
Feb	5.4	36.2	0.6	4.3	0.6	4.3	0.0	0.0	4.7	31.9	0.0
Mar	5.3	35.6	1.1	7.3	1.1	7.3	0.0	0.0	4.2	28.3	0.0
Apr	4.2	28.4	1.0	6.8	1.0	6.8	0.0	0.0	3.2	21.7	0.0
May	3.3	22.0	0.9	5.7	0.9	5.7	0.0	0.0	2.4	16.3	0.0
Jun	2.9	19.8	0.7	4.7	0.7	4.7	0.0	0.0	2.2	15.1	0.0
Jul	1.4	9.3	0.4	2.6	0.4	2.6	0.0	0.0	1.0	6.7	0.0
Aug	1.6	11.0	0.5	3.1	0.5	3.1	0.0	0.0	1.2	7.9	0.0
Sep	2.9	19.5	0.6	4.2	0.6	4.2	0.0	0.0	2.3	15.3	0.0
TOTAL	**54.1**	**363.5**	**8.3**	**55.8**	**8.3**	**55.8**	**0.0**	**0.0**	**45.8**	**307.7**	**0.0**

Table 1d - Basin 2 Qvr+till-fill RCH to Shallow Aquifer Monthly Water Budget for Till Fill Grass Under Developed

Till-Fill Acreage **9.90**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	4.1	1.0	0.8	1.0	0.8	1.8	1.5	2.2	1.8	0.0
Nov	7.4	6.1	0.7	0.5	0.7	0.5	3.0	2.5	3.7	3.1	0.0
Dec	7.5	6.2	0.6	0.5	0.6	0.5	3.1	2.6	3.8	3.1	0.0
Jan	7.1	5.9	0.8	0.7	0.8	0.7	2.8	2.3	3.5	2.9	0.0
Feb	5.4	4.4	0.8	0.7	0.8	0.7	2.1	1.7	2.5	2.1	0.0
Mar	5.3	4.4	1.6	1.4	1.6	1.4	1.6	1.4	2.0	1.7	0.0
Apr	4.2	3.5	2.1	1.7	2.1	1.7	1.0	0.8	1.2	1.0	0.0
May	3.3	2.7	2.4	2.0	2.4	2.0	0.4	0.3	0.5	0.4	0.0
Jun	2.9	2.4	2.4	2.0	2.4	2.0	0.2	0.2	0.3	0.2	0.0
Jul	1.4	1.1	2.4	2.0	1.4	1.1	0.0	0.0	(1.0)	(0.8)	0.0
Aug	1.6	1.3	2.0	1.7	1.6	1.3	0.0	0.0	(0.4)	(0.3)	0.0
Sep	2.9	2.4	1.5	1.3	1.5	1.3	0.6	0.5	0.7	0.6	0.0
TOTAL	**54.1**	**44.6**	**18.3**	**15.1**	**16.9**	**14.0**	**16.7**	**13.8**	**19.1**	**15.7**	**0.0**

Basin 3N (north) Qpog1 Developed Condition Summary Table

Basin 3 Qpo AC 113.40

	Developed Conditions						
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)	
Oct	47.5	9.1	9.1	0.0	10.9	27.5	**0.0**
Nov	69.8	6.2	6.2	0.0	18.7	45.0	**0.0**
Dec	70.6	5.3	5.3	0.0	19.2	46.0	**0.0**
Jan	67.4	7.3	7.3	0.0	17.6	42.5	**0.0**
Feb	50.8	7.1	7.1	0.0	12.7	31.0	**0.0**
Mar	50.0	13.9	13.9	0.0	10.0	26.1	**0.0**
Apr	40.0	17.5	17.5	0.0	5.2	17.2	**0.0**
May	30.9	23.0	20.8	0.0	0.7	7.2	**0.0**
Jun	27.8	24.1	19.0	0.0	0.4	3.3	**0.0**
Jul	13.1	21.1	9.6	0.0	0.0	-7.9	**0.0**
Aug	15.4	12.8	11.3	0.0	0.0	2.6	**0.0**
Sep	27.4	11.4	11.4	0.0	3.8	12.2	**0.0**
TOTAL	**510.77**	**158.67**	**138.56**	**0.00**	**99.37**	**252.74**	**0.0**

Table - Basin 3N (north) Qpog1 Monthly Water Budget for Outwash Grass Under Developed Conditions

OW-Grass AC 0.00

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Nov	7.4	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Dec	7.5	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Jan	7.1	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Feb	5.4	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Mar	5.3	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Apr	4.2	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
May	3.3	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Jun	2.9	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Jul	1.4	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Aug	1.6	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Sep	2.9	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
TOTAL	**54.1**	**0.0**	**18.3**	**0.0**	**0.0**	**0.0**	**35.0**	**0.0**	**0.0**	**0.0**	**0.0**

Table - Basin 3N (north) Qpog1 Monthly Water Budget for Outwash Forest Under Developed Conditions

OW-forest AC 0.00

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH [ppt-et] (in)	RCH ow (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	0.0	1.2	0.0	0.0	0.0	5.0	0.0	0.0	0.0	**0.0**
Nov	7.4	0.0	0.7	0.0	0.0	0.0	7.4	0.0	0.0	0.0	**0.0**
Dec	7.5	0.0	0.6	0.0	0.0	0.0	7.5	0.0	0.0	0.0	**0.0**
Jan	7.1	0.0	0.8	0.0	0.0	0.0	7.1	0.0	0.0	0.0	**0.0**
Feb	5.4	0.0	0.8	0.0	0.0	0.0	5.4	0.0	0.0	0.0	**0.0**
Mar	5.3	0.0	1.7	0.0	0.0	0.0	5.3	0.0	0.0	0.0	**0.0**
Apr	4.2	0.0	2.5	0.0	0.0	0.0	4.2	0.0	0.0	0.0	**0.0**
May	3.3	0.0	3.8	0.0	0.0	0.0	3.3	0.0	0.0	0.0	**0.0**
Jun	2.9	0.0	4.2	0.0	0.0	0.0	2.9	0.0	0.0	0.0	**0.0**
Jul	1.4	0.0	3.7	0.0	0.0	0.0	1.4	0.0	0.0	0.0	**0.0**
Aug	1.6	0.0	1.8	0.0	0.0	0.0	1.6	0.0	0.0	0.0	**0.0**
Sep	2.9	0.0	1.6	0.0	0.0	0.0	2.9	0.0	0.0	0.0	**0.0**
TOTAL	**54.1**	**0.0**	**23.4**	**0.0**	**0.0**	**0.0**	**54.05**	**0.0**	**0.0**	**0.0**	**0.0**

Table - Basin 3N (north) Qpog1 Monthly Water Budget for Impervious Under Developed Conditions

Impervious AC 42.00

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	17.6	0.7	2.5	0.7	2.5	0.0	0.0	4.3	15.1	0.0
Nov	7.4	25.9	0.6	2.1	0.6	2.1	0.0	0.0	6.8	23.8	0.0
Dec	7.5	26.1	0.5	1.9	0.5	1.9	0.0	0.0	6.9	24.3	0.0
Jan	7.1	25.0	0.7	2.5	0.7	2.5	0.0	0.0	6.4	22.5	0.0
Feb	5.4	18.8	0.6	2.2	0.6	2.2	0.0	0.0	4.7	16.6	0.0
Mar	5.3	18.5	1.1	3.8	1.1	3.8	0.0	0.0	4.2	14.7	0.0
Apr	4.2	14.8	1.0	3.5	1.0	3.5	0.0	0.0	3.2	11.3	0.0
May	3.3	11.4	0.9	3.0	0.9	3.0	0.0	0.0	2.4	8.5	0.0
Jun	2.9	10.3	0.7	2.5	0.7	2.5	0.0	0.0	2.2	7.8	0.0
Jul	1.4	4.9	0.4	1.4	0.4	1.4	0.0	0.0	1.0	3.5	0.0
Aug	1.6	5.7	0.5	1.6	0.5	1.6	0.0	0.0	1.2	4.1	0.0
Sep	2.9	10.2	0.6	2.2	0.6	2.2	0.0	0.0	2.3	8.0	0.0
TOTAL	**54.1**	**189.2**	**8.3**	**29.1**	**8.3**	**29.1**	**0.0**	**0.0**	**45.8**	**160.1**	**0.0**

Table - Basin 3N (north) Qpog1 Monthly Water Budget for Till Forest Under Developed Conditions

Till-Forest AC 49.30

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	20.7	1.2	4.7	1.2	4.7	1.9	7.6	2.0	8.3	0.0
Nov	7.4	30.4	0.7	2.8	0.7	2.8	3.2	13.1	3.5	14.4	0.0
Dec	7.5	30.7	0.6	2.4	0.6	2.4	3.3	13.5	3.6	14.8	0.0
Jan	7.1	29.3	0.8	3.3	0.8	3.3	3.0	12.4	3.3	13.6	0.0
Feb	5.4	22.1	0.8	3.4	0.8	3.4	2.2	8.9	2.4	9.8	0.0
Mar	5.3	21.7	1.7	7.1	1.7	7.1	1.7	7.0	1.9	7.6	0.0
Apr	4.2	17.4	2.5	10.2	2.5	10.2	0.8	3.4	0.9	3.7	0.0
May	3.3	13.4	3.8	15.6	3.3	13.4	0.0	0.0	(0.5)	(2.1)	0.0
Jun	2.9	12.1	4.2	17.2	2.9	12.1	0.0	0.0	(1.2)	(5.1)	0.0
Jul	1.4	5.7	3.7	15.3	1.4	5.7	0.0	0.0	(2.3)	(9.6)	0.0
Aug	1.6	6.7	1.8	7.5	1.6	6.7	0.0	0.0	(0.2)	(0.8)	0.0
Sep	2.9	11.9	1.6	6.4	1.6	6.4	0.6	2.6	0.7	2.9	0.0
TOTAL	**54.1**	**222.1**	**23.4**	**96.0**	**19.1**	**78.3**	**16.7**	**68.6**	**14.0**	**57.5**	**0.0**

Table - Basin 3N (north) Qpog1 Monthly Water Budget for Till Grass Under Developed Conditions

Till-Grass AC 22.10

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	9.3	1.0	1.9	1.0	1.9	1.8	3.3	2.2	4.1	0.0
Nov	7.4	13.6	0.7	1.2	0.7	1.2	3.0	5.6	3.7	6.8	0.0
Dec	7.5	13.8	0.6	1.0	0.6	1.0	3.1	5.7	3.8	7.0	0.0
Jan	7.1	13.1	0.8	1.5	0.8	1.5	2.8	5.2	3.5	6.4	0.0
Feb	5.4	9.9	0.8	1.5	0.8	1.5	2.1	3.8	2.5	4.6	0.0
Mar	5.3	9.7	1.6	3.0	1.6	3.0	1.6	3.0	2.0	3.7	0.0
Apr	4.2	7.8	2.1	3.8	2.1	3.8	1.0	1.8	1.2	2.2	0.0
May	3.3	6.0	2.4	4.4	2.4	4.4	0.4	0.7	0.5	0.9	0.0
Jun	2.9	5.4	2.4	4.4	2.4	4.4	0.2	0.4	0.3	0.5	0.0
Jul	1.4	2.6	2.4	4.4	1.4	2.6	0.0	0.0	(1.0)	(1.8)	0.0
Aug	1.6	3.0	2.0	3.7	1.6	3.0	0.0	0.0	(0.4)	(0.7)	0.0
Sep	2.9	5.3	1.5	2.8	1.5	2.8	0.6	1.1	0.7	1.4	0.0
TOTAL	**54.1**	**99.5**	**18.3**	**33.6**	**16.9**	**31.2**	**16.7**	**30.8**	**19.1**	**35.1**	**0.0**

Basin 3N (north) Shallow Developed Condition Summary Table

asin 3 Shallow AC **19.10**

	Developed Conditions						
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc. set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)	
Oct	8.0	1.4	1.4	2.6	0.0	4.0	**0.0**
Nov	11.8	1.0	1.0	4.4	0.0	6.3	**0.0**
Dec	11.9	0.9	0.9	4.5	0.0	6.5	**0.0**
Jan	11.3	1.2	1.2	4.2	0.0	6.0	**0.0**
Feb	8.6	1.1	1.1	3.0	0.0	4.4	**0.0**
Mar	8.4	2.1	2.1	2.4	0.0	3.9	**0.0**
Apr	6.7	2.4	2.4	1.3	0.0	3.0	**0.0**
May	5.2	2.8	2.6	0.4	0.0	2.1	**0.0**
Jun	4.7	2.7	2.4	0.2	0.0	1.7	**0.0**
Jul	2.2	2.3	1.3	0.0	0.0	-0.1	**0.0**
Aug	2.6	1.7	1.5	0.0	0.0	0.9	**0.0**
Sep	4.6	1.6	1.6	0.9	0.0	2.1	**0.0**
TOTAL	**86.03**	**21.30**	**19.64**	**23.90**	**0.00**	**40.83**	**0.0**

Table 1a - Basin 3N (north) Shallow Monthly Water Budget for Outwash Grass Under Developed Conditions

)W-Grass Acreage **5.20**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	2.2	1.0	0.4	1.0	0.4	3.8	1.6	0.2	0.1	**0.0**
Nov	7.4	3.2	0.7	0.3	0.7	0.3	6.3	2.7	0.4	0.2	**0.0**
Dec	7.5	3.2	0.6	0.2	0.6	0.2	6.5	2.8	0.4	0.2	**0.0**
Jan	7.1	3.1	0.8	0.3	0.8	0.3	6.0	2.6	0.4	0.2	**0.0**
Feb	5.4	2.3	0.8	0.4	0.8	0.4	4.3	1.9	0.3	0.1	**0.0**
Mar	5.3	2.3	1.6	0.7	1.6	0.7	3.4	1.5	0.2	0.1	**0.0**
Apr	4.2	1.8	2.1	0.9	2.1	0.9	2.1	0.9	0.1	0.1	**0.0**
May	3.3	1.4	2.4	1.0	2.4	1.0	0.8	0.4	0.1	0.0	**0.0**
Jun	2.9	1.3	2.4	1.0	2.4	1.0	0.5	0.2	0.0	0.0	**0.0**
Jul	1.4	0.6	2.4	1.0	1.4	0.6	0.0	0.0	-1.0	-0.4	**0.0**
Aug	1.6	0.7	2.0	0.9	1.6	0.7	0.0	0.0	-0.4	-0.2	**0.0**
Sep	2.9	1.3	1.5	0.7	1.5	0.7	1.3	0.6	0.1	0.0	**0.0**
TOTAL	**54.1**	**23.4**	**18.3**	**7.9**	**16.9**	**7.3**	**35.0**	**15.2**	**0.8**	**0.4**	**0.0**

Table 1b - Basin 3N (north) Shallow Monthly Water Budget for Outwash Forest Under Developed Conditions

)W-forest acreage **3.00**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH [ppt-et] (in)	RCH ow (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	1.3	1.2	0.3	1.2	0.3	3.9	1.0	0.0	0.0	**0.0**
Nov	7.4	1.8	0.7	0.2	0.7	0.2	6.7	1.7	0.0	0.0	**0.0**
Dec	7.5	1.9	0.6	0.1	0.6	0.1	6.9	1.7	0.0	0.0	**0.0**
Jan	7.1	1.8	0.8	0.2	0.8	0.2	6.3	1.6	0.0	0.0	**(0.0)**
Feb	5.4	1.3	0.8	0.2	0.8	0.2	4.6	1.1	0.0	0.0	**0.0**
Mar	5.3	1.3	1.7	0.4	1.7	0.4	3.6	0.9	0.0	0.0	**(0.0)**
Apr	4.2	1.1	2.5	0.6	2.5	0.6	1.7	0.4	0.0	0.0	**0.0**
May	3.3	0.8	3.8	0.9	3.3	0.8	0.0	0.0	(0.5)	(0.1)	**0.0**
Jun	2.9	0.7	4.2	1.0	2.9	0.7	0.0	0.0	(1.2)	(0.3)	**0.0**
Jul	1.4	0.3	3.7	0.9	1.4	0.3	0.0	0.0	(2.3)	(0.6)	**0.0**
Aug	1.6	0.4	1.8	0.5	1.6	0.4	0.0	0.0	(0.2)	(0.0)	**0.0**
Sep	2.9	0.7	1.6	0.4	1.6	0.4	1.3	0.3	0.0	0.0	**(0.0)**
TOTAL	**54.1**	**13.5**	**23.4**	**5.8**	**19.1**	**4.8**	**34.98**	**8.7**	**(4.3)**	**(1.1)**	**0.0**

Table 1c - Basin 3N (north) Shallow Monthly Water Budget for Impervious Under Developed Conditions

Impervious Acreage **10.90**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	4.6	0.7	0.6	0.7	0.6	0.0	0.0	4.3	3.9	0.0
Nov	7.4	6.7	0.6	0.5	0.6	0.5	0.0	0.0	6.8	6.2	0.0
Dec	7.5	6.8	0.5	0.5	0.5	0.5	0.0	0.0	6.9	6.3	0.0
Jan	7.1	6.5	0.7	0.6	0.7	0.6	0.0	0.0	6.4	5.8	0.0
Feb	5.4	4.9	0.6	0.6	0.6	0.6	0.0	0.0	4.7	4.3	0.0
Mar	5.3	4.8	1.1	1.0	1.1	1.0	0.0	0.0	4.2	3.8	0.0
Apr	4.2	3.8	1.0	0.9	1.0	0.9	0.0	0.0	3.2	2.9	0.0
May	3.3	3.0	0.9	0.8	0.9	0.8	0.0	0.0	2.4	2.2	0.0
Jun	2.9	2.7	0.7	0.6	0.7	0.6	0.0	0.0	2.2	2.0	0.0
Jul	1.4	1.3	0.4	0.4	0.4	0.4	0.0	0.0	1.0	0.9	0.0
Aug	1.6	1.5	0.5	0.4	0.5	0.4	0.0	0.0	1.2	1.1	0.0
Sep	2.9	2.6	0.6	0.6	0.6	0.6	0.0	0.0	2.3	2.1	0.0
TOTAL	**54.1**	**49.1**	**8.3**	**7.5**	**8.3**	**7.5**	**0.0**	**0.0**	**45.8**	**41.6**	**0.0**

Table 1d - Basin 3N (north) Shallow Monthly Water Budget for Till Forest Under Developed Conditions

Till-Forest Acreage **0.00**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nov	7.4	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dec	7.5	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jan	7.1	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feb	5.4	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mar	5.3	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr	4.2	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	3.3	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jun	2.9	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jul	1.4	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aug	1.6	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep	2.9	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**54.1**	**0.0**	**23.4**	**0.0**	**0.0**	**0.0**	**16.7**	**0.0**	**0.0**	**0.0**	**0.0**

Table 1e - Basin 3N (north) Shallow Monthly Water Budget for Till Grass Under Developed Conditions

Till-Grass Acreage **0.00**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nov	7.4	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dec	7.5	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jan	7.1	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feb	5.4	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mar	5.3	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr	4.2	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	3.3	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jun	2.9	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jul	1.4	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aug	1.6	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep	2.9	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**54.1**	**0.0**	**18.3**	**0.0**	**0.0**	**0.0**	**16.7**	**0.0**	**0.0**	**0.0**	**0.0**

Basin 3S (south) Developed Condition Summary Table

Basin 3S Qpo AC **57.60**

	Developed Conditions						
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc. set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)	
Oct	24.1	4.1	4.1	1.2	2.9	16.0	0.0
Nov	35.5	3.0	3.0	2.0	5.0	25.5	0.0
Dec	35.9	2.7	2.7	2.0	5.1	26.1	0.0
Jan	34.2	3.6	3.6	1.8	4.7	24.2	0.0
Feb	25.8	3.4	3.4	1.3	3.4	17.7	0.0
Mar	25.4	6.3	6.3	1.1	2.7	15.4	0.0
Apr	20.3	7.1	7.1	0.6	1.5	11.1	0.0
May	15.7	7.8	7.5	0.2	0.4	7.2	0.0
Jun	14.1	7.6	6.9	0.2	0.3	6.1	0.0
Jul	6.7	6.4	3.8	0.0	0.0	0.3	0.0
Aug	7.8	5.1	4.5	0.0	0.0	2.8	0.0
Sep	13.9	4.8	4.8	0.4	1.0	7.8	0.0
TOTAL	**259.44**	**61.66**	**57.51**	**10.78**	**26.86**	**160.13**	**0.0**

Table - Basin 3S (south) Monthly Water Budget for Outwash Grass Under Developed Conditions

OW-Grass AC **3.70**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	1.6	1.0	0.3	1.0	0.3	3.8	1.2	0.2	0.1	0.0
Nov	7.4	2.3	0.7	0.2	0.7	0.2	6.3	2.0	0.4	0.1	0.0
Dec	7.5	2.3	0.6	0.2	0.6	0.2	6.5	2.0	0.4	0.1	0.0
Jan	7.1	2.2	0.8	0.2	0.8	0.2	6.0	1.8	0.4	0.1	0.0
Feb	5.4	1.7	0.8	0.2	0.8	0.2	4.3	1.3	0.3	0.1	0.0
Mar	5.3	1.6	1.6	0.5	1.6	0.5	3.4	1.1	0.2	0.1	0.0
Apr	4.2	1.3	2.1	0.6	2.1	0.6	2.1	0.6	0.1	0.0	0.0
May	3.3	1.0	2.4	0.7	2.4	0.7	0.8	0.2	0.1	0.0	0.0
Jun	2.9	0.9	2.4	0.7	2.4	0.7	0.5	0.2	0.0	0.0	0.0
Jul	1.4	0.4	2.4	0.7	1.4	0.4	0.0	0.0	-1.0	-0.3	0.0
Aug	1.6	0.5	2.0	0.6	1.6	0.5	0.0	0.0	-0.4	-0.1	0.0
Sep	2.9	0.9	1.5	0.5	1.5	0.5	1.3	0.4	0.1	0.0	0.0
TOTAL	**54.1**	**16.7**	**18.3**	**5.6**	**16.9**	**5.2**	**35.0**	**10.8**	**0.8**	**0.2**	**0.0**

Table - Basin 3S (south) Monthly Water Budget for Outwash Forest Under Developed Conditions

OW-forest AC **0.00**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH [ppt-et] (in)	RCH ow (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	0.0	1.2	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
Nov	7.4	0.0	0.7	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.0
Dec	7.5	0.0	0.6	0.0	0.0	0.0	7.5	0.0	0.0	0.0	0.0
Jan	7.1	0.0	0.8	0.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0
Feb	5.4	0.0	0.8	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0
Mar	5.3	0.0	1.7	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0
Apr	4.2	0.0	2.5	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0
May	3.3	0.0	3.8	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0
Jun	2.9	0.0	4.2	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0
Jul	1.4	0.0	3.7	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0
Aug	1.6	0.0	1.8	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0
Sep	2.9	0.0	1.6	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0
TOTAL	**54.1**	**0.0**	**23.4**	**0.0**	**0.0**	**0.0**	**54.05**	**0.0**	**0.0**	**0.0**	**0.0**

Table - Basin 3S (south) Monthly Water Budget for Impervious Under Developed Conditions

Impervious AC **34.60**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	14.5	0.7	2.0	0.7	2.0	0.0	0.0	4.3	12.5	**0.0**
Nov	7.4	21.3	0.6	1.7	0.6	1.7	0.0	0.0	6.8	19.6	**0.0**
Dec	7.5	21.5	0.5	1.6	0.5	1.6	0.0	0.0	6.9	20.0	**0.0**
Jan	7.1	20.6	0.7	2.0	0.7	2.0	0.0	0.0	6.4	18.5	**0.0**
Feb	5.4	15.5	0.6	1.8	0.6	1.8	0.0	0.0	4.7	13.7	**0.0**
Mar	5.3	15.3	1.1	3.1	1.1	3.1	0.0	0.0	4.2	12.1	**0.0**
Apr	4.2	12.2	1.0	2.9	1.0	2.9	0.0	0.0	3.2	9.3	**0.0**
May	3.3	9.4	0.9	2.5	0.9	2.5	0.0	0.0	2.4	7.0	**0.0**
Jun	2.9	8.5	0.7	2.0	0.7	2.0	0.0	0.0	2.2	6.5	**0.0**
Jul	1.4	4.0	0.4	1.1	0.4	1.1	0.0	0.0	1.0	2.9	**0.0**
Aug	1.6	4.7	0.5	1.3	0.5	1.3	0.0	0.0	1.2	3.4	**0.0**
Sep	2.9	8.4	0.6	1.8	0.6	1.8	0.0	0.0	2.3	6.6	**0.0**
TOTAL	**54.1**	**155.8**	**8.3**	**23.9**	**8.3**	**23.9**	**0.0**	**0.0**	**45.8**	**131.9**	**0.0**

Table - Basin 3S (south) Monthly Water Budget for Till Forest Under Developed Conditions

Till-Forest AC **6.40**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	2.7	1.2	0.6	1.2	0.6	1.9	1.0	2.0	1.1	**0.0**
Nov	7.4	3.9	0.7	0.4	0.7	0.4	3.2	1.7	3.5	1.9	**0.0**
Dec	7.5	4.0	0.6	0.3	0.6	0.3	3.3	1.8	3.6	1.9	**0.0**
Jan	7.1	3.8	0.8	0.4	0.8	0.4	3.0	1.6	3.3	1.8	**0.0**
Feb	5.4	2.9	0.8	0.4	0.8	0.4	2.2	1.2	2.4	1.3	**0.0**
Mar	5.3	2.8	1.7	0.9	1.7	0.9	1.7	0.9	1.9	1.0	**0.0**
Apr	4.2	2.3	2.5	1.3	2.5	1.3	0.8	0.4	0.9	0.5	**0.0**
May	3.3	1.7	3.8	2.0	3.3	1.7	0.0	0.0	(0.5)	(0.3)	**0.0**
Jun	2.9	1.6	4.2	2.2	2.9	1.6	0.0	0.0	(1.2)	(0.7)	**0.0**
Jul	1.4	0.7	3.7	2.0	1.4	0.7	0.0	0.0	(2.3)	(1.2)	**0.0**
Aug	1.6	0.9	1.8	1.0	1.6	0.9	0.0	0.0	(0.2)	(0.1)	**0.0**
Sep	2.9	1.5	1.6	0.8	1.6	0.8	0.6	0.3	0.7	0.4	**0.0**
TOTAL	**54.1**	**28.8**	**23.4**	**12.5**	**19.1**	**10.2**	**16.7**	**8.9**	**14.0**	**7.5**	**0.0**

Table - Basin 3S (south) Monthly Water Budget for Till Grass Under Developed Conditions

Till-Grass AC **12.90**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	5.4	1.0	1.1	1.0	1.1	1.8	1.9	2.2	2.4	**0.0**
Nov	7.4	7.9	0.7	0.7	0.7	0.7	3.0	3.3	3.7	4.0	**0.0**
Dec	7.5	8.0	0.6	0.6	0.6	0.6	3.1	3.3	3.8	4.1	**0.0**
Jan	7.1	7.7	0.8	0.9	0.8	0.9	2.8	3.1	3.5	3.7	**0.0**
Feb	5.4	5.8	0.8	0.9	0.8	0.9	2.1	2.2	2.5	2.7	**0.0**
Mar	5.3	5.7	1.6	1.8	1.6	1.8	1.6	1.8	2.0	2.2	**0.0**
Apr	4.2	4.5	2.1	2.2	2.1	2.2	1.0	1.1	1.2	1.3	**0.0**
May	3.3	3.5	2.4	2.6	2.4	2.6	0.4	0.4	0.5	0.5	**0.0**
Jun	2.9	3.2	2.4	2.6	2.4	2.6	0.2	0.3	0.3	0.3	**0.0**
Jul	1.4	1.5	2.4	2.5	1.4	1.5	0.0	0.0	(1.0)	(1.1)	**0.0**
Aug	1.6	1.8	2.0	2.2	1.6	1.8	0.0	0.0	(0.4)	(0.4)	**0.0**
Sep	2.9	3.1	1.5	1.7	1.5	1.7	0.6	0.7	0.7	0.8	**0.0**
TOTAL	**54.1**	**58.1**	**18.3**	**19.6**	**16.9**	**18.2**	**16.7**	**18.0**	**19.1**	**20.5**	**0.0**

Basin 4 Pre-Olympia Developed Condition Summary Table

Basin 4 Qpo AC **226.50**

	Developed Conditions					
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc. set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)
Oct	94.9	18.9	18.9	5.4	22.1	48.6
Nov	139.5	12.4	12.4	9.2	37.9	79.9
Dec	141.0	10.7	10.7	9.5	39.0	81.8
Jan	134.6	14.7	14.7	8.7	35.8	75.5
Feb	101.5	14.6	14.6	6.3	25.8	55.0
Mar	99.8	28.8	28.8	4.9	20.2	45.8
Apr	79.8	37.6	37.6	2.6	10.3	29.3
May	61.7	51.4	45.9	0.5	0.9	9.0
Jun	55.5	54.7	41.7	0.3	0.6	0.0
Jul	26.2	48.1	20.8	0.0	0.0	-21.9
Aug	30.8	27.4	24.4	0.0	0.0	3.3
Sep	54.7	24.2	24.2	1.9	7.6	21.1
TOTAL	**1020.19**	**343.50**	**294.62**	**49.26**	**200.12**	**427.32**

Table 1a - Basin 4 Pre-Olympia Monthly Water Budget for Outwash Grass Under Developed Condition

OW-Grass Acreage **7.00**

	Developed Conditions									
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)
Oct	5.0	2.9	1.0	0.6	1.0	0.6	3.8	2.2	0.2	0.1
Nov	7.4	4.3	0.7	0.4	0.7	0.4	6.3	3.7	0.4	0.2
Dec	7.5	4.4	0.6	0.3	0.6	0.3	6.5	3.8	0.4	0.2
Jan	7.1	4.2	0.8	0.5	0.8	0.5	6.0	3.5	0.4	0.2
Feb	5.4	3.1	0.8	0.5	0.8	0.5	4.3	2.5	0.3	0.2
Mar	5.3	3.1	1.6	1.0	1.6	1.0	3.4	2.0	0.2	0.1
Apr	4.2	2.5	2.1	1.2	2.1	1.2	2.1	1.2	0.1	0.1
May	3.3	1.9	2.4	1.4	2.4	1.4	0.8	0.5	0.1	0.0
Jun	2.9	1.7	2.4	1.4	2.4	1.4	0.5	0.3	0.0	0.0
Jul	1.4	0.8	2.4	1.4	1.4	0.8	0.0	0.0	-1.0	-0.6
Aug	1.6	1.0	2.0	1.2	1.6	1.0	0.0	0.0	-0.4	-0.2
Sep	2.9	1.7	1.5	0.9	1.5	0.9	1.3	0.7	0.1	0.0
TOTAL	**54.1**	**31.5**	**18.3**	**10.7**	**16.9**	**9.9**	**35.0**	**20.4**	**0.8**	**0.5**

Table 1b - Basin 4 Pre-Olympia Monthly Water Budget for Outwash Forest Under Developed Condition

OW-forest acreage **9.90**

	Developed Conditions									
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH [ppt-et] (in)	RCH ow (ac-ft)	RO (inches)	RO (ac-ft)
Oct	5.0	4.1	1.2	0.9	1.2	0.9	3.9	3.2	0.0	0.0
Nov	7.4	6.1	0.7	0.6	0.7	0.6	6.7	5.5	0.0	0.0
Dec	7.5	6.2	0.6	0.5	0.6	0.5	6.9	5.7	0.0	0.0
Jan	7.1	5.9	0.8	0.7	0.8	0.7	6.3	5.2	0.0	0.0
Feb	5.4	4.4	0.8	0.7	0.8	0.7	4.6	3.8	0.0	0.0
Mar	5.3	4.4	1.7	1.4	1.7	1.4	3.6	2.9	0.0	0.0
Apr	4.2	3.5	2.5	2.1	2.5	2.1	1.7	1.4	0.0	0.0
May	3.3	2.7	3.8	3.1	3.3	2.7	0.0	0.0	(0.5)	(0.4)
Jun	2.9	2.4	4.2	3.4	2.9	2.4	0.0	0.0	(1.2)	(1.0)
Jul	1.4	1.1	3.7	3.1	1.4	1.1	0.0	0.0	(2.3)	(1.9)
Aug	1.6	1.3	1.8	1.5	1.6	1.3	0.0	0.0	(0.2)	(0.2)
Sep	2.9	2.4	1.6	1.3	1.6	1.3	1.3	1.1	0.0	0.0
TOTAL	**54.1**	**44.6**	**23.4**	**19.3**	**19.1**	**15.7**	**34.98**	**28.9**	**(4.3)**	**(3.5)**

Table 1c - Basin 4 Pre-Olympia Monthly Water Budget for Impervious Under Developed Conditions

Impervious Acreage 65.80

	Developed Conditions									
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)
Oct	5.0	27.6	0.7	3.9	0.7	3.9	0.0	0.0	4.3	23.7
Nov	7.4	40.5	0.6	3.3	0.6	3.3	0.0	0.0	6.8	37.2
Dec	7.5	41.0	0.5	3.0	0.5	3.0	0.0	0.0	6.9	38.0
Jan	7.1	39.1	0.7	3.8	0.7	3.8	0.0	0.0	6.4	35.3
Feb	5.4	29.5	0.6	3.5	0.6	3.5	0.0	0.0	4.7	26.0
Mar	5.3	29.0	1.1	5.9	1.1	5.9	0.0	0.0	4.2	23.1
Apr	4.2	23.2	1.0	5.5	1.0	5.5	0.0	0.0	3.2	17.7
May	3.3	17.9	0.9	4.7	0.9	4.7	0.0	0.0	2.4	13.3
Jun	2.9	16.1	0.7	3.8	0.7	3.8	0.0	0.0	2.2	12.3
Jul	1.4	7.6	0.4	2.1	0.4	2.1	0.0	0.0	1.0	5.5
Aug	1.6	8.9	0.5	2.5	0.5	2.5	0.0	0.0	1.2	6.4
Sep	2.9	15.9	0.6	3.4	0.6	3.4	0.0	0.0	2.3	12.5
TOTAL	**54.1**	**296.4**	**8.3**	**45.5**	**8.3**	**45.5**	**0.0**	**0.0**	**45.8**	**250.9**

Table 1d - Basin 4 Pre-Olympia Monthly Water Budget for Till Forest Under Developed Conditions

Till-Forest Acreage 115.80

	Developed Conditions									
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)
Oct	5.0	48.5	1.2	11.1	1.2	11.1	1.9	17.9	2.0	19.6
Nov	7.4	71.3	0.7	6.7	0.7	6.7	3.2	30.9	3.5	33.8
Dec	7.5	72.1	0.6	5.6	0.6	5.6	3.3	31.7	3.6	34.7
Jan	7.1	68.8	0.8	7.8	0.8	7.8	3.0	29.1	3.3	31.9
Feb	5.4	51.9	0.8	8.0	0.8	8.0	2.2	21.0	2.4	22.9
Mar	5.3	51.0	1.7	16.7	1.7	16.7	1.7	16.4	1.9	18.0
Apr	4.2	40.8	2.5	24.0	2.5	24.0	0.8	8.0	0.9	8.8
May	3.3	31.6	3.8	36.6	3.3	31.6	0.0	0.0	(0.5)	(5.0)
Jun	2.9	28.4	4.2	40.3	2.9	28.4	0.0	0.0	(1.2)	(12.0)
Jul	1.4	13.4	3.7	36.0	1.4	13.4	0.0	0.0	(2.3)	(22.6)
Aug	1.6	15.7	1.8	17.6	1.6	15.7	0.0	0.0	(0.2)	(1.8)
Sep	2.9	28.0	1.6	15.1	1.6	15.1	0.6	6.2	0.7	6.8
TOTAL	**54.1**	**521.6**	**23.4**	**225.4**	**19.1**	**184.0**	**16.7**	**161.2**	**14.0**	**135.0**

Table 1e - Basin 4 Pre-Olympia Monthly Water Budget for Till Grass Under Developed Conditions

Till-Grass Acreage 28.00

	Developed Conditions									
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)
Oct	5.0	11.7	1.0	2.4	1.0	2.4	1.8	4.2	2.2	5.2
Nov	7.4	17.2	0.7	1.5	0.7	1.5	3.0	7.1	3.7	8.6
Dec	7.5	17.4	0.6	1.3	0.6	1.3	3.1	7.2	3.8	8.9
Jan	7.1	16.6	0.8	1.9	0.8	1.9	2.8	6.6	3.5	8.1
Feb	5.4	12.6	0.8	1.9	0.8	1.9	2.1	4.8	2.5	5.9
Mar	5.3	12.3	1.6	3.8	1.6	3.8	1.6	3.8	2.0	4.7
Apr	4.2	9.9	2.1	4.8	2.1	4.8	1.0	2.3	1.2	2.8
May	3.3	7.6	2.4	5.6	2.4	5.6	0.4	0.9	0.5	1.1
Jun	2.9	6.9	2.4	5.6	2.4	5.6	0.2	0.6	0.3	0.7
Jul	1.4	3.2	2.4	5.5	1.4	3.2	0.0	0.0	(1.0)	(2.3)
Aug	1.6	3.8	2.0	4.7	1.6	3.8	0.0	0.0	(0.4)	(0.9)
Sep	2.9	6.8	1.5	3.6	1.5	3.6	0.6	1.4	0.7	1.7
TOTAL	**54.1**	**126.1**	**18.3**	**42.6**	**16.9**	**39.5**	**16.7**	**39.0**	**19.1**	**44.5**

BasinQvic_LID Developed Condition Summary Table

Basin 4 LID AC **133.30**

	Developed Conditions						
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc. set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)	
Oct	55.9	8.9	8.9	13.2		33.7	0.0
Nov	82.1	6.9	6.9	22.1		53.1	0.0
Dec	83.0	6.1	6.1	22.7		54.2	0.0
Jan	79.2	8.1	8.1	20.8		50.3	0.0
Feb	59.8	7.7	7.7	15.0		37.0	0.0
Mar	58.8	14.0	14.0	12.0		32.8	0.0
Apr	47.0	14.9	14.9	7.1		25.0	0.0
May	36.3	15.0	15.0	2.7		18.6	0.0
Jun	32.7	13.9	13.8	1.7		17.1	0.0
Jul	15.4	11.4	7.8	0.0		4.1	0.0
Aug	18.1	10.5	9.2	0.0		7.6	0.0
Sep	32.2	10.1	10.1	4.5		17.7	0.0
TOTAL	**600.4**	**127.4**	**122.4**	**121.8**		**351.2**	**0.0**

BasinQvic_LID Monthly Water Budget for Outwash Grass Under Developed Conditions

)W-Grass Acreage **40.70**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	17.1	1.0	3.4	1.0	3.4	3.8	12.8	0.2	0.8	0.0
Nov	7.4	25.1	0.7	2.2	0.7	2.2	6.3	21.5	0.4	1.3	0.0
Dec	7.5	25.3	0.6	1.9	0.6	1.9	6.5	22.0	0.4	1.4	0.0
Jan	7.1	24.2	0.8	2.7	0.8	2.7	6.0	20.2	0.4	1.2	0.0
Feb	5.4	18.2	0.8	2.7	0.8	2.7	4.3	14.6	0.3	0.9	0.0
Mar	5.3	17.9	1.6	5.6	1.6	5.6	3.4	11.7	0.2	0.7	0.0
Apr	4.2	14.3	2.1	7.0	2.1	7.0	2.1	7.0	0.1	0.4	0.0
May	3.3	11.1	2.4	8.2	2.4	8.2	0.8	2.7	0.1	0.2	0.0
Jun	2.9	10.0	2.4	8.2	2.4	8.2	0.5	1.7	0.0	0.1	0.0
Jul	1.4	4.7	2.4	8.0	1.4	4.7	0.0	0.0	-1.0	-3.3	0.0
Aug	1.6	5.5	2.0	6.8	1.6	5.5	0.0	0.0	-0.4	-1.3	0.0
Sep	2.9	9.8	1.5	5.2	1.5	5.2	1.3	4.3	0.1	0.3	0.0
TOTAL	**54.1**	**183.3**	**18.3**	**62.0**	**16.9**	**57.4**	**35.0**	**118.6**	**0.8**	**2.7**	**0.0**

BasinQvic_LID Monthly Water Budget for Outwash Forest Under Developed Conditions

)W-forest acreage **1.10**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH [ppt-et] (in)	RCH ow (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	0.5	1.2	0.1	1.2	0.1	3.9	0.4	0.0	0.0	0.0
Nov	7.4	0.7	0.7	0.1	0.7	0.1	6.7	0.6	0.0	0.0	0.0
Dec	7.5	0.7	0.6	0.1	0.6	0.1	6.9	0.6	0.0	0.0	0.0
Jan	7.1	0.7	0.8	0.1	0.8	0.1	6.3	0.6	0.0	0.0	(0.0)
Feb	5.4	0.5	0.8	0.1	0.8	0.1	4.6	0.4	0.0	0.0	0.0
Mar	5.3	0.5	1.7	0.2	1.7	0.2	3.6	0.3	0.0	0.0	0.0
Apr	4.2	0.4	2.5	0.2	2.5	0.2	1.7	0.2	0.0	0.0	0.0
May	3.3	0.3	3.8	0.3	3.3	0.3	0.0	0.0	(0.5)	(0.0)	0.0
Jun	2.9	0.3	4.2	0.4	2.9	0.3	0.0	0.0	(1.2)	(0.1)	0.0
Jul	1.4	0.1	3.7	0.3	1.4	0.1	0.0	0.0	(2.3)	(0.2)	0.0
Aug	1.6	0.1	1.8	0.2	1.6	0.1	0.0	0.0	(0.2)	(0.0)	0.0
Sep	2.9	0.3	1.6	0.1	1.6	0.1	1.3	0.1	0.0	0.0	0.0
TOTAL	**54.1**	**5.0**	**23.4**	**2.1**	**19.1**	**1.7**	**34.98**	**3.2**	**(4.3)**	**(0.4)**	**0.0**

BasinQvic_LID Monthly Water Budget for Outwash Impervious Under Developed Conditions

OW-imp Acreage **91.50**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	38.4	0.7	5.4	0.7	5.4	0.0	0.0	4.3	32.9	0.0
Nov	7.4	56.3	0.6	4.6	0.6	4.6	0.0	0.0	6.8	51.8	0.0
Dec	7.5	57.0	0.5	4.1	0.5	4.1	0.0	0.0	6.9	52.8	0.0
Jan	7.1	54.4	0.7	5.3	0.7	5.3	0.0	0.0	6.4	49.0	0.0
Feb	5.4	41.0	0.6	4.9	0.6	4.9	0.0	0.0	4.7	36.1	0.0
Mar	5.3	40.3	1.1	8.2	1.1	8.2	0.0	0.0	4.2	32.1	0.0
Apr	4.2	32.3	1.0	7.7	1.0	7.7	0.0	0.0	3.2	24.6	0.0
May	3.3	24.9	0.9	6.5	0.9	6.5	0.0	0.0	2.4	18.5	0.0
Jun	2.9	22.4	0.7	5.3	0.7	5.3	0.0	0.0	2.2	17.1	0.0
Jul	1.4	10.6	0.4	3.0	0.4	3.0	0.0	0.0	1.0	7.6	0.0
Aug	1.6	12.4	0.5	3.5	0.5	3.5	0.0	0.0	1.2	8.9	0.0
Sep	2.9	22.1	0.6	4.7	0.6	4.7	0.0	0.0	2.3	17.4	0.0
TOTAL	**54.1**	**412.1**	**8.3**	**63.3**	**8.3**	**63.3**	**0.0**	**0.0**	**45.8**	**348.8**	**0.0**

Basin 4 Qpog2 Developed Condition Summary Table

Basin 4 Qpog2 AC 201.80

	Developed Conditions					
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc. set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)
Oct	84.6	15.2	15.2	0.0	16.3	53.1
Nov	124.3	10.8	10.8	0.0	27.6	85.9
Dec	125.6	9.4	9.4	0.0	28.4	87.8
Jan	119.9	12.7	12.7	0.0	26.0	81.2
Feb	90.5	12.4	12.4	0.0	18.8	59.3
Mar	89.0	23.5	23.5	0.0	14.8	50.6
Apr	71.1	28.1	28.1	0.0	8.1	34.9
May	55.0	34.1	31.8	0.0	1.8	19.1
Jun	49.4	34.5	29.2	0.0	1.1	13.8
Jul	23.4	30.0	15.5	0.0	0.0	-6.6
Aug	27.4	20.7	18.1	0.0	0.0	6.8
Sep	48.8	18.7	18.7	0.0	5.6	24.5
TOTAL	**908.94**	**249.99**	**225.42**	**0.00**	**148.49**	**510.46**

Table 1a - Basin 4 Qpog2 Monthly Water Budget for Outwash Grass Under Developed Conditions

)W-Grass Acreage 0.00

	Developed Conditions									
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)
Oct	5.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nov	7.4	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dec	7.5	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jan	7.1	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feb	5.4	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mar	5.3	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Apr	4.2	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	3.3	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jun	2.9	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jul	1.4	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aug	1.6	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep	2.9	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	**54.1**	**0.0**	**18.3**	**0.0**	**0.0**	**0.0**	**35.0**	**0.0**	**0.0**	**0.0**

Table 1b - Basin 4 Qpog2 Monthly Water Budget for Outwash Forest Under Developed Conditions

)W-forest acreage 0.00

	Developed Conditions									
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH [ppt-et] (in)	RCH ow (ac-ft)	RO (inches)	RO (ac-ft)
Oct	5.0	0.0	1.2	0.0	0.0	0.0	5.0	0.0	0.0	0.0
Nov	7.4	0.0	0.7	0.0	0.0	0.0	7.4	0.0	0.0	0.0
Dec	7.5	0.0	0.6	0.0	0.0	0.0	7.5	0.0	0.0	0.0
Jan	7.1	0.0	0.8	0.0	0.0	0.0	7.1	0.0	0.0	0.0
Feb	5.4	0.0	0.8	0.0	0.0	0.0	5.4	0.0	0.0	0.0
Mar	5.3	0.0	1.7	0.0	0.0	0.0	5.3	0.0	0.0	0.0
Apr	4.2	0.0	2.5	0.0	0.0	0.0	4.2	0.0	0.0	0.0
May	3.3	0.0	3.8	0.0	0.0	0.0	3.3	0.0	0.0	0.0
Jun	2.9	0.0	4.2	0.0	0.0	0.0	2.9	0.0	0.0	0.0
Jul	1.4	0.0	3.7	0.0	0.0	0.0	1.4	0.0	0.0	0.0
Aug	1.6	0.0	1.8	0.0	0.0	0.0	1.6	0.0	0.0	0.0
Sep	2.9	0.0	1.6	0.0	0.0	0.0	2.9	0.0	0.0	0.0
TOTAL	**54.1**	**0.0**	**23.4**	**0.0**	**0.0**	**0.0**	**54.05**	**0.0**	**0.0**	**0.0**

Table 1c - Basin 4 Qpog2 Monthly Water Budget for Impervious Under Developed Conditions

Impervious Acreage 95.10

	Developed Conditions									
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)
Oct	5.0	39.9	0.7	5.6	0.7	5.6	0.0	0.0	4.3	34.2
Nov	7.4	58.6	0.6	4.8	0.6	4.8	0.0	0.0	6.8	53.8
Dec	7.5	59.2	0.5	4.3	0.5	4.3	0.0	0.0	6.9	54.9
Jan	7.1	56.5	0.7	5.5	0.7	5.5	0.0	0.0	6.4	51.0
Feb	5.4	42.6	0.6	5.1	0.6	5.1	0.0	0.0	4.7	37.6
Mar	5.3	41.9	1.1	8.6	1.1	8.6	0.0	0.0	4.2	33.4
Apr	4.2	33.5	1.0	8.0	1.0	8.0	0.0	0.0	3.2	25.5
May	3.3	25.9	0.9	6.7	0.9	6.7	0.0	0.0	2.4	19.2
Jun	2.9	23.3	0.7	5.5	0.7	5.5	0.0	0.0	2.2	17.8
Jul	1.4	11.0	0.4	3.1	0.4	3.1	0.0	0.0	1.0	7.9
Aug	1.6	12.9	0.5	3.6	0.5	3.6	0.0	0.0	1.2	9.3
Sep	2.9	23.0	0.6	4.9	0.6	4.9	0.0	0.0	2.3	18.1
TOTAL	**54.1**	**428.3**	**8.3**	**65.8**	**8.3**	**65.8**	**0.0**	**0.0**	**45.8**	**362.6**

Table 1d - Basin 4 Qpog2 Monthly Water Budget for Till Forest Under Developed Conditions

Till-Forest Acreage 51.30

	Developed Conditions									
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)
Oct	5.0	21.5	1.2	4.9	1.2	4.9	1.9	7.9	2.0	8.7
Nov	7.4	31.6	0.7	2.9	0.7	2.9	3.2	13.7	3.5	15.0
Dec	7.5	31.9	0.6	2.5	0.6	2.5	3.3	14.1	3.6	15.4
Jan	7.1	30.5	0.8	3.5	0.8	3.5	3.0	12.9	3.3	14.1
Feb	5.4	23.0	0.8	3.5	0.8	3.5	2.2	9.3	2.4	10.2
Mar	5.3	22.6	1.7	7.4	1.7	7.4	1.7	7.3	1.9	8.0
Apr	4.2	18.1	2.5	10.6	2.5	10.6	0.8	3.6	0.9	3.9
May	3.3	14.0	3.8	16.2	3.3	14.0	0.0	0.0	(0.5)	(2.2)
Jun	2.9	12.6	4.2	17.9	2.9	12.6	0.0	0.0	(1.2)	(5.3)
Jul	1.4	5.9	3.7	15.9	1.4	5.9	0.0	0.0	(2.3)	(10.0)
Aug	1.6	7.0	1.8	7.8	1.6	7.0	0.0	0.0	(0.2)	(0.8)
Sep	2.9	12.4	1.6	6.7	1.6	6.7	0.6	2.7	0.7	3.0
TOTAL	**54.1**	**231.1**	**23.4**	**99.9**	**19.1**	**81.5**	**16.7**	**71.4**	**14.0**	**59.8**

Table 1e - Basin 4 Qpog2 Monthly Water Budget for Till Grass Under Developed Conditions

Till-Grass Acreage 55.40

	Developed Conditions									
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)
Oct	5.0	23.2	1.0	4.7	1.0	4.7	1.8	8.3	2.2	10.2
Nov	7.4	34.1	0.7	3.0	0.7	3.0	3.0	14.0	3.7	17.1
Dec	7.5	34.5	0.6	2.6	0.6	2.6	3.1	14.3	3.8	17.5
Jan	7.1	32.9	0.8	3.7	0.8	3.7	2.8	13.1	3.5	16.1
Feb	5.4	24.8	0.8	3.7	0.8	3.7	2.1	9.5	2.5	11.6
Mar	5.3	24.4	1.6	7.6	1.6	7.6	1.6	7.6	2.0	9.3
Apr	4.2	19.5	2.1	9.5	2.1	9.5	1.0	4.5	1.2	5.5
May	3.3	15.1	2.4	11.1	2.4	11.1	0.4	1.8	0.5	2.2
Jun	2.9	13.6	2.4	11.1	2.4	11.1	0.2	1.1	0.3	1.3
Jul	1.4	6.4	2.4	10.9	1.4	6.4	0.0	0.0	(1.0)	(4.5)
Aug	1.6	7.5	2.0	9.2	1.6	7.5	0.0	0.0	(0.4)	(1.7)
Sep	2.9	13.4	1.5	7.1	1.5	7.1	0.6	2.8	0.7	3.5
TOTAL	**54.1**	**249.5**	**18.3**	**84.3**	**16.9**	**78.1**	**16.7**	**77.1**	**19.1**	**88.1**

Basin 5 Developed Condition Summary Table

Basin 5 AC **107.70**

	Developed Conditions					
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc. set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)
Oct	45.1	9.5	9.5		13.9	21.7
Nov	66.3	6.0	6.0		23.8	36.5
Dec	67.0	5.1	5.1		24.5	37.4
Jan	64.0	7.1	7.1		22.5	34.4
Feb	48.3	7.2	7.2		16.2	24.9
Mar	47.5	14.5	14.5		12.7	20.3
Apr	38.0	19.8	19.8		6.4	11.8
May	29.3	28.4	25.0		0.3	0.6
Jun	26.4	30.8	22.6		0.2	-4.6
Jul	12.5	27.3	11.0		0.0	-14.9
Aug	14.6	14.5	12.9		0.0	0.1
Sep	26.0	12.6	12.6		4.8	8.7
TOTAL	**485.10**	**182.90**	**153.35**		**125.25**	**176.94**

Table 1c - Basin 5 Monthly Water Budget for Impervious Under Developed Conditions

pervious Acreage **17.70**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	7.4	0.7	1.0	0.7	1.0	0.0	0.0	4.3	6.4	0.0
Nov	7.4	10.9	0.6	0.9	0.6	0.9	0.0	0.0	6.8	10.0	0.0
Dec	7.5	11.0	0.5	0.8	0.5	0.8	0.0	0.0	6.9	10.2	0.0
Jan	7.1	10.5	0.7	1.0	0.7	1.0	0.0	0.0	6.4	9.5	0.0
Feb	5.4	7.9	0.6	0.9	0.6	0.9	0.0	0.0	4.7	7.0	0.0
Mar	5.3	7.8	1.1	1.6	1.1	1.6	0.0	0.0	4.2	6.2	0.0
Apr	4.2	6.2	1.0	1.5	1.0	1.5	0.0	0.0	3.2	4.7	0.0
May	3.3	4.8	0.9	1.3	0.9	1.3	0.0	0.0	2.4	3.6	0.0
Jun	2.9	4.3	0.7	1.0	0.7	1.0	0.0	0.0	2.2	3.3	0.0
Jul	1.4	2.1	0.4	0.6	0.4	0.6	0.0	0.0	1.0	1.5	0.0
Aug	1.6	2.4	0.5	0.7	0.5	0.7	0.0	0.0	1.2	1.7	0.0
Sep	2.9	4.3	0.6	0.9	0.6	0.9	0.0	0.0	2.3	3.4	0.0
TOTAL	**54.1**	**79.7**	**8.3**	**12.2**	**8.3**	**12.2**	**0.0**	**0.0**	**45.8**	**67.5**	**0.0**

Table 1d - Basin 5 Monthly Water Budget for Till Forest Under Developed Conditions

ill-Forest Acreage **79.30**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	33.2	1.2	7.6	1.2	7.6	1.9	12.2	2.0	13.4	0.0
Nov	7.4	48.8	0.7	4.6	0.7	4.6	3.2	21.1	3.5	23.1	0.0
Dec	7.5	49.4	0.6	3.8	0.6	3.8	3.3	21.7	3.6	23.8	0.0
Jan	7.1	47.1	0.8	5.4	0.8	5.4	3.0	19.9	3.3	21.8	0.0
Feb	5.4	35.6	0.8	5.5	0.8	5.5	2.2	14.4	2.4	15.7	0.0
Mar	5.3	35.0	1.7	11.4	1.7	11.4	1.7	11.2	1.9	12.3	0.0
Apr	4.2	28.0	2.5	16.5	2.5	16.5	0.8	5.5	0.9	6.0	0.0
May	3.3	21.6	3.8	25.0	3.3	21.6	0.0	0.0	(0.5)	(3.4)	0.0
Jun	2.9	19.4	4.2	27.6	2.9	19.4	0.0	0.0	(1.2)	(8.2)	0.0
Jul	1.4	9.2	3.7	24.6	1.4	9.2	0.0	0.0	(2.3)	(15.5)	0.0
Aug	1.6	10.8	1.8	12.0	1.6	10.8	0.0	0.0	(0.2)	(1.3)	0.0
Sep	2.9	19.2	1.6	10.3	1.6	10.3	0.6	4.2	0.7	4.6	0.0
TOTAL	**54.1**	**357.2**	**23.4**	**154.4**	**19.1**	**126.0**	**16.7**	**110.4**	**14.0**	**92.5**	**0.0**

Table 1e - Basin 5 Monthly Water Budget for Till Grass Under Developed Conditions

Till-Grass Acreage **10.70**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	4.5	1.0	0.9	1.0	0.9	1.8	1.6	2.2	2.0	0.0
Nov	7.4	6.6	0.7	0.6	0.7	0.6	3.0	2.7	3.7	3.3	0.0
Dec	7.5	6.7	0.6	0.5	0.6	0.5	3.1	2.8	3.8	3.4	0.0
Jan	7.1	6.4	0.8	0.7	0.8	0.7	2.8	2.5	3.5	3.1	0.0
Feb	5.4	4.8	0.8	0.7	0.8	0.7	2.1	1.8	2.5	2.2	0.0
Mar	5.3	4.7	1.6	1.5	1.6	1.5	1.6	1.5	2.0	1.8	0.0
Apr	4.2	3.8	2.1	1.8	2.1	1.8	1.0	0.9	1.2	1.1	0.0
May	3.3	2.9	2.4	2.1	2.4	2.1	0.4	0.3	0.5	0.4	0.0
Jun	2.9	2.6	2.4	2.1	2.4	2.1	0.2	0.2	0.3	0.3	0.0
Jul	1.4	1.2	2.4	2.1	1.4	1.2	0.0	0.0	(1.0)	(0.9)	0.0
Aug	1.6	1.5	2.0	1.8	1.6	1.5	0.0	0.0	(0.4)	(0.3)	0.0
Sep	2.9	2.6	1.5	1.4	1.5	1.4	0.6	0.5	0.7	0.7	0.0
TOTAL	**54.1**	**48.2**	**18.3**	**16.3**	**16.9**	**15.1**	**16.7**	**14.9**	**19.1**	**17.0**	**0.0**

Basin 6 Developed Condition Summary Table

Basin 6 AC **93.20**

	Developed Conditions						
Month	PPT (ac-ft)	Estimated ET (ac-ft)	ET with exc. set = to PPT (ac-ft)	RCH from OW (ac-ft)	RCH from Till (ac-ft)	RO (ac-ft)	
Oct	39.1	8.6	8.6		13.1	17.4	0.0
Nov	57.4	5.3	5.3		22.5	29.6	0.0
Dec	58.0	4.5	4.5		23.2	30.4	0.0
Jan	55.4	6.2	6.2		21.2	27.9	0.0
Feb	41.8	6.3	6.3		15.3	20.2	0.0
Mar	41.1	12.9	12.9		12.0	16.2	0.0
Apr	32.9	18.1	18.1		5.9	8.8	0.0
May	25.4	26.9	23.4		0.1	-1.6	0.0
Jun	22.8	29.4	21.1		0.1	-6.6	0.0
Jul	10.8	26.1	10.1		0.0	-15.3	0.0
Aug	12.7	13.2	11.8		0.0	-0.6	0.0
Sep	22.5	11.4	11.4		4.5	6.6	0.0
TOTAL	**419.79**	**168.94**	**139.71**		**117.87**	**132.98**	**0.0**

Table 1c - Basin 6 Monthly Water Budget for Impervious Under Developed Conditions

pervious Acreage **8.50**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	3.6	0.7	0.5	0.7	0.5	0.0	0.0	4.3	3.1	0.0
Nov	7.4	5.2	0.6	0.4	0.6	0.4	0.0	0.0	6.8	4.8	0.0
Dec	7.5	5.3	0.5	0.4	0.5	0.4	0.0	0.0	6.9	4.9	0.0
Jan	7.1	5.1	0.7	0.5	0.7	0.5	0.0	0.0	6.4	4.6	0.0
Feb	5.4	3.8	0.6	0.5	0.6	0.5	0.0	0.0	4.7	3.4	0.0
Mar	5.3	3.7	1.1	0.8	1.1	0.8	0.0	0.0	4.2	3.0	0.0
Apr	4.2	3.0	1.0	0.7	1.0	0.7	0.0	0.0	3.2	2.3	0.0
May	3.3	2.3	0.9	0.6	0.9	0.6	0.0	0.0	2.4	1.7	0.0
Jun	2.9	2.1	0.7	0.5	0.7	0.5	0.0	0.0	2.2	1.6	0.0
Jul	1.4	1.0	0.4	0.3	0.4	0.3	0.0	0.0	1.0	0.7	0.0
Aug	1.6	1.2	0.5	0.3	0.5	0.3	0.0	0.0	1.2	0.8	0.0
Sep	2.9	2.1	0.6	0.4	0.6	0.4	0.0	0.0	2.3	1.6	0.0
TOTAL	**54.1**	**38.3**	**8.3**	**5.9**	**8.3**	**5.9**	**0.0**	**0.0**	**45.8**	**32.4**	**0.0**

Table 1d - Basin 6 Monthly Water Budget for Till Forest Under Developed Conditions

ill-Forest Acreage **80.40**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	33.7	1.2	7.7	1.2	7.7	1.9	12.4	2.0	13.6	0.0
Nov	7.4	49.5	0.7	4.6	0.7	4.6	3.2	21.4	3.5	23.5	0.0
Dec	7.5	50.0	0.6	3.9	0.6	3.9	3.3	22.0	3.6	24.1	0.0
Jan	7.1	47.8	0.8	5.4	0.8	5.4	3.0	20.2	3.3	22.1	0.0
Feb	5.4	36.0	0.8	5.6	0.8	5.6	2.2	14.6	2.4	15.9	0.0
Mar	5.3	35.4	1.7	11.6	1.7	11.6	1.7	11.4	1.9	12.5	0.0
Apr	4.2	28.3	2.5	16.7	2.5	16.7	0.8	5.6	0.9	6.1	0.0
May	3.3	21.9	3.8	25.4	3.3	21.9	0.0	0.0	(0.5)	(3.5)	0.0
Jun	2.9	19.7	4.2	28.0	2.9	19.7	0.0	0.0	(1.2)	(8.3)	0.0
Jul	1.4	9.3	3.7	25.0	1.4	9.3	0.0	0.0	(2.3)	(15.7)	0.0
Aug	1.6	10.9	1.8	12.2	1.6	10.9	0.0	0.0	(0.2)	(1.3)	0.0
Sep	2.9	19.4	1.6	10.5	1.6	10.5	0.6	4.3	0.7	4.7	0.0
TOTAL	**54.1**	**362.1**	**23.4**	**156.5**	**19.1**	**127.8**	**16.7**	**111.9**	**14.0**	**93.7**	**0.0**

Table 1e - Basin 6 Monthly Water Budget for Till Grass Under Developed Conditions

Till-Grass Acreage **4.30**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	1.8	1.0	0.4	1.0	0.4	1.8	0.6	2.2	0.8	0.0
Nov	7.4	2.6	0.7	0.2	0.7	0.2	3.0	1.1	3.7	1.3	0.0
Dec	7.5	2.7	0.6	0.2	0.6	0.2	3.1	1.1	3.8	1.4	0.0
Jan	7.1	2.6	0.8	0.3	0.8	0.3	2.8	1.0	3.5	1.2	0.0
Feb	5.4	1.9	0.8	0.3	0.8	0.3	2.1	0.7	2.5	0.9	0.0
Mar	5.3	1.9	1.6	0.6	1.6	0.6	1.6	0.6	2.0	0.7	0.0
Apr	4.2	1.5	2.1	0.7	2.1	0.7	1.0	0.4	1.2	0.4	0.0
May	3.3	1.2	2.4	0.9	2.4	0.9	0.4	0.1	0.5	0.2	0.0
Jun	2.9	1.1	2.4	0.9	2.4	0.9	0.2	0.1	0.3	0.1	0.0
Jul	1.4	0.5	2.4	0.8	1.4	0.5	0.0	0.0	(1.0)	(0.4)	0.0
Aug	1.6	0.6	2.0	0.7	1.6	0.6	0.0	0.0	(0.4)	(0.1)	0.0
Sep	2.9	1.0	1.5	0.6	1.5	0.6	0.6	0.2	0.7	0.3	0.0
TOTAL	**54.1**	**19.4**	**18.3**	**6.5**	**16.9**	**6.1**	**16.7**	**6.0**	**19.1**	**6.8**	**0.0**

Basin 7 Monthly Water Budget for Till Forest Under Developed Conditions

Till-Forest Acreage **28.10**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	11.8	1.2	2.7	1.2	2.7	1.9	4.3	2.0	4.7	**0.0**
Nov	7.4	17.3	0.7	1.6	0.7	1.6	3.2	7.5	3.5	8.2	**0.0**
Dec	7.5	17.5	0.6	1.4	0.6	1.4	3.3	7.7	3.6	8.4	**0.0**
Jan	7.1	16.7	0.8	1.9	0.8	1.9	3.0	7.1	3.3	7.7	**0.0**
Feb	5.4	12.6	0.8	1.9	0.8	1.9	2.2	5.1	2.4	5.6	**0.0**
Mar	5.3	12.4	1.7	4.1	1.7	4.1	1.7	4.0	1.9	4.4	**0.0**
Apr	4.2	9.9	2.5	5.8	2.5	5.8	0.8	1.9	0.9	2.1	**0.0**
May	3.3	7.7	3.8	8.9	3.3	7.7	0.0	0.0	(0.5)	(1.2)	**0.0**
Jun	2.9	6.9	4.2	9.8	2.9	6.9	0.0	0.0	(1.2)	(2.9)	**0.0**
Jul	1.4	3.3	3.7	8.7	1.4	3.3	0.0	0.0	(2.3)	(5.5)	**0.0**
Aug	1.6	3.8	1.8	4.3	1.6	3.8	0.0	0.0	(0.2)	(0.4)	**0.0**
Sep	2.9	6.8	1.6	3.7	1.6	3.7	0.6	1.5	0.7	1.6	**0.0**
TOTAL	**54.1**	**126.6**	**23.4**	**54.7**	**19.1**	**44.7**	**16.7**	**39.1**	**14.0**	**32.8**	**0.0**

Basin 7 Monthly Water Budget for Till Grass Under Developed Conditions

Till-Grass Acreage **7.80**

	Developed Conditions										
Month	PPT (inches)	PPT (ac-ft)	Estimated ET (inches)	Estimated ET (ac-ft)	ET with exc. set = to PPT (inches)	ET with exc. set = to PPT (ac-ft)	RCH predicted by WRI-01-4110 (in)	RCH (ac-ft)	RO (inches)	RO (ac-ft)	
Oct	5.0	3.3	1.0	0.7	1.0	0.7	1.8	1.2	2.2	1.4	**0.0**
Nov	7.4	4.8	0.7	0.4	0.7	0.4	3.0	2.0	3.7	2.4	**0.0**
Dec	7.5	4.9	0.6	0.4	0.6	0.4	3.1	2.0	3.8	2.5	**0.0**
Jan	7.1	4.6	0.8	0.5	0.8	0.5	2.8	1.9	3.5	2.3	**0.0**
Feb	5.4	3.5	0.8	0.5	0.8	0.5	2.1	1.3	2.5	1.6	**0.0**
Mar	5.3	3.4	1.6	1.1	1.6	1.1	1.6	1.1	2.0	1.3	**0.0**
Apr	4.2	2.7	2.1	1.3	2.1	1.3	1.0	0.6	1.2	0.8	**0.0**
May	3.3	2.1	2.4	1.6	2.4	1.6	0.4	0.3	0.5	0.3	**0.0**
Jun	2.9	1.9	2.4	1.6	2.4	1.6	0.2	0.2	0.3	0.2	**0.0**
Jul	1.4	0.9	2.4	1.5	1.4	0.9	0.0	0.0	(1.0)	(0.6)	**0.0**
Aug	1.6	1.1	2.0	1.3	1.6	1.1	0.0	0.0	(0.4)	(0.2)	**0.0**
Sep	2.9	1.9	1.5	1.0	1.5	1.0	0.6	0.4	0.7	0.5	**0.0**
TOTAL	**54.1**	**35.1**	**18.3**	**11.9**	**16.9**	**11.0**	**16.7**	**10.9**	**19.1**	**12.4**	**0.0**

Basin 7 Monthly Water Budget for Till Under Pre-Developed Conditions

Till Acreage 70.10 RCH flux through till, RO from Till recharges Qvr in Ravensdale Creek swale

	Existing Conditions											negative RO
			Estimated	Estimated	ET with exc.	ET with exc.	RCH	RCH				not add to
	PPT	PPT	ET	ET	set = to PPT	set = to PPT	predicted by	Till	RO	RO		Qvr RCH
Month	(inches)	(ac-ft)	(inches)	(ac-ft)	(inches)	(ac-ft)	WRI-01-4110 (in)	(ac-ft)	(inches)	(ac-ft)		(ac-ft)
Oct	5.0	29.4	1.2	6.7	1.2	6.7	1.9	10.8	2.0	11.8	**0.0**	0.0
Nov	7.4	43.2	0.7	4.0	0.7	4.0	3.2	18.7	3.5	20.5	**0.0**	0.0
Dec	7.5	43.6	0.6	3.4	0.6	3.4	3.3	19.2	3.6	21.0	**0.0**	0.0
Jan	7.1	41.7	0.8	4.7	0.8	4.7	3.0	17.6	3.3	19.3	**0.0**	0.0
Feb	5.4	31.4	0.8	4.8	0.8	4.8	2.2	12.7	2.4	13.9	**0.0**	0.0
Mar	5.3	30.9	1.7	10.1	1.7	10.1	1.7	9.9	1.9	10.9	**0.0**	0.0
Apr	4.2	24.7	2.5	14.5	2.5	14.5	0.8	4.9	0.9	5.3	**0.0**	0.0
May	3.3	19.1	3.8	22.1	3.3	19.1	0.0	0.0	-0.5	-3.0	**0.0**	-3.0
Jun	2.9	17.2	4.2	24.4	2.9	17.2	0.0	0.0	-1.2	-7.2	**0.0**	-7.2
Jul	1.4	8.1	3.7	21.8	1.4	8.1	0.0	0.0	-2.3	-13.7	**0.0**	-13.7
Aug	1.6	9.5	1.8	10.6	1.6	9.5	0.0	0.0	-0.2	-1.1	**0.0**	-1.1
Sep	2.9	16.9	1.6	9.1	1.6	9.1	0.6	3.7	0.7	4.1	**0.0**	0.0
TOTAL	**54.1**	**315.7**	**23.4**	**136.5**	**19.1**	**111.4**	**16.7**	**97.6**	**14.0**	**81.7**	**0.0**	-25.1

Basin 7 Monthly Water Budget for Outwash Under Pre-Developed Conditions

Outwash Acreage 11.50 recharges Qvr in Ravensdale Creek swale

	Existing Conditions												Total Recharge
			Estimated	Estimated	ET with exc.	ET with exc.	RCH	RCH				positive RO	(includes RO from
	PPT	PPT	ET	ET	set = to PPT	set = to PPT	[ppt-et]	ow	RO	RO		from till to Qvr	till uplands)
Month	(inches)	(ac-ft)	(inches)	(ac-ft)	(inches)	(ac-ft)	(in)	(ac-ft)	(inches)	(ac-ft)		(ac-ft)	(ac-ft)
Oct	5.0	4.8	1.2	1.1	1.2	1.1	3.9	3.7	0.0	0.0	**(0.0)**	11.8	15.6
Nov	7.4	7.1	0.7	0.7	0.7	0.7	6.7	6.4	0.0	0.0	**0.0**	20.5	26.9
Dec	7.5	7.2	0.6	0.6	0.6	0.6	6.9	6.6	0.0	0.0	**0.0**	21.0	27.6
Jan	7.1	6.8	0.8	0.8	0.8	0.8	6.3	6.1	0.0	0.0	**0.0**	19.3	25.4
Feb	5.4	5.2	0.8	0.8	0.8	0.8	4.6	4.4	0.0	0.0	**(0.0)**	13.9	18.3
Mar	5.3	5.1	1.7	1.7	1.7	1.7	3.6	3.4	0.0	0.0	**0.0**	10.9	14.3
Apr	4.2	4.1	2.5	2.4	2.5	2.4	1.7	1.7	0.0	0.0	**0.0**	5.3	7.0
May	3.3	3.1	3.8	3.6	3.3	3.1	0.0	0.0	(0.5)	(0.5)	**0.0**	0.0	0.0
Jun	2.9	2.8	4.2	4.0	2.9	2.8	0.0	0.0	(1.2)	(1.2)	**0.0**	0.0	0.0
Jul	1.4	1.3	3.7	3.6	1.4	1.3	0.0	0.0	(2.3)	(2.2)	**0.0**	0.0	0.0
Aug	1.6	1.6	1.8	1.7	1.6	1.6	0.0	0.0	(0.2)	(0.2)	**0.0**	0.0	0.0
Sep	2.9	2.8	1.6	1.5	1.6	1.5	1.3	1.3	0.0	0.0	**0.0**	4.1	5.4
TOTAL	**54.1**	**51.8**	**23.4**	**22.4**	**19.1**	**18.3**	**34.9**	**33.5**	**(4.3)**	**(4.1)**	0.0	106.8	**140.3**

Precipitation and ET.

Month	Precip. (in)	Evapotranspiration (in.)										
		Forest	Grass					Roof	Road			
Oct	5.03	1.15	1.01					0.71	0.71			
Nov	7.39	0.69	0.66					0.60	0.60			
Dec	7.47	0.58	0.57					0.54	0.54			
Jan	7.13	0.81	0.80					0.70	0.70			
Feb	5.38	0.83	0.81					0.64	0.64			
Mar	5.29	1.73	1.64					1.08	1.08			
Apr	4.23	2.49	2.05					1.01	1.01			
May	3.27	3.79	2.41					0.85	0.85			
Jun	2.94	4.18	2.41					0.70	0.70			
Jul	1.39	3.73	2.37					0.39	0.39			
Aug	1.63	1.82	2.00					0.46	0.46			
Sep	2.90	1.56	1.54					0.62	0.62			
Total	**54.05**	**23.36**	**18.27**					**8.30**	**8.30**			

Precip is 0.95 x Landsburg gauge monthly historic

ET values from Goldsmith, McCormick V Water Bal 2007 using HSPF model. ET values are actual, not potential, per M. Barber.