CITY OF BLACK DIAMOND
PLANNING COMMISSION
25510 Lawson Street, Black Diamond, Washington

MEMORANDUM

Date: August 27, 2010

To: Planning Commission

From: Steve Pilcher, Community Development Director

Re: 2010 Comprehensive Plan Amendments

The Commission opened the public hearing on this matter at its last meeting and then continued the hearing to September 7th at 7:00 p.m. in order to allow additional time for public comment (last month's meeting adjourned after 10:00 p.m.). Therefore, the public testimony portion of the hearing remains open.

As noted last month, BDMC 16.30.070 allows the Planning Commission to initiate potential amendments to the Plan. Staff had suggested a series of amendments, which the Commission agreed to initiate. These proposals fall into two main areas:

1. Adding additional text to the Capital Facilities Element of the Plan to address utilities provided by other entities other than the City, such as Puget Sound Energy, Covington Water, etc.
2. Miscellaneous updates to the background text throughout the document to reflect current data and/or eliminate outdated information.

Attached are those pages from the Comprehensive Plan for which amendments are being proposed.

One concern the Commission heard at the last public hearing involved Puget Sound Energy's potential electrical and natural gas transmission upgrades and how this had been addressed in the environmental review of the proposed Plan amendments. Staff contacted representatives of PSE and verified these are preliminary concepts of what might be needed to serve the area as growth occurs over time. Typically, PSE completes detailed environmental review at the time they propose a specific project, with the affected local government serving as the "lead" SEPA agency. Staff considered the proposed language addition to the Utilities section at a general level and on July 26, 2010, issued a Determination of Nonsignificance for all the proposed Comprehensive Plan amendments, with the appeal period expiring on August 10, 2010.

Staff recommends the Commission conduct the public hearing and then either direct staff to draft possible adjustments or vote to move these on to the City Council for its consideration.

A small coal boom during and after World War II kept the coal mining tradition alive. Coal mining then continued a gradual decline until 1986 and the opening of the John Henry Mine, just northeast of the City.

Following the end of the company town period at the completion of major mining activities, community services were provided by King County and the community residents.

City residents initiated an incorporation petition and presented this petition to King County in 1958. The incorporation was approved by a favorable vote on January 20, 1959 and the first Black Diamond City Council meeting was held March 3, 1959.

In 1998, the City significantly increased its size and population through the annexation of the Lake Sawyer neighborhood. This annexation increased the City's size by approximately 786 acres, and its population by approximately 1,480 people.[1] Additional annexations of large parcels within the City's Urban Growth Area (UGA) occurred in 2005 in accordance with the Black Diamond Urban Growth Area Agreement (BDUGAA) and the related Black Diamond Area Open Space Protection Agreement.

1.3. City Planning Area

The planning area encompassed by this comprehensive plan includes the land within the City limits and the designated UGA of the City.

In the decade since the City completed its 1996 comprehensive plan, the City and King County came to an agreement on designation of an UGA with the BDUGAA. This agreement outlines mutually acceptable urban growth boundaries and conditions under which these areas may be annexed to the City. The UGA approved in this agreement includes several of the large ownership parcels which surround the City, providing opportunities for creating a fiscally balanced city while maintaining the City's unique character.

Designation of a UGA is a key element in the City's long-term planning. The City is located at the edge of the King County Urban Growth Boundary. Per county policies, and the approved BDUGAA, unincorporated lands not included in an UGA may be developed for low density (5-acre tracts or larger) rural/ residential uses, or preserved for commercial resource activities (agriculture, forestry and mineral extraction). Consistent with the BDUGAA, the City annexed its "West Annexation

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[1] Washington State Office of Financial Management; Annexations Approved by the Office of Financial Management from 01/01/90 through 12/31/99.

Area" and the "North Triangle Annexation" in December 2005. The "South Annexation Area~~,~~" and the "East ~~Potential~~ Annexation Area" were annexed in December 2009. An area in the vicinity of Kentlake High School~~,~~ and the Lake 12 Annexation Area are the remaining areas that will be considered for annexation in the future ~~subject to compliance with the BDUGAA.~~

1.4. Planning Authority

1.4.1. Growth Management Act

The City of Black Diamond Comprehensive Plan meets the requirements of the Growth Management Act (GMA), which was adopted by the Washington State Legislature on March 9, 1990 (Substitute House Bill 2929, Chapter 17, 1990 Laws of Washington), and as subsequently amended. The GMA required the state's fastest growing counties and cities within those counties to prepare comprehensive plans which guide conservation and development for a 20-year period.

The GMA makes the City's comprehensive plan the legal foundation and guide for all subsequent planning, zoning and development, all of which must be consistent with and implement the plan. The comprehensive plan must be both internally consistent and consistent with the plans of other jurisdictions which share either a common boundary or related regional issues. The GMA also requires that appropriate public facilities and services must be in place, or funds committed for their provision, "concurrent" (within 6 years) new development.

The GMA requires counties, in cooperation with cities, to designate UGAs. All cities are to be within an UGA, which is to include areas and densities sufficient to accommodate urban growth expected to occur in the City over the next 20 years. The GMA guidelines for defining urban boundaries state that urban growth is to be "...located first in areas already characterized by urban growth that have existing public facility and service capacities to serve such development, and second in areas that are provided by either public or private sources." The UGA may include "...territory that is located outside of a city only if such territory already is characterized by urban growth or is adjacent to territory already characterized by urban growth." Finally, UGAs "...shall include greenbelt and open space areas."

The GMA establishes mandatory elements for local comprehensive plans. Required elements of comprehensive plans include land use, housing, capital facilities, utilities and transportation. Optional elements of comprehensive plans include solar energy, conservation, recreation, economic development and sub-area plans. The state legislature added Economic Development and Parks and Recreation as additional

environmentally sensitive areas and contribute to the City's quality of life and identity. The plan also uses *innovative techniques* -- including density bonuses, cluster housing, MPDs and the transfer of development rights, as encouraged by the GMA (RCW 36.70A. 090) – to creatively address local concerns and issues.

1.5. Consistency with County Plans and Policies

1.5.1. King County Countywide Planning Policies

The GMA mandates that counties, in cooperation with cities, adopt the King County Countywide Planning Policies (CPPs). The GMA defines CPPs as written policy statements used for establishing a countywide framework from which county and city comprehensive plans are developed and adopted. That framework is to ensure that city and county comprehensive plans are consistent with each other. At a minimum, the CPPs must address:

- implementation of UGAs,
- promotion of contiguous and orderly development and provision of urban services,
- siting of public capital facilities,
- transportation facilities and strategies,
- affordable housing,
- joint county and city planning within UGAs,
- countywide economic development and employment, and
- analysis of fiscal impact.

For King County, the CPPs established a UGA. Most future growth and development is to occur within the UGA to limit urban sprawl, enhance open space, protect rural areas and more efficiently use human services, transportation and utilities. The intent of these policies is to reduce future infrastructure costs and maintain a high quality of life by encouraging concentrated development in those areas where services already are or are planned to be provided. Cities are expected to absorb the largest share of future growth. Each city has the authority to make decisions regarding its local character and density.

The City finds that this comprehensive plan is consistent with the purpose and intent of the King County CPPs. The City includes the UGA agreed upon in the BDUGAA, and is generally consistent with the King County CPPs as updated ~~in July~~

2006. ~~The City is also updating its population and employment targets to reflect growth that is anticipated over the next 20 years.~~However, the population and job growth allocation to the City in recent amendments to the CPPs is not consistent with the amount of growth this Plan anticipates occurring over the next 20 years.

1.6. Comprehensive Plan Features

The City of Black Diamond Comprehensive Plan is based upon the premise that sustainable development is based upon a trilogy of ecology, sociology and economics. The plan embodies a holistic approach to treatment of nature and the human spirit. The extensive natural beauty and intricate ecosystem that comprise the planning area have been considered in determining lands that are appropriate for development at different intensities.

Planning for natural resources and open space are the cornerstone of the City of Black Diamond Comprehensive Plan. The plan supports recognition and protection of quality habitat including: the protection of key riparian corridors, wetlands, wildlife habitats and the design of green spaces between habitats; water quality protection measures and support for an environmental education area and program to build a strong community commitment to conservation and habitat improvement. Stewardship of the environment is supported by the plan.

The City's developed areas will be compact, preserving 35% to 40% of the entire City as open space. Interspersed among the built areas will be large connected areas of open space that act as a green necklace. Creeks, wetlands and significant wildlife habitat will be protected as part of the open space network. Trails, parks, community facilities will also define the open space network.

By the year 2025, the City is planning to be able to accommodate a population of 16,980 people. The community will also contain areas for retail and personal services, community parks, schools, churches, community buildings, other public services, and business and industrial parks. The plan emphasizes the need for a balance of jobs and housing, and sustainable economics for the growing community. Job growth is an essential part of the plan. Employment opportunities will grow as new companies and their support services are attracted to the City, and as existing companies expand.

Amidst this change, the City will also preserve the best of its past, including historical buildings and treasured community places. The essence of the historical community will be perpetuated through the use of design guidelines for new development. A village center concept has been included to bring together a visual, social and geographic center of the City. An innovative transfer of development

Chapter 2. Urban Growth Area

The Urban Growth Area (UGA) Element of the City of Black Diamond Comprehensive Plan was initially adopted in 2001 as an amendment to the City of Black Diamond's (City's) 1996 plan. It identified the City's UGA, which was determined based on a joint planning process and formal agreement (the Black Diamond Urban Growth Area Agreement [BDUGAA]) between the City, King County and several large property owners. It ~~is~~ was intended to guide future land use and annexations in the Urban Growth Area consistent with the Growth Management Act (GMA). Although the majority ~~major portions~~ of the UGA ~~have~~ has been annexed as ~~of the 2008~~2009, ~~City of Black Diamond Comprehensive Plan Update,~~ the UGA Element will continue to provide guidance and useful historical information until the balance of the UGA is annexed. ~~The UGA Element has been incorporated unchanged into the 2008 Update.~~

2.1. Introduction

The City and its residents worked with King County to define a UGA for the City since the latter part of the 1970s. For the City, the chief goals of these efforts reflect the plan vision of a healthy economy, improved housing, protection of the treasured natural resources in and around the City, and a better quality of life. The county's objectives were to limit urban sprawl and protect rural resource lands.

The GMA was the final impetus in deciding the Black Diamond UGA. The GMA established a framework for coordinated and comprehensive planning to help local communities manage their growth. It also led to the creation of the Black Diamond-King County Joint Planning Area (JPA). The 1996 comprehensive plan identified the Black Diamond UGA as an issue that was not resolved before the

Lake 12 Annexation Area

The Lake 12 Annexation Area can only be annexed after the following steps are completed:

- The City may extend sewer and water service to the Lake 12 Annexation Area before it is annexed provided that City funds are not required to do so and that this action does not affect the City's ability to provide these services within the existing City limits;
- The lake meets or exceeds state water quality standards (pursuant to Washington Administrative Code [WAC] 173-201A-030 (5)(c)); and
- The City completes a traffic study to determine the City road standards needed to improve the Green River Gorge Road.

Sequence of Annexations

When the conditions of annexation were achieved, annexation of the PAA began, in the following sequence:

- West Annexation Area (completed December 8, 2005)
- East Annexation Area (completed December 2009)
- South Annexation Area (completed December 2009)
- Lake 12 Annexation Area

Per the terms of the BDUGAA, t~~T~~wo or more of these areas may be annexed simultaneously, except that the East Annexation Area could not be annexed unless the West Annexation Area was annexed, the South Annexation Area could not be annexed unless the West Annexation Area and East Annexation Area were annexed, and the Lake 12 Annexation Area could not be annexed unless the West Annexation Area was annexed. ~~Pursuant to these terms, the annexation of the South Annexation Area and Lake 12 Annexation Area may now occur when conditions are favorable.~~

2.2.4. Consistency with the Plans and Policies

In accordance with the GMA, the UGA must be consistent with other related plans and policies and the City of Black Diamond Comprehensive Plan. The following discussion analyzes the Agreement in light of the relevant plans; the King County Comprehensive Plan and the City of Black Diamond Comprehensive Plan.

- Be maintained in large lots at densities of one unit per five acres, or less, with mandatory clustering until the City annexes it;
- Be implemented through inter local agreements between King County, the cities and special purpose districts, as appropriate, to ensure that annexation is phased, nearby open space is protected and development within the Urban Growth Area is compatible with surrounding Rural and Resource areas; and
- Not include designated forest or Agricultural District lands unless conservation of those lands and continued resource-based use, or other compatible use, is assured."

King County Comprehensive Plan Policy R-307

"Rural cities and their agreed-upon Urban Growth Areas shall be considered part of the UGA for purposes of planning land uses and facility needs. King County should work with rural cities to plan for growth consistent with long term protection of significant historic resources, the surrounding Rural Area, and Natural Resource Lands."

King County Growth Targets

King County CPPs establish growth targets for the City. In 1998, the county adopted growth targets for all cities in the county, in accordance with the GMA. These ~~were~~ are periodically~~subsequently~~ updated, most recently in ~~2005~~2009. The targets establish the ~~upper limits of~~ the minimum amount of growth which the City must plan to accommodate in ~~2022~~the planning horizon.

The ~~2022~~ 2032 target is 1,099 additional households, which equates to 2,945 individuals. However, the population and household allocation does not take into account the large Master Planned Developments (MPDs) anticipated to occur within the City during that time frame. The City expects to significantly surpass its household and population targets. This is discussed in greater detail in the Land Use Element of the plan.

~~2.3.UGA Policies~~

~~The objectives and policies identified in this section will be used to guide decisions that determine the pattern, timing, and impact mitigation of development in the UGA. They are intended to supplement the relevant policies and objectives elsewhere in this plan.~~

~~*UGA Natural Environment Objectives and Policies*~~

~~UGA Objective NE 1: Preserve the diversity and distribution of habitat types in sufficient quantities to sustain species populations, especially rare or unusual habitats.~~

~~UGA Objective NE 2: Incorporate the mitigation measures identified in the Final Environmental Impact Statement (EIS) for the PAA to protect environmentally sensitive areas.~~

~~Water Quality~~

~~UGA Policy NE 3: Protect, and where appropriate, enhance ground and surface water quality to meet or exceed state water quality standards within the drainage basins that may be affected by development in the UGA.~~

~~UGA Policy NE 4: Prior to annexation of the Lake 12 Annexation area, Lake 12 water quality must meet or exceed state water quality standards pursuant to WAC 173-201A-030 (5)(c).~~

~~Critical Areas~~

~~UGA Policy NE 5: Naturally occurring processes such as runoff, stream channel migration, etc., should be maintained by designing stream crossings to pass floods and debris, as well as fish.~~

~~UGA Policy NE 6: Development of headwater catchments should be limited to protect streams from temperature increases, sediment, and fish habitat degradation.~~

~~UGA Policy NE 7: Where linkages between habitats have been severed or interrupted, connections should be restored by replacing culverts with bridges, revegetating riparian areas, and improving in-stream habitat.~~

~~UGA Policy NE 8: Developed portions of all annexation areas, especially in the Lake 12 Annexation Area, should protect the maximum amount of native vegetation to enhance stormwater management.~~

~~UGA Policy NE 9: New residential development in the Lake 12 Annexation Area should be sited and clustered away from the adjacent rural and resource lands and sensitive areas.~~

~~UGA Policy NE 10: Coordinate with King County and the Muckleshoot Indian Tribe to develop management plans that preserve County Open Space identified in the BDUGAA primarily for its open space values, as opposed to timber values.~~

~~UGA Policy NE 11: Mitigation measures identified in the City of Black Diamond Potential Annexation Area Final EIS and Comprehensive Plan Amendments should be used, with other city requirements, as development standards for the UGA.~~

~~*UGA Land Use Objectives and Policies*~~

~~Land Use~~

~~UGA Objective LU 1: Accommodate projected growth, protect the critical drainage areas from inappropriate development, protect and retain the community character, and efficiently provide urban services within UGA lands.~~

~~UGA Objective LU 2: Ensure that the site development process for the UGA provides flexibility in locating uses, establishes a unified development plan for each site, and adequate opportunities for public involvement.~~

~~UGA Objective LU 3: Insure that the City maintains an overall and fiscally sound balance between revenues and expenditures during each phase of development of the UGA.~~

~~Open Space~~

~~UGA Policy LU 4: The TDR Program should transfer development rights from the priority open space areas identified in the City Open Space Program for use in designated "receiving areas" within the UGA.~~

~~UGA Policy LU 5: Prior to annexation of any portion of the surface mining pits, landowners will be required to confirm to the City that the PAA and County Open Space Areas have been permanently protected under the City and County Open Space programs, as appropriate.~~

~~UGA Policy LU 6: Approval of the annexation of the Lake 12 Annexation Area should include permanent public access to the lake.~~

~~UGA Policy LU 7: Approval of the annexation of the East Annexation Area should include provision of permanent public access to the in-city forest.~~

~~Commercial and Mixed Use Development~~

~~UGA Policy LU 8: Prior to annexation of any portion of the PAA., the City should adopt a development agreement with the PAA landowners to establish zoning and vested rights, to determine the process by which the site plans for developing the area are reviewed and approved, and to identify the roles and responsibilities of each party in providing capital facilities and public services.~~

~~UGA Policy LU 9: Utilize am MPD process in the UGA to determine the specific location of structures and uses, phases of development, and the design features of each site and its structures. If the Lake 12 Annexation Area continues to develop by individual lot ownership, it should not be subject to an MPD process.~~

~~UGA Policy LU 10: The affect of the new commercial activity in the UGA should be evaluated to minimize possible negative financial impacts on the City's existing business sector.~~

~~Phasing Development~~

~~UGA Policy LU 11: The growth phasing schedule of the capital improvement program should determine the timing and sequence of development in the UGA.~~

~~UGA Policy LU 12: The City should determine the as-built cumulative impact of UGA development on the City's capital improvement program, its fiscal position, and its natural resource policies when each phase is completed. Ensure that adverse impacts are mitigated before the beginning of a subsequent phase.~~

~~Community Design and Character~~

~~UGA Policy LU 13: Utilize the Black Diamond Design Guidelines and Standards as the standards to determine the design features of commercial, office, and industrial uses and as guidance in designing residential development in the UGA.~~

~~UGA Policy LU 14: In developing the UGA, protect significant view corridors, especially views of Mt. Rainier.~~

~~Housing~~

~~UGA Policy LU 15: Residential development in the UGA shall contribute to meeting the City's fair share of affordable housing in accordance with current King County Affordable Housing Policy.~~

~~Fiscal Management~~

~~UGA Policy LU 16: Revenues shall exceed expenditures for each development phase of the UGA to provide a sufficient fiscal reserve for financial circumstances.~~

~~UGA Policy LU 17: Prior to annexation of any portion of the PAA, its landowners shall, at a minimum, confirm that they have made commitments to carry out construction contracts for extending water, sewer, stormwater, and major road facilities to these areas.~~

~~UGA Parks and Recreation Objectives and Policies~~

~~UGA Policy PR 1: Provide park and recreation facilities in the UGA concurrent with the development of this area and consistent with the standards of the Parks Plan.~~

~~UGA Policy PR 2: Avoid locating active park and recreation facilities (other than trails and viewing areas) in environmentally sensitive areas. Where it is necessary to do so, substantial buffers should be maintained to minimize human disturbance of these resources.~~

~~UGA Utilities and Public Services Objectives and Policies~~

~~UGA Objective U 1: Integrate all public facility and service plans for the UGA into appropriate City plans and programs.~~

~~UGA Policy U 2: The mix of residential and employment land uses in the UGA, should achieve the "economies of scale" needed to support quality public services and schools in a cost-efficient manner.~~

~~UGA Policy U 3: City revenues should not be used to fund private facility extension in the UGA.~~

~~UGA Policy U 4: The City Capital Improvement Program should integrate public facility and service extensions for water, sanitary sewers, roads, schools, stormwater management, fiber optic communications, fire and emergency services, police, and parks and recreation infrastructure for all phases of UGA development.~~

~~UGA Policy U 5: UGA landowners should provide sufficient land to meet the utility and educational facilities needs projected for this area.~~

~~UGA Policy U 6: Water and sewer service should be extended to the Lake 12 Annexation Area only if these service extensions will not adversely impact the ability of the City to provide these services to development within the existing city, and if extending water or other urban services to the area does not require the use of City revenues.~~

~~UGA Policy U 7: If the Lake 12 Annexation Area is to be annexed, the City should enter into a pre annexation agreement with the county to establish a funding package that includes a combination of local improvement district revenues, and federal, state, and county resources.~~

~~UGA Policy U 8: Prior to annexing the Lake 12 Annexation Area, a traffic study should be completed to determine the appropriate City road standards that apply to the Green River Gorge Road upon annexation.~~

~~UGA Policy U-9: Sewer and water facilities extended to the UGA will not serve adjacent rural or resource lands.~~

~~UGA Policy U-10: Identify appropriate programs and technologies to reduce solid waste and conserve supplies and energy resources.~~

Chapter 3. Population and Employment Character

3.1. Population

At the turn of the twentieth century, the City of Black Diamond (City) was a thriving coal mining town and contained a population of 3,000 persons. In the early years of the twenty-first century, the City has passed that threshold again and is a thriving village community with a population of 4,~~085~~ 180 (~~2007~~2009). By 2025, the City is expected to grow to a population of 16,980 residents. Much of the growth will occur as a result of Master Planned Developments (MPDs) in areas annexed to the City in 2005 and 2009, together with ~~and~~ other areas slated for future annexation. ~~consistent with the Black Diamond Urban Growth Area Agreement (BDUGAA).~~

For the 2000 Census, the Black Diamond area consists of portions of three Census tracts: Tract 316.01, which covers the area surrounding Lake Morton; Tract 316.02, which includes the northwest quadrant of the City, as well as Lake Keevies, Lake Sawyer, and part of Maple Valley; and Tract 316.03, which covers most of the City, as well as territory south, east and north, extending to Ravensdale (Figure 3-1). The collective outer boundary of the tracts coincides with the Puget Sound Regional Council's (PSRC's) Forecast Analysis Zone (FAZ) 3310, and the three tracts continue to be closely tied. (Some discussion in the comprehensive plan refers to them collectively as "Tract 316," and combines data for the three separate census tracts.)

Much of the increase in population in the City between 1990 and 2000 can be attributed to the annexation of the Lake Sawyer neighborhood in 1998, which added 1,480 residents to the City. However, as can be seen from Table 3-1, development in this portion of the county has also been proceeding more rapidly than the county or state as a whole for the past 30 years.

3.1.1. Current Population

The State of Washington Office of Financial Management (OFM) estimated the April ~~2008~~ 2009 population of the City at 4,~~155~~ 180 people and the population of King County, as a whole, at ~~1,884,200~~1,909,300 people. The combined 2000 population of Census Tracts 316.01, 316.02, and 316.03 was 13,158 people, 3,970 residents which located within the City.

The City was incorporated in 1959. The 1960 population was 1,026. Population growth is shown below in Table 3-1 for years 1970 to 2006. Between 1970 and 1980, the City experienced slow growth of less than 1%. From 1980 to 1990, the City experienced 21.5% growth, followed by a boom in population growth between 1990 and 2000, most of which was due to the annexation of the Lake Sawyer neighborhood in 1998. During this period, the City more than doubled in population, from 1,422 residents in 1990 to 3,970 residents in 2000, an increase of 179%. Growth since 2000 has been slower, with population increasing 2.9% from 2000 to 2006. Development moratoria were in effect for much of this period.

Table 3-1. 1970–2006 Population Growth

	1970	1980 % change	1990 % change	2000 % change	~~2008~~2009 % change
Washington State	3,143,250	4,132,353 31.5%	4,866,669 17.8%	5,894,121 21.1%	6,~~587,600~~668,200 ~~11.8~~13.1%
King County	1,145,314	1,269,749 9.8%	1,507,319 18.7%	1,737,046 15.2%	~~1,884,200~~1,909,300 ~~8.4%~~9.9%
Census Tract 316/ FAZ 3310	4,185	6,858 63%	9,083 32.4%	13, 158 44.9%	--
Black Diamond	1,160	1,170 0.86%	1,422 21.5%	3,970 179%	4,~~155~~4,180 ~~4.7%~~5.3%

Source: U.S. Census for 1970-2000. Washington State OFM Estimate for ~~2008~~2009.

2000 Population estimate for Tract 316 represents combined totals for Tracts 316.01, 316.02, and 316.03.

King County Overview

King County as a whole contained 1,737,046 residents as of the 2000 Census, and the OFM estimates a ~~2008~~ 2009population of ~~1,884,200~~1,909,300. OFM forecasts that King County's population will increase by 460,000 residents by the year 2025. Per the 2004 King County Comprehensive Plan, 96% of this household growth from 2001 to 2022 is expected to locate within the designated Urban Growth Area (UGA), which makes up about one-fifth of the county.[2] How this growth will be distributed within the county will be a function of the King County CPPs, plans of individual jurisdictions, the regional economy, and the private marketplace.

King County CPPs allocated 1,099 new households (for the period ~~2001~~2007–~~2022~~2032) to be built in the City. This represents the amount of growth the City is obligated to plan for during that period of time. However, due to several large development proposals likely to occur during the upcoming 10 to ~~15~~ 20 years, this plan assumes greater increases in the number of households and in population (Table 3-4).

Table 3-4. Comparison of New Household and New Employment Allocations and Projections

King County Allocation (~~2022~~2032)	King County CPP Allocation (~~2022~~2032)	Black Diamond Projection (2025)	
New Households	New Employment	New Households	New Employment
1,099	2,525	5,426	2,677

Note: Black Diamond projections are for the year 2025.
CPP = Countywide Planning Policies

City of Black Diamond Building Activity

The City ~~has~~ had a moratorium on subdivisions in place ~~since~~ from 2001 until June 2009, in order to update required plans and regulations. Thus, there ~~has~~ was ~~been~~ little formal subdivision development ~~in the last five years~~ outside of what was vested prior to 2001. Residential in-fill development has continued over the past ten years, however, as population growth and increases in land prices have occurred throughout southeast King County.

Land for Future Growth

In December 1994, the City annexed 783 acres of land to the southwest of the City limits, near Black Diamond Lake. This annexation area is designated for

[2] King County, 2004 King County Comprehensive Plan, "Household Growth Targets by Subregion" table, page 2-6.

development as an MPD, including single-family and multifamily residential development, along with a small commercial area, recreation, and a 50% open space requirement. In December 2005, the City annexed the West Annexation Area, an area designated in the BDUGAA. This annexation added 338.6 acres of vacant land to the City's land supply which can be developed with a mix of commercial, residential and mixed-use development types through application of the City of Black Diamond Master Planned Development Ordinance and the Pre-Annexation Development Agreements adopted for these properties. Finally, in December 2009, the City completed the "East" and "South" annexations, adding approx. 300 additional acres to the City, which are anticipated to be developed as part of larger Master Planned Development applications. MPD, residential subdivision, and building permit activity for the City is anticipated to increase beginning in ~~2009~~2011, ~~following the lifting of the~~ now that the former development moratorium has been lifted. There is significant pent up demand and development potential within these recently annexed areas.

The City of Black Diamond Comprehensive Plan contemplates significant residential growth in the City limits. Growth is seen as a key to creating a balanced and fiscally sound community and will be managed pursuant to the plan and development regulations.

City of Black Diamond Population Forecast

The updated comprehensive plan is based on an extended 20-year planning period. In order to determine a population forecast for the year 2025, the City reviewed the PSRC preliminary 2003 forecasts for FAZ 3310, King County forecasts, existing City plans and policies, and forecasts regarding the long-term state of the regional economy. The City believes that considerable growth could occur within the City in the next 20 years, given its significant amount of developable land, GMA and King County CPPs directing growth to existing urban areas (i.e., cities), and a strong economy. Table 3-5 identifies population counts for 2000 and 2006, and the City's population projections for 2025.

Table 3-5. City of Black Diamond Population Projections

Year	Population	Households	Annual Population Increase
2000	3,970	1,456	---
2006	4,085	1,578 (2.6 pph)	0.47%
2015	10,437	3,740 (2.79 pph)	9.8%
2020	15,770	5,776 (2.73 pph)	7.1%
2025	16,980	6,302 (2.68 pph)	1.2%-

Note: Projections for population and households include 2006 Black Diamond City limits and 2006 Potential Annexation Areas.

pph = persons per household~~Error! Bookmark not defined.~~ for 2015-2025 was derived from the 2006 PSRC FAZ (Forecast Analysis Zones) forecasts.

For purposes of the 2025 projection, the number of persons per household is projected to gradually decline to 2.68 persons per household (pph), and is reflected in the estimate.

The amount of growth the City plans for in its comprehensive plan should be consistent with the CPPs including the household allocation. Section 3.3.1 and Table 3-4 show the relationship between the City's projection and the CPP's household and employment allocation. It should be noted that the CPP projections and targets do not currently reach the year 2025, and the City has derived its own projections for a portion of this time period.

Population growth in the City is encouraged by the comprehensive plan provided it is consistent with the City's vision, respects the natural environment, and pays its "fair-share" of the costs associated with growth. Growth that is managed and occurs consistent with these principles will contribute to a more balanced and fiscally sound community.

There are many uncertainties inherent in population forecasting. In planning for its future growth, the City has intentionally planned for more land than is estimated to be needed for growth over the next 20 years. If substantial growth does occur at a significantly higher or lower rate than anticipated, adjustment of some aspects of this plan (particularly growth phasing) may be necessary.

The City uses a formula for calculating the amount, use, and density of land within the City to ensure that the forecast of population, housing, and employment is met and so that limitations of available land supply will not artificially drive up prices. This is important so that the fluctuations in population and employment growth can be absorbed, and unmet demand for housing and jobs is not displaced into rural unincorporated areas. To accomplish these objectives, King County recommends and uses a land supply factor of 140% (i.e., 40% more land should be provided above that calculated to be needed for projected growth based on land use designations, zoning regulations and household size). Existing comprehensive plan designations would supply enough land for approximately a 9% increase over the forecasted population of 16,980, which is significantly less than the 140% land factor recommended by King County. However, this smaller margin is considered to acceptable for the City due to the fact that substantial developable land in large single-ownership tracts is expected to be coming on the market in the near future, is anticipated to build out during the planning period, and the resulting amount of population and household growth is significantly greater than allocated through the King County CPPs. This supply of land is anticipated to be built-out within the

Chapter 4. The Natural Environment

4.1. Introduction

4.1.1. Preserving the Natural Beauty

The first 100 years of the City of Black Diamond's (City's) history were based on extraction of the natural resources. The next 100 years of the City's future will be characterized by the preservation of the quality of its natural setting, its scenery and views, and the preservation of its historic treasures.

From the local fishing hole, to the field where deer graze, to the beaver dams, to the eagle flight overhead; these resources are a tangible part of living in the City. The extensive natural beauty and intricate ecosystem of the City form the basis for a natural resource and open space network. The network serves to define the edges for the existing and future development areas.

This Natural Environment chapter provides the framework for protection of natural resources. The City's forests and fields—along with the natural drainage system and its connections with lakes, streams and forests—form a rich habitat for fish and wildlife that is unlike any other city in King County.

Information contained within the Natural Environment chapter is based upon sensitive areas inventories conducted by the City in th~~e early~~ 2008~~1990s~~ to locate, identify, and categorize sensitive areas within the City's jurisdiction.~~ The City uses King County Map data as a basis for developing existing sensitive areas maps. Therefore, the King County Interactive Map Folio was used to provide sensitive areas inventory information for the current City boundaries.~~ The City's current Environmentally Sensitive Areas regulations (Chapter 19.~~12~~10, Black Diamond

Municipal Code) were adopted in 2009 ~~20081993 and are in the process of being updated in 2008~~.

4.2. Existing Natural Features

4.2.1. Water and Natural Drainage

Drainage within the planning area is an interrelated system of surface water, groundwater, and wetlands. In order to identify existing drainage characteristics and potential impacts from urbanization, an understanding of the site-specific hydrologic interaction among the components of the drainage system is required.

Surface Water Drainage Basins

Nearly all of the planning area is located in the Rock Creek and Ravensdale Creek Drainage Basins. Rock Creek and Ravensdale Creek are two headwater drainage systems of Lake Sawyer and Covington Creek. Rock Creek drains to the south and southwest portion of Lake Sawyer, while Ravensdale Creek drains to the north and northwest portion of the Lake Sawyer area. Lake Sawyer is the fourth largest natural lake in King County. Lake Sawyer's outlet is Covington Creek which flows west into the Big Soos Creek drainage system. The Big Soos Creek discharges into the Green River about 1 mile east of the City of Auburn and about 7 miles west of the City. The southern and western most portions of the planning area touch upon watersheds oriented toward Green River and the Crisp Creek drainage basin (including Horseshoe Lake), respectively. The Lake 12 Annexation Area drains to the middle Cedar River indirectly via the lake and wetlands extending east from the lake.

Types of land cover presently found in the Rock Creek and Ravensdale Drainage Basins include remnant forest stands (second and third generation growth); grass; and limited impervious surfaces (roads and a few structures). Forest covered surfaces typically display higher infiltration capacity and less surface runoff potential than grass covered surfaces because the root system of trees is more extensive and deeper than that of grass. The flat to moderate topography of the Rock Creek Drainage Basin further reduces surface runoff potential.

Surface impoundments caused by lakes, wetlands, and streams influence surface runoff by providing storage that helps attenuate the peak rate of discharge. The storage effect of streams is less pronounced than that of lakes and wetlands. In streams, increased surface runoff volumes and prolonged duration of peak rates of discharge results in more impact.

The surface water drainage system in the planning area is shown in Figure 4-1.

Basin boundaries were identified from the 1990 King County Soos Creek Basin Plan (1992). Much of the area near the City is designated as Regionally Significant Resource Areas in the Soos Creek Basin Plan because of the relatively pristine condition of the watershed, including the streams, lakes, wetlands and surrounding forested upland areas.

The Rock Creek and Ravensdale Creek drainage basins received special attention in the City's resource planning.

Streams and Lakes

Both the Rock Creek and Ravensdale Creek basins drain to Lake Sawyer and ultimately to the Green River. A small portion of the planning area drains either to the Green River via an unnamed drainage network or via Lake Keevies and Crisp Creek, or to Horseshoe Lake, which has no outlet.

Major creeks in the City were inventoried in 2008~~1991~~ using guidelines provided by the Washington State Department of Natural Resources (DNR), in compliance with the Growth Management Act (GMA).

There are eight creeks located in the planning area—Covington Creek, Rock Creek, Jones Lake Creek, Ginder Creek, Lawson Creek, Mud Lake Creek, an unnamed tributary to Black Diamond Lake, and Ravensdale Creek. These water bodies are listed in Appendix A. Stream classifications shown in Appendix A are based on a water typing system used by DNR and are for information purposes only. Stream types are classified in the City's Sensitive Areas Ordinance (SAO) under "Water Typing System," which defines streams from Types S, F, Np or Ns~~1 to Type 5~~ depending on the presence of fish, whether intermittent or year round, and other factors. Stream type will be determined using the definitions and criteria of the City's SAO.

Covington Creek is also classified as a Shoreline of the State, subject to the Shoreline Management Act (SMA). There is only a small segment of Covington Creek where it exits Lake Sawyer within the existing City limits.

In their present state, all of the larger streams are moderately important for water supplies, recreation, fish and wildlife habitat, and protection of water quality. Lawson Creek influences water quality in Jones Lake and the Rock Creek wetlands, and Mud Lake Creek influences the water quality of Ginder Creek. All other drainage courses within the Rock Creek watershed are considered minor.

There are ~~eight~~ seven existing lakes within the planning area — Lake Sawyer, Jones Lake, Black Diamond Lake, Oak Lake (also known as Lake Marjorie), Frog Lake, ~~Horseshoe Lake,~~ Lake Number 12, and Mud Lake.

Lake Sawyer is the fourth largest natural lake in King County at 286 acres with a watershed of 13 square miles. Lake Sawyer is considered a "shoreline of the state" and is subject to the SMA and the ~~City's~~ King County's Shoreline Master Program (as the City has not adopted regulations for Lake Sawyer since annexing the lake over 10 years ago). The lake is fed by the Rock Creek and Ravensdale Creek drainage systems. Lake Sawyer has experienced water quality problems from various sources, including discharge of inadequately treated sewage from the decommissioned the City's sewage treatment plant located in the Rock Creek drainage. A lake management plan for Lake Sawyer was completed by King County in 2000. The City and King County have conducted stormwater monitoring in the lake's watershed to help identify sources of phosphorus. Data collected by volunteer lake monitors indicate that Lake Sawyer is low to moderate in primary productivity with very good water quality.[5] Ravensdale Creek has a disproportionately high discharge to drainage area ratio likely due to a high influx of groundwater. Although its drainage area is about half that of Rock Creek's drainage area, Ravensdale Creek has a discharge about 3 times greater than that of Rock Creek during the dry summer months. The phosphorus concentrations in Ravensdale Creek are relatively low during the wet season but exceed those of Rock Creek during the dry season when most of the flow is comprised of naturally phosphorus rich groundwater. Consequently, Ravensdale Creek contributes about half as much phosphorus to Lake Sawyer as Rock Creek. Lake Sawyer is an important migration corridor for a late run of coho salmon that pass upstream shortly after Christmas. The fish spawn in upper Ravensdale Creek. Lake Sawyer also provides year-round recreational fishing for stocked rainbow trout and warm water fish. The lake is also used extensively for boating, water-skiing, and other recreation. Public access is provided at a boat launch on the northwest side of the lake. An undeveloped 168 acre park is located along the southern part of the lake.

Frog Lake is located in the northwestern part of the planning area at the southeastern portion of Lake Sawyer. Frog Lake is approximately 25 acres in size. It is largely a forested wetland with an open water area, identified as Wetland 2 by the City or as Covington Creek 22 by King County's Interactive Map Folio Sensitive Areas layer. As a wetland related to Lake Sawyer, Frog Lake is considered a shoreline of the state regulated by the SMA.

Jones Lake is ~~under~~less than 20 acres in size, located within ~~and covers~~~~is 23 acres in size with~~ a watershed of 740 acres. It is fed by Lawson Creek and two other unnamed tributaries, but is a highly groundwater-dependent lake that displays a seasonal fluctuation in water level. Jones Lake is classified as a dystrophic lake,

[5] King County Lake Monitoring Report, Water Year 2004.

Ground water recharge to the shallow aquifer is primarily from precipitation or infiltration of surface water runoff from adjacent areas. As precipitation falls on the ground surface, a portion infiltrates into the soil. Precipitation that does not infiltrate remains on the surface, filling small depressions or moving downslope as surface runoff. Some shallow infiltrated water (soil moisture) is used by plants and returns to the atmosphere by evaporation. When the soil moisture content is high, such as occurs after a long period of rainfall, water within the soil migrates downward. Downward percolation of water is impeded by relatively impermeable till or bedrock that underlies most of the land. Where water is concentrated within topographically low areas, lowlands such as wetlands and streams, there is generally more recharge than in topographically high, upland, areas where the surficial aquifer is dry much of the time. The intermediate depth and deep bedrock aquifer systems are recharged by infiltrating water over an area much larger than the planning area.

Public Water Supplies

Groundwater withdrawal has not been necessary to supply the City's water needs. The City currently obtains all of its municipal water from a series of springs (Spring No. 1 through Spring No. 4) located on the east slope of Green River gorge about 2 miles southeast of the City. The City does not maintain any water wells at present. The spring system is located in a geologically active area of the Green River gorge as demonstrated by a large landslide in February 1996 immediately downstream of Spring No. 1. The water quality and quantity are very good; limited only by the approved water rights consumptive allocation of the spring water.

The City has a wholesale contract for water supply from the City of Tacoma that will provide future water supply. The City will also continue to withdraw water supply from its springs so long as this source remains feasible.

4.2.2. Sensitive Areas

Sensitive Areas (also referred to as critical areas) are environmentally sensitive features of the City for which protection is required by the GMA. They include wetlands, frequently flooded areas, fish and wildlife habitat conservation areas (FWHCA), geologically hazardous areas, and areas with a critical recharging effect on groundwater used for potable purposes.

The City conducted sensitive areas inventories in its planning area in 2008.~~the early 1990s~~ ~~and is also using King County mapping data as its source of sensitive areas information.~~ The Black Diamond Sensitive Areas Map was produced by Parametrix (a consulting firm) in 2008.~~King County geographic information systems (GIS) data. This plan relies on the King County Interactive Map Folio, Sensitive Areas layer to identify locations of known sensitive areas both within the City limits and the City's~~

~~UGA. This information will be updated in 2008 as a result of the update of the City's current Environmentally Sensitive Areas regulations (Ch. 19.12 BDMC).~~

Development adjacent to wetlands and streams inside the City is regulated by the City's SAO. The SAO contains requirements for designating, rating and mapping wetlands and streams, requires the establishment of wetland and stream buffers, identifies activities allowed within the buffers and describes applicable performance standards, and outlines appropriate mitigation requirements.

Wetlands

Known wetlands and streams in the City have been identified and classified (i.e., rated on a reconnaissance level) in ~~the~~ a 2008~~1992~~ Sensitive Areas Inventory ~~study, entitled "City of Black Diamond Wetland and Stream Inventory."~~ The City's SAO designates and rates wetlands according to the Washington State Department of Ecology's (Ecology's) wetland ratings system found in the Washington State Wetland Rating System documents ~~(Western Washington Ecology Publication #93-74)~~. Known wetlands in and adjacent to the City are identified in Appendix A. The wetland classifications listed in the appendix are preliminary and for information purposes only. For project proposals, wetland classifications will be determined using the definitions, criteria and procedures contained in the City's SAO.

The City has classified and designated frequently flooded areas using the Federal Housing and Urban Development Flood Map (Figure 4-1). This map identifies the following flood hazard areas inundated by a 100 year flood: along Rock Creek from Morganville to Jones Lake; the southern portion of Ginder Creek; surrounding Jones Lake and along the east side of Highway 169 (across from Jones Lake). New development in these areas will continue to be regulated by the City.

The 2006 King County Interactive Map Folio Sensitive Areas layer shows a small segment of Section 15 in the 100 year floodplain in the City. The floodplain is generally along the Rock Creek wetlands and Covington Creek Wetland No. 26.

Fish and Wildlife Habitat Conservation Areas

Fish and wildlife habitats in the City were identified and ranked in terms of value in the 2008 Sensitive Areas Inventory. ~~1992 "City of Black Diamond Fish and Wildlife Habitat Study."~~ High value habitats include the Rock Creek and Ginder Creek corridors, open water ponds, lakes, and riparian forests. These habitats exist around streams and wetlands, which are identified, classified, and regulated under the City's SAO. The SAO contains requirements for designating and mapping FWHCA, sets buffer requirements and performance standards for activities allowed within FWHCAs and their buffers, and outlines appropriate mitigation requirements. There are areas of high quality habitat that relate closely to the City's wetland and stream

network. Two of these areas may meet the City's SAO criteria for FWHCAs: 1) Ravensdale Creek and its adjacent wetlands; and 2) Black Diamond Lake and its adjacent wetlands (Figure 4-2)~~. The City is currently updating its SAO and may revise the criteria for FWHCAs in the update process.~~

The general habitat types in the Black Diamond area include mixed deciduous and unmanaged evergreen forest, areas of regenerating managed forest, wetlands, lakes, riparian areas, and creeks. Wetlands, riparian areas, and lakes meeting certain criteria are listed as "priority habitats" in the Washington Department of Fish and Wildlife's (WDFW's) Priority Habitats and Species (PHS) program. WDFW has compiled draft maps of priority habitat areas in the City.

Wildlife corridors provide a means for wildlife, particularly species that roam widely or have large home ranges, to move freely within and among habitat types. Creeks and streams and their associated buffers function as wildlife corridors in urban areas. Rock Creek, Ravensdale Creek and the associated riparian habitat, functions as a corridor between the upper and lower Soos Creek basin. The Rock Creek corridor likely serves as a route to the Green River and upper parts of the Green River watershed as well, linking wildlife that use the lower Green River watershed and the upper Soos Creek basin. The following list of drainages and the known fish species are updated from the Water Resource Inventory Area (WRIA) 9 Fish Distribution maps (2000, King County DNR):

Covington Creek. Coho, cutthroat trout and steelhead are known to inhabit Covington Creek. The WRIA 9 Fish Distribution Map indicates that Covington Creek also provides good habitat for Chinook salmon, though presence of that species has not been verified.

Lake Sawyer. Covington Creek drains Lake Sawyer, which is fed by Ravensdale and Rock Creeks. Lake Sawyer supports populations of cutthroat trout, steelhead, largemouth and smallmouth bass, yellow perch, and rainbow trout (WRIA 9 2000 and WDFW 1991). The lake is impounded by a small dam at the head of Covington Creek. The dam has a fish ladder that allows passage of migrating coho. Due to low water flows and creekbed infiltration, however, the fish ladder is not typically passable until December. This factor limits coho use of the upper watershed, including Rock Creek.

Ravensdale Creek. Ravensdale Creek has significant fisheries value and is known to support coho and cutthroat trout. The headwater wetlands are important for maintaining perennial flow, as well as maintaining water quality in Rock Creek.

land uses contained in the City's SAO help protect the functions and values of these streams as critical fish and wildlife corridors.

Geologically Hazardous Areas

Geologically hazardous areas include erosion hazards, landslide hazards, and mine hazards. Areas of abandoned coal mine workings are identified and mapped in Figure 4-3 and are regulated by the City's Sensitive Areas regulations.

Areas of steep slopes are similarly identified in City Sensitive Areas maps and regulated by the SAO. The SAO contains designation and mapping requirements, a description of allowed activities and performance standards, and appropriate mitigation requirements for erosion, landslide, seismic and mine hazard areas.~~ Additional geologically hazardous areas not currently regulated by the SAO include seismic hazard areas and steep slopes.~~

Erosion Hazard Areas

Erosion hazard areas are defined as those areas identified by the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) as having a "severe" to "very severe" erosion hazard.

Black Diamond's~~King County's Interactive Map Folio,~~ Sensitive Areas ~~Layer~~ Map indicates five small locations within the planning area, including the Ravensdale Creek corridor, as "erosion hazard." Among the Natural Resources Conservation Service (formerly Soil Conservation Service [SCS]) soil types identified within the planning area, one is identified~~ by King County~~ as potentially severely erosive. It is shown as AkF and AgD. Relatively small areas of this soil type exist within Sections 22 and 23, but both are located along the edge of wetlands (southwest of Black Diamond Lake and east of Jones Lake). These erosion prone soils are constrained for development, especially the area of AkF near Black Diamond Lake.

Landslide Hazard Areas

Landslide hazard areas are defined in the City's SAO as those areas that are potentially subject to risk of mass movement due to a geologic landslide resulting from a combination of geologic, topographic, and hydrologic factors. These areas are typically susceptible to landslides because of a combination of factors including: bedrock, soil, slope gradient, slope aspect, geologic structure, groundwater, or other factors. Black Diamond's ~~King County's Interactive Map Folio (IMap)~~ Sensitive Areas ~~Layer~~ Map delineates a small landslide area within ~~it's Black Diamond~~the City's w~~W~~atershed property~~no known landslide hazardous areas within the planning area~~.

Coal Mine Hazard Areas

Coal mine hazard areas include abandoned and improperly sealed mine openings and areas underlain by mine workings shallower than 200 feet in depth (steeply dipping seams) or shallower than 15 times the thickness of the seam or workings (gently dipping seams) may be affected by collapse or other subsidence.

Although the City is underlain by numerous coal mines, the "mine hazard" areas by definition are limited due to the accuracy of past mapping and the depth of most of the shafts. Black Diamond's~~King County's IMap~~ Sensitive Areas ~~Layer~~ Map identifies one large area of "coal mine hazard" in the central part of the City, and a smaller area to the east in the Lawson Hill neighborhood. The ~~county~~ map layer appears to locate coal mine areas without specific information on the degree of hazard.

Information provided by Palmer Coking Coal (PCC) indicates that much of the existing City is built over deep underground coal mine working. Most underground coal mining in the Black Diamond area consisted of the "room and pillar" mining technique. "Pillars" of coal were left to provide support for the mining of adjacent areas, creating rooms. Once abandoned, these "pillars" would collapse and the "rooms" would fill with collapsed roof material, coal debris, and water.

There are known coal mine entrances, stockpiles of coal tailings or mine spoil in the planning area. Mining records indicate that underground mining has occurred in Section 2, 10, 11, 12, 13, 14, 15, and 23. Most of these are areas underlain by deep underground coal workings. The coal mine hazards identified in the SAMF are based upon maps available at the Department of Natural Resources. The approximate location of the mine areas is shown on Figure 4-3.

Prior to development in areas of coal mine working and potential subsidence, the City requires studies by geologic engineers detailing the depth to workings, the presence of surface openings or potential sinkholes, and a detailed examination of historic coal mine maps.

Seismic Hazard Areas

Seismic hazard areas are subject to severe risk of earthquake damage as a result of earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction. These conditions occur in areas underlain by cohesion's soils of low density, usually in association with a shallow groundwater table. For the City, these areas are primarily wetlands and saturated soils. According to Black Diamond's ~~to King County's IMap~~ Sensitive Areas ~~Layer~~Map, no seismic hazard areas are identified within the planning area.

Steep Slopes

The City of Black Diamond's Sensitive ~~a~~Area map ~~layer~~ identifies areas that approach 40 % slope.~~county's SAMF does not identify steep slopes (greater than 40%) in the planning area and did not map inside the existing City limits~~. The steepest slope in the City occurs along the south side of Lawson Hill (aka Franklin Hill), where isolated portions of the hillside approach 4~~3~~0% slope. Most of Lawson Hill contains 6% to 15% slopes with an area of 16% to 24% slopes. Isolated slopes within the City's watershed property approach 40% slope. Some isolated slopes which are in the 16% to 24% slope range, are located east of the Black Diamond Lake, along Lawson Road east of Mud Lake, near SE 288th Street and crossing SR 169 north of the City limits. The remainder of the City of Black Diamond Comprehensive Plan area appears to contain slopes from 0 to 15%. Isolated steep slopes may exist throughout the City.

Ground Water Management Areas

The City is located within the South King County Groundwater Management Area. In the "South King County Groundwater Management Plan," the western and northwestern portions of the City have been identified within the large area of coarse and highly pervious Qvr (Vashon Recessional Outwash) geologic deposits. As a result, the Qvr areas of the City have the potential to serve as aquifer recharge areas but offer little contaminant removal ability leaving groundwater susceptible to contamination. The King County Comprehensive Plan mapped these areas as "Areas Highly Susceptible to Ground Water Contamination," that are shown in Figure 4-3. As noted on Figure 4-3 this map is provided for information purposes only and is not specific enough to be used as an integral part of regulations.

This area of Qvr geology contains a shallow aquifer serving as a source of water supply to the City of Kent system and Lake Sawyer. Lake Sawyer, Ravensdale Creek, and Rock Creek are identified as being hydraulically coupled to this shallow aquifer. Mapping provided by King County's IMap shows that areas with high susceptibility to groundwater contamination are located surrounding Lake Sawyer in the northwestern portion of the City, and in the southwestern portion of the City. An area southeast of Lake Sawyer and a small area in the southeastern part of the City are shown as medium susceptibility to groundwater contamination.

To protect critical groundwater recharge areas of domestic water supply aquifers, the City requires that development within the City limits served by City utilities be served by sanitary sewers. Areas served by Soos Creek Water and Sewer District where sewer service is not available are still allowed to use septic systems.

Maintaining the water quality and quantity of stormwater runoff is important within aquifer recharge areas so that aquifers are protected from pollutants. Maintaining

Policy NE-5: Within areas highly susceptible to groundwater (aquifer) contamination, adopt special protection measures. The special protection measures require businesses that use hazardous chemicals to have containment facilities to capture potential chemical spills, and require the use of best management practices for applying pesticides and fertilizers for business residential, and recreational uses.

Policy NE-6: The special protection measures noted in NE-5 should evaluate and define "high risk" uses and address the siting of such uses in sensitive aquifer recharge areas. The protection measures should also evaluate and include measures to reduce pollutant loads, including phosphorous discharged to Lake Sawyer.

Policy NE-7: Require temporary erosion control measures to be installed before construction begins and maintenance of those control measures through the stabilization of the site following the completion of construction to control the quantity of sediment entering surface water.

4.3.3. ~~Critical~~ Sensitive Area Concepts, Objectives, and Policies

~~Critical~~ Sensitive Area Concepts

~~Critical~~ Sensitive Areas include wetlands, aquifer recharge, fish and wildlife habitat conservation areas (FWHCAs), frequently flooded areas, and geologically hazardous areas. These features of the natural environment are critical to maintaining local environmental quality, quality of life, and maintaining the City's character. Some of the critical areas may present potential development constraints, i.e., floodplains, and geologically hazardous areas (including coal mine hazards).

~~Critical~~ Sensitive Area Objectives

The City will control development in all critical areas through its Sensitive~~Critical~~ Areas Ordinance (S~~C~~AO). Those areas designated as posing a hazard to life or property will be identified prior to development approvals. Development will not be permitted unless detailed technical studies find the hazardous condition can be safely mitigated. Monitoring of the S~~C~~AO should result in periodic updates to assure effectiveness of the ordinance.

Objective NE-2: Implement the Natural Resources Management Plan for the Comprehensive Plan planning area.

Objective NE-3: Promote preservation of fish and wildlife habitats of documented threatened and endangered species.

~~Critical~~ Sensitive Area Policies

Policy NE-8: Coordinate with King County and the Muckleshoot Indian Tribe in the developing natural resources planning for the areas surrounding the City.

Policy NE-9: Protect sensitive areas from inappropriate land uses, activities, or development through continued application of and periodic updates to the S~~C~~AO and development regulations. The City of the City will monitor the effectiveness of its S~~C~~AO and will modify this ordinance as necessary, based upon the information gathered during monitoring.

Policy NE-10: Avoid disturbance to valuable fish and wildlife habitat through the proper location, design, construction, and management of new development.

Policy NE-11: Minimize disruption of areas in current use by endangered wildlife species or by unique wildlife populations.

Policy NE-12: Establish an open space network, linking critical habitat areas to enhance their ecological value.

Policy NE-14: Update and enforce comprehensive regulations pertaining to development in critical areas.

Policy NE-15: Manage land uses to be compatible with aquifer recharge areas and to minimize potential groundwater contamination.

4.3.4. Air Quality Concepts, Objectives and Policies

Air Quality Concepts

Because of the surrounding geographic and climatic characteristics, the City experiences prevailing winds, long summer days and higher inland temperatures. Although there are no air quality monitoring stations in the planning area, southeast King County has a higher ozone pollution concentration than the rest of the county.

Burlington Northern Railroad land), Palmer Coking Coal Company, and the Berklid family.

The City completed its first GMA comprehensive plan in 1996. That same year, the City negotiated a Potential Annexation Area (PAA) with King County and nearby property owners that was formalized in the Black Diamond Urban Growth Area Agreement (BDUGAA). Subsequently, the City annexed an additional 786 acres to the northwest, including and surrounding Lake Sawyer, in 1998. This annexation added 1,480 residents to the City, increasing the population by 82.6% in one year.[7] In December 2005, the City completed annexation of its West Annexation Areas totaling approximately 345 acres.[8] In December 2009, the City further expanded by completing the South Annexation (approx. 233.6 acres) and the East Annexation (approx. 50 acres). ~~With the December 2005 annexation, the following PAAs remain to be annexed:~~Of the areas defined in the BDUGAA, this leaves the Lake 12 Annexation area (approximately 160 acres in the northeast corner of the UGA, including portions of the Green River Gorge Road connecting the Lake 12 Annexation Area to the City limits) still to be annexed

~~▪South Annexation Area: Approximately 233.6 acres in the southern portion of the City's Urban Growth Area (UGA).~~

~~▪East Annexation Area: Approximately 50 acres along the eastern boundary of the City in the City's UGA.~~

~~▪Lake 12 Annexation Area: Approximately 160 acres in the northeast corner of the UGA, including portions of the Green River Gorge Road connecting the Lake 12 Annexation Area to the City limits~~.

There is also an area within the King County UGA located west of Lake Sawyer along the Covington-Sawyer road and including Kentlake High School, which is not identified in the BDUGAA. This "unclaimed" urban growth area, which abuts the City's northwest boundary, was not historically designated as a Black Diamond PAA However, with this plan; the City is now including this area as part of its PAA.

5.2.2. Planning Area Land Use

The Land Use Element addresses the existing City limits (approximately 4,179 acres) and the adjacent unincorporated UGA, referred to in this plan as the PAA. The PAA, which is currently outside the City's corporate boundaries, will

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[7] Washington State Office of Financial Management. Annexations Approved by OFM 1/1/1990 through 12/31/1999.

[8] Washington State Office of Financial Management. Annexations Approved by OFM 1/1/2000 through 8/31/2006.

Designation Criteria: Properties designated Urban Reserve should be only be those areas currently lacking public water and sanitary sewer service within the City's Potential Annexation Area.

~~*Transfer of Development Rights(TDR) Receiving Areas Overlay*~~

~~Purpose: The TDR Receiving Areas Overlay is applied to lands that, pursuant to City policies, annexation agreements, or other legal instruments of records, are intended to remain in an undeveloped state until such time that development rights are received pursuant to the City's TDR program as outlined in BDMC 19.24. A Master Planned Development (MPD) overlay may also apply in these areas. In order to maintain a "baseline" value to these lands and avoid the necessity of acquiring significant amounts of development rights, a base density of either one or two dwelling units per acre should be allowed, provided that development at higher urban densities consistent with the other plan designations can be achieved through the receipt of transferred development rights from designated "sending areas."~~

~~Allowed Uses and Description: Low density, single-family residential uses (not exceeding 1 or 2 dwelling units per acre) should be allowed in these areas as a basic development right, recognizing that higher density development is expected to occur with the acquisition of development rights from designated "sending areas."~~

~~Designation criteria: Properties to which the TDR Receiving Area Overlay is applied should be those identified through the City's TDR program that are intended to develop as urban densities only after the transfer of development rights. For the majority of these areas, approval of an MPD is a prerequisite to development.~~

Master Planned Development (MPD) Overlay

Purpose: The MPD overlay is applied to areas to take advantage of opportunities to create a clustered mix of residential, commercial and civic uses along with open space and public facilities, on large sites in appropriate locations. These sites typically consist of large parcels in common ownership where a master plan will be developed to guide unified development over a period of many years. The MPD designation is applied to meet the special needs and opportunities presented by such sites while managing impacts on nearby uses.

Allowed Uses and Descriptions: The MPD overlay is applied to areas that are intended to allow a mix of those land uses and residential densities as depicted on the Future Land Use Map. Areas with an MPD overlay designation are intended to develop only subsequent to approval of an MPD permit pursuant to Black Diamond Municipal Code. An MPD may include residential and commercial uses clustered around private and community open space, supported by adequate services and facilities. As part of the process of approving an MPD, a specific development plan

by two volunteer firefighters/EMTs. Station 99 is staffed only by volunteers responding from home. The staff the City is supported by a cadre of volunteers assigned to Station 98 and Station 99, as well as career staff assigned to nearby stations. Nighttime coverage, between 1800 hours and 0600 hours, is augmented by volunteer staff at Station 92, Station 93 on SE Covington Sawyer Road, Station 97 on Green Valley Road, and Station 94 near Krain Corner.

The National Fire Protection Association (NFPA) establishes six trained firefighters arriving to a scene within 14 minutes of an alarm 80% of the time for volunteer fire departments in rural areas (defined as areas with a population density less than 500 people per square mile; District 44 has roughly 350 people per square mile) as a sufficient number of members to operate safely and effectively.

2007 response data indicates Station 98 had a response time of 6.98 minutes or less 80% of the time, and Station 99 has a response time of 8.28 minutes or less 80% of the time. Both stations' response times are well below the NFPA's standard. Note, both fire and EMS responses were considered together because of the limited database.

8.7.4. Future Needs

As the City and district increase in population, the district may need to increase the number of volunteer and career firefighters available per shift.

The City should create a work plan to address its long-term fire and emergency services needs as a result of anticipated development and growth.

8.8. Utilities

This Utilities ~~Element~~ has been developed in accordance with Section 36.70A.070 of the GMA. It describes how the existing and planned utility capacity will be financed, and supports the City's Land Use Element.

Suggested items to be included ~~in the~~when addressing u~~U~~tilities ~~Element~~ and recommendations for ~~preparing the element~~discussing utilities are delineated in WAC 365-195-320. These are as follows:

- Integration of the general location and capacity of existing and proposed utility lines with the Land Use Element of the City of Black Diamond Comprehensive Plan. For the purposes of this step, proposed utilities are understood to be those awaiting approval when the comprehensive plan is adopted.

- An analysis of the capacity needs for various utilities over the planning period to serve the growth anticipated at the location and densities proposed within the jurisdiction's planning area.
- A schematic identification of the general location of utility lines and facilities required to furnish anticipated capacity needs for the planning period within the jurisdiction's planning area. This should be a part of the process of identifying lands useful for public purposes to be carried out by planning jurisdictions.
- Evaluation of whether any utilities should be identified and classified as essential public facilities, subject to the separate siting process established under the comprehensive plan for such facilities, and if so, provision for applying that process as appropriate.
- Creation of local criteria for siting utilities over the planning period, involving:

  a. Consideration of whether any siting proposal is consistent with the locations and densities for growth contemplated in the Land Use Element.

  b. Consideration of any public service obligations of the utility involved.

  c. Evaluation of whether the siting decision will adversely affect the ability of the utility to provide service throughout its system.

  d. Balancing of local design considerations against articulated needs for system-wide uniformity.

- Policies should be adopted which call for:

  e. Joint use of transportation rights-of-way and utility corridors, where possible.

  f. Timely and effective notification of interested utilities of road construction, and of maintenance and upgrades of existing roads to facilitate coordination of public and private utility trenching activities.

  g. Consideration of utility permits simultaneously with the proposals requesting service and, when possible, approval of utility permits when the project to be served is approved.

It is the intent of this section to fulfill the RCW requirements relating to the Capital Facilities Element and Utilities Element of the comprehensive plan.

The Utilities ~~Element~~ section has also been developed in accordance with the Countywide Planning Policies (CPPs) and has been integrated with all other

planning elements to ensure consistency through the comprehensive plan. ~~The~~ This section ~~Utilities Element~~ specifically considers the location and LOS of all existing and proposed utilities, including electrical, telecommunication, natural gas, and non-city water transmission line; public schools; and fire protection. This ~~element~~ section also provides a process and policies for the siting of "Essential Public Facilities" as defined by the GMA.

8.8.1. Inventory and Analysis

The inventory presented in this element provides information useful to the planning process. The inventory summarizes general information pertaining to the existing utility service system in the City. Many public and private agencies are involved in regulation, coordination, production, delivery, and supply of utility services. This section of the element identifies those providers as well as the legislation regulating the utility. The inventory includes:

City-Provided Utilities

- Water (except around Lake Sawyer)
- Sanitary Sewer (except around Lake Sawyer)
- Stormwater

Utilities Provided by Other Entities

- Electricity (Puget Sound Energy)
- Telecommunications (Qwest and Comcast)
- Natural Gas (Puget Sound Energy)
- Tacoma Water Transmission Pipeline #5 provides wholesale water supply
- Covington Water District provides water service around Lake Sawyer
- Soos Creek Water and Sewer District provides sewer service to a small area in the northwest corner of the City and has a sewer service around Lake Sawyer.
- Solid Waste (Allied Waste)

Federal and State Utility Laws and Regulations

RCW and Washington Utilities and Transportation Commission – Utilities and transportation are regulated in Washington by the Washington Utilities and Transportation Commission (WUTC). The WUTC, composed of three members appointed by the governor, is empowered to regulate utilities (including but not

8.12. Utilities Provided By Other Entities

As independent utilities, the private companies providing the services described in this section, for the most part, fund capital investments and ongoing operations and maintenance costs independently through their rate base.

This section should provide a framework for efficient and predictable provision and siting of utility facilities and services within the city, consistent with serving the utility's public service obligations.

This section describes how the goals in the other plan elements will be implemented through utility policies and regulation, and is an important element in implementing the comprehensive plan. The main purpose of this section is to ensure that the City will have utility capacity to adequately serve the Land Use Element.

8.12.1. Utilities Concept, Goal, Objective, and Policies

Utilities Concept

The City should consider, when reasonable and feasible, the co-location of new public (non-City owned) and private utility distribution facilities in shared trenches, and coordination of construction timing, to minimize construction-related disruptions to the public and reduce the cost to the public of utility delivery. The City will encourage provision of an efficient, cost effective and reliable utility service by ensuring land will be made available for the location of utility lines and utility facilities.

The City will review and amend existing regulations, including ~~Critical~~ Sensitive Areas Ordinances (~~CAOs~~SAOs), as necessary within existing corridors to allow maintenance, repair, installation, and replacement of utilities in a timely manner.

The City will provide standard locations for gas, power, phone, and cable within the street section of the City's construction standards.

The City will encourage communication among the private utility providers to support service planning for the City. It will be important for the City to encourage system design practices intended to minimize the number and duration of interruptions to customer service. The City supports necessary amendments to the Utility and Public Services Element for the purposes of updating individual provider plans.

As a strategy, the City will facilitate and encourage conservation of resources to delay the need for additional facilities for electrical energy and water resources, and to achieve improved air quality. In addition, the City will support the conversion to

cost-effective and environmentally sensitive alternative technologies and energy sources.

Utilities Goal, Objectives, and Policies

Utilities Goal: Coordinate City land use and utility facility planning to ensure consistency and to enable utility service providers to meet public service obligations.

Objective U-1: Design and construction standards will be environmentally sensitive, safe, cost effective, and consistent with utilities' public service obligations.

Policy U-1: Facilitate the development of all utilities at the appropriate levels of service to accommodate growth that is anticipated to occur in the City.

Policy U-2: Facilitate the provision of utilities and ensure environmentally sensitive, safe, and reliable service that is aesthetically compatible with the surrounding land uses and results in a reasonable economic cost.

Policy U-3: Process permits and approvals for utility facilities in a fair and timely manner and in accordance with development regulations which encourage predictability.

Policy U-4: Encourage conservation of all non-renewable non-municipal resources.

8.12.2. Utilities Overview

Electricityand Natural Gas

~~Electricity is provided by~~ Puget Sound Energy (PSE) provides electrical and natural gas service to the city of Black Diamond and its potential annexation area. PSE is an investor owned private utility that provides service to approximately 1.4 million electric and natural gas customers in a service are that covers 6,000 square miles. ~~Various facilities are located throughout the City and King County, including one substation and one overhead transmission line within existing City limits.~~

Existing Electric Facilities

Various electric transmission and distribution facilities are located through the City and King County. At present, one 115kV passes through the City generally south to

north along SR 169. This transmission line serves the Black Diamond Substation located at approximately SE 316th St. and SR 169.

The Bonneville Power Administration has a 500 kV transmission corridor which ~~easement and line that~~ lies approximately ~~about~~ one mile north of the City limits. The transmission line is the BPA Ravensdale – BPA Covington, connecting power from Ravensdale to Covington.

Future Electrical Facilities~~:~~

Electrical facility planning is ongoing for south King County, and Black Diamond is included in the larger general study area. The potential addition of 6,000 homes in two proposed Master Planned Developments would require PSE to expand the existing electrical facilities to meet the needed energy requirements. To serve the electrical load of the planned 2015 population, the following projects have been identified for possible future construction:

- Expansion of the Black Diamond Substation to include a second transformer, 115 kV breakers, and an additional 115 kV transmission line which could potentially head west along Auburn Black Diamond Road or east along Black Diamond Ravensdale Road.

- Possible construction of a new substation within the Black Diamond area. (May not be necessary if current growth load predictions/development is high). No exact site has been determined and would depend on more detailed information regarding the proposed Master Planned Developments.

- Reconductoring and rebuilding of the existing 115 kV transmission line that passes through the city.

- Construction of a new 115 kV transmission line from Berrydale Substation to Krain Corner Substation. One possible route would be along Kent-Black Diamond Road and Auburn Black Diamond Road to the existing Black Diamond substation. A future substation called Lake Holm is planned for this line east of Black Diamond.

Existing Gas Distribution Facilities

Natural gas is supplied to the City of Black Diamond from Williams (formerly Northwest) Pipeline Corporation through gate stations. Gas service is generally extended to new development upon evaluations of requests based on an economic feasibility study.

Supply mains (measuring 16", 12", 8", 6" and 4" in diameter) transport gas from the gate stations to district regulators. This pipe material is typically wrapped

steel (STW). District regulators (DR) reduce supply main pressures to typical distribution operating pressures of 25 to 60 psig. Distribution mains are fed from the district regulators. These typically are 8", 6", 4", 2" and 1-1/4" diameter lines. The pipe material typically is polyethelene (PE) or wrapped steel.

Individual residential service lines are fed by distribution mains and are typically 5/8" in diameter. Individual commercial and industrial service lines are typically 1-1/4", 2", or 4" in diameter.

Future Gas Distribution Facilities

Minimum pressure delivery to distribution systems is approximately 15 psig. If growth would result in design pressures below 15 psig, there are several methods of increasing the pressure in the line, including:

- Looping the distribution and/or supply lines to provide an alternative route for the gas to travel to an area needing additional supply. This method often involves construction of supply mains, district regulators and distribution mains.
- Installing mains parallel to existing mains to supplemental supply of natural gas to a particular service area.
- Replacing/upsizing existing pipelines to increase volume.

There are three types of construction:

1. New or replacement of existing facilities to increase capacity requirements due to new building construction and conversion from alternate fuel.
2. Main replacement to facilitate improved maintenance of the facility.
3. Replacement or relocation of facilities due to municipal and state projects.

PSE makes an effort to coordinate construction work with municipal projects in order to minimize cost and impacts to the surrounding community. Due to franchise agreements, PSE is required to relocate existing facilities when required due to the municipal project.

The following major projects are anticipated between now and the year 2018 to serve customers to in the city:

- Replacement of a section of a 2" main on Roberts Drive east of Morgan Street working with city project schedule.

Tentative future projects:

- Future extension of the 8" PE IP main on Auburn Black Diamond Road (will be determined by growth in the surrounding areas).

Due to the growing popularity of natural gas in Black Diamond and surrounding areas, PSE will continually evaluate the necessity of the above projects and alternatives. Changes in project route, construction schedule and detail could occur as they are dependent on budgets and WUTC approval.

Telecommunications

Telecommunications include, but are not limited to, telephone, personal wireless services, microwave and cable television. The City is served by Qwest Communications. There are various facilities located throughout King County and the City. Many of the telecommunication facilities, including aerial and underground, are co-located with those of the electrical power provider.

Cellular service in the City is currently available through a variety of providers, including Verizon Wireless, AT&T Wireless, T-Mobile, and Sprint. There are at least three cellular towers located in or near the City. Additional cellular sites are located around the City in the vicinity of the cities of Maple Valley, Covington, and Enumclaw. Generally, locating new cellular tower sites would depend on the density and location of new cell phone users, not overall population trends.

The City should promote new technological advances while still considering the implications of continued availability of basic communication services to all people. Effective communication services are critical to all citizens in several ways. They promote and enhance information exchange, a strong regional economy and public information, such as delivering emergency services, education and citizen involvement.

Telecommunication services are regulated by the Federal Communications Commission and the Washington Utilities and Transportation Commission. The City has some regulatory authority of telecommunication services through franchise agreements and the development approval process.

In most cases, telecommunication services will use existing utility corridors, public right-of-ways, and/or City-owned properties. Providers of new wireless communication facilities within the city and its Potential Annexation Area should demonstrate through area-wide service planning the lower impacts consistent with telecommunications customer needs.

Cable television service throughout the City is provided by Comcast. Comcast usually locates its cable lines on private property, or on the power company lines

within street right-of-way. They will also locate their lines within other utility easements along the right-of-way. No new major facilities would be required to accommodate population increases. Only additional cable lines would need to be provided to new development. Comcast also uses these lines to deliver broadband internet and digital phone service to its customers.

~~Natural Gas~~

~~Puget Sound Energy provides natural gas via existing pipelines to the City. Gas service is generally extended to new development upon evaluations of requests based on an economic feasibility study. Currently the gas supply system meets the existing demand.~~

Tacoma Water Transmission Pipeline #5

The City of Tacoma, Department of Public Utilities Water Division completed a project to improve its water supply system with construction of the second supply pipeline (Pipeline No. 5) in May 2006. Construction of the project allows diversion and transmission of an additional 100 cubic feet per second (or an additional 65 MGD) of water from the Green River to the Tacoma Regional Water Supply Area. The pipeline begins at the headworks near Kanaskat located approximately 0.5 mile downstream of the diversion dam and river intake, and travels in a westerly direction through the City and other communities, terminating near the Portland Avenue Reservoir in Tacoma.

The section of the pipeline through the City first passes through a wetland east of Lake 12, then south of Lake 12, to within 150 feet of the north right-of-way of the Green River Gorge Road (along the edge of the John Henry Mine), then along the south boundary of the John Henry mine to SR 169. The pipeline continues north along SR 169 to the existing Palmer Coking Coal roadway and turns west, to Lake Sawyer Road then north along Lake Sawyer Road to SE 305th Street then west to where it leaves the City limits.

Solid Waste

Allied Waste provides garbage, recycling and yard debris collection services for residential, multifamily and commercial customers in Black Diamond. Allied Waste, along with affiliated Allied Waste Companies, operates solid waste collection systems, landfills, recycling centers and portable sanitation services throughout the northwest. Collection companies are located in Seattle, Bellevue, Lynnwood, Kent and Goldendale. Landfill operations are located in Roosevelt, Washington.

Other solid waste services are available to residents at the King County Transfer Station located in Enumclaw.