



CITY OF BLACK DIAMOND COMPREHENSIVE PLAN



2015-2035



ADOPTED December 2021

CITY OF BLACK DIAMOND CITY COUNCIL

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TABLE OF CONTENTS

Introduction

Chapter 1 Introduction

- 1.1 Purpose of Comprehensive Planning
- 1.2 Planning Framework
- 1.3 Implementation of the Comprehensive Plan
- 1.4 Amending the Comprehensive Plan
- 1.5 Our Future Vision for Black Diamond for 2035
- 1.6 Vision Goals
- 1.7 Plan Summary
- 1.8 Plan Outline

Comprehensive Plan Elements

Chapter 2 Community Character and Demographics

- 2.1 Introduction
- 2.2 Existing Condition
- 2.3 Future Conditions
- 2.4 Land Capacity

Chapter 3 Parks, Recreation, Trails, and Open Space

- 3.1 Introduction
- 3.2 Planning Framework
- 3.3 Parks, Recreation, Trails and Open Space Concept
- 3.4 Financing
- 3.5 Parks, Recreation, Trails, Open Space Goals and Policies

Chapter 4 Natural Environment

- 4.1 Introduction
- 4.2 Planning Framework
- 4.3 Natural Environment General Goals and Policies
- 4.4 Wetland Goals and Policies
- 4.5 Fish and Wildlife Conservation Areas Goals and Policies
- 4.6 Geologically Hazardous Areas Goals and Policies
- 4.7 Critical Aquifer Recharge Areas (CARA) Goals and Policies
- 4.8 Frequently Flooded Areas Goals and Policies
- 4.9 Climate Change Goals and Policies
- 4.10 Air Quality Goals and Policies
- 4.11 Water Quality Goals and Policies
- 4.12 Native Vegetation Goals and Policies

TABLE OF CONTENTS

Chapter 5 Land Use

- 5.1 Introduction
- 5.2 Planning Framework
- 5.3 General Land Use and Development Goals and Policies
- 5.4 Community Character and Design Goals and Policies
- 5.5 Historic Preservation Goals and Policies
- 5.6 Master Planned Development (MPD) Overlay Goals and Policies
- 5.7 Transfer of Development Rights (TDR) Receiving Areas Overlay
- 5.8 Gateway Corridor Overlay
- 5.9 Urban Reserve Goals and Policies
- 5.10 Residential Goals and Policies
- 5.11 Industrial, Light Industrial and Business Park Goals and Policies
- 5.12 Commercial Goals and Policies
- 5.13 Public Land Goals and Policies
- 5.14 Regional Coordination Goals and Policies
- 5.15 Open Space Area Protection Goals and Policies
- 5.16 Shoreline Management
- 5.17 Future Land Use Map

Chapter 6 Housing

- 6.1 Introduction
- 6.2 Context and Housing Strategies
- 6.3 Housing Goals and Policies

Chapter 7 Transportation

- 7.1 Introduction
- 7.2 Planning Framework and Consistency Statements
- 7.3 Elements of the Transportation Chapter
- 7.4 Transportation Policies

Chapter 8 Capital Facilities and Utilities

- 8.1 Introduction
- 8.2 Purpose Statement
- 8.3 LOS and Phasing
- 8.4 General Capital Facility and Utility Goals and Policies
- 8.5 Utilities
- 8.6 Police
- 8.7 Fire and Emergency Medical Services

TABLE OF CONTENTS

8.8 Public Schools

8.9 Administrative Services

Chapter 9 Economic Development

9.1 Introduction

9.2 Planning Framework

9.3 Economic Development Strategies

9.4 Economic Development Goals and Policies

Comprehensive Plan Appendices

Appendix 1 Community Character and Demographics

Appendix 2 Parks, Recreation, Trails, and Open Space

Appendix 3 Natural Environment

Appendix 4 Land Use

Appendix 5 Housing

Appendix 6 Capital Facilities and Utilities

Appendix 7 Transportation

CHAPTER 1. INTRODUCTION



Black Diamond is a beautiful and active city in the Puget Sound Region. The City lies in the heart of the Green River Region, in King County Washington, about 30 miles southeast of Seattle in a picturesque natural setting surrounded by forested hills, mountain views, and beautiful water features. Black Diamond has evolved from one of the earliest and largest towns and employment centers outside of Seattle for resource activities (primarily extraction) to its present-day small town with a rich history and strong community identity.

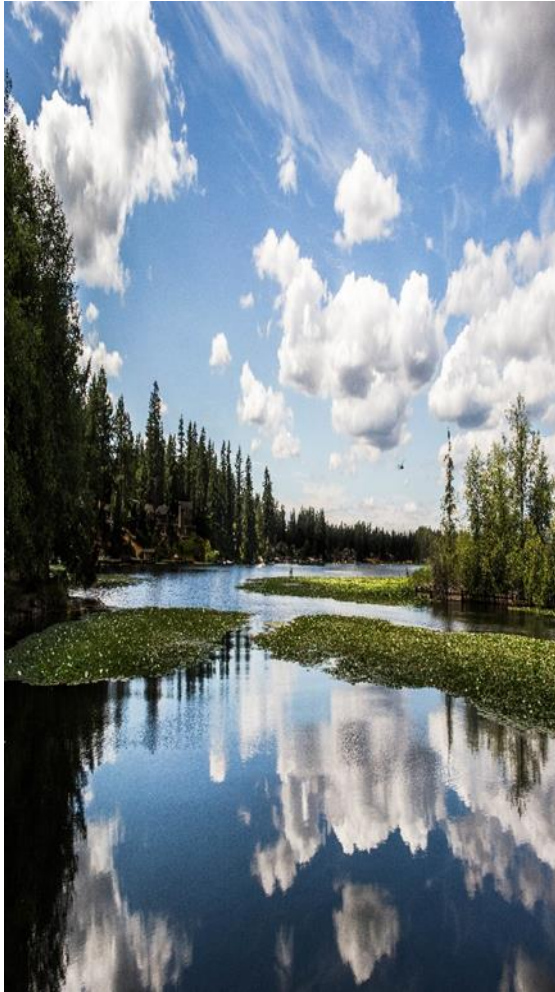
Founded in the 1880s, Black Diamond was developed and operated as a company coal town for almost fifty years. In the 1930s, its owner, the Pacific Coast Coal Company deeded the land and housing and gave the water system and roads to the community. By the early 1950s, the Pacific Coast Coal Company's remaining land holdings were acquired by the Palmer Coking Coal Company (PCC). Much of this land has since been retained for mining and investment purposes. The City of Black Diamond incorporated on January 20, 1959.

Over the years, the City has increased its size and population through several annexations while simultaneously working to preserve its natural amenities. With the passage of the Growth Management Act in Washington in 1990, the Legislature found that uncoordinated and unplanned growth posed a threat to the environment, sustainable economic development, and quality of life. This piece of legislation paved the way for the City to begin shaping itself.

An important agreement between the City, King County, PCC, and the Plum Creek Timber Company (Plum Creek) in 1996 established the Black Diamond Urban Growth Area (BDUGA) and Potential Annexation Areas (PAAs) which enabled the City to plan for environmentally sustainable growth. This agreement along with the 2005 Black Diamond Open Space Protection Agreement between the City, King County, Plum Creek, and the Cascade Land Conservancy identified open space around the City for permanent preservation and established minimum urban densities within the BDUGA. The most notable (largest) annexation was in 1998 when the City annexed the Lake Sawyer community and effectively took in approximately 786 acres with a population increase of 1,480.

Due to its origin as a resource-based settlement with its rolling topography, lakes, streams, forested lands, and open meadows, the City has a unique development pattern consisting of pockets of single-family residential areas and small commercial uses located in three general areas similar to small European or rural east-coast villages. Such a pattern differs from traditional west-coast small towns which developed around a central commercial core with a grid street pattern.

Regional projections suggest that significant growth will occur over the next twenty years. The neighboring cities of Covington and Maple Valley have been steadily growing. The City's 2011 approval of two Master Planned Development (MPD) permits and implementing Development Agreements is evidence that Black Diamond is poised for significant growth in the near future. In the face of this anticipated growth, the citizens of Black Diamond want to ensure that the quality of life is maintained and enhanced, the future Vision and goals are upheld, and City government will continue to be financially sound.



Overall, the Black Diamond Comprehensive Plan is founded on several key planning concepts to achieve the City's Vision. The Plan embodies a holistic approach to support sustainable growth and development by preserving open space, protecting quality habitat including riparian corridors and wetlands when determining lands that are appropriate for development at different intensities.

Development within the City is to be compact so as to preserve 35% to 40% of the entire City as open space. Open space will be a connected network of environmentally sensitive areas, trails, parks, and treasured places. This desired development pattern emphasizes the communities' strong commitment to preserve the natural beauty and intricate ecosystems through land use planning.

The Vision for a sustainable and fiscally sound future also includes a balance between housing and employment. This Plan provides a range of housing choices for all income levels with opportunities for people to live in close proximity to work. This is supported by the concept of ensuring accessibility to transportation options as well as expanding employment opportunities in the City's commercial and residential areas.

Another approach identified by the City leaders to achieve the vision and goals while attaining efficiencies for infrastructure investments, open space preservation, and achieving a balance of jobs and housing was the adoption of a Master Planned Development (MPD) ordinance in 2005 (Black Diamond Municipal Code [BDMC] 18.98). The City Council subsequently approved two MPD permits in 2010, the Villages and Lawson Hills.



The following summarizes the extent of these approvals:

The Villages MPD (1,196 total acres) – Maximum of 4,800 low, medium and high-density residential units, with 750,000 square feet of retail, commercial and light industrial uses, as well as schools, parks, and open space. Of the total project site, 42 percent will be open space. Lawson Hills MPD (371 total acres) – Maximum of 1,250 low, medium and high-density residential units, with 190,000 square feet of destination and neighborhood retail, 200,000 square feet of office space, as well as schools, parks, and open space. Of the total project site, 37 percent will be open space.

The MPD approvals, including the Environmental Impact Statement (EIS) for both permits were appealed and later affirmed by the City's Hearing Examiner on April 15, 2010. Black Diamond and the MPD proponents subsequently entered into Development Agreements (DAs) in December 2011 in accordance with state law and the City's Municipal Code. The two MPD permits are vested for 15 years from the time of their approval. With City Council approval, their vested rights may be extended out for an additional 5 years.

1.1 Purpose of the Comprehensive Plan

Many of the day-to-day decisions made by City officials can have a significant impact on how a community develops and functions. A comprehensive plan coordinates and guides individual decisions in a manner that moves the community towards its overall goals.

Comprehensive plans are meant to be internally consistent, coordinated, and built on public input to create a solid basis for implementation. No plan element is more important than another and each element is meant to complement the others.

What is a Comprehensive Plan?

A Comprehensive Plan is a broad statement of the community's vision for the future. It contains policies primarily to guide the physical development of the city, as well as certain aspects of its social and economic character. Comprehensive plans not only indicate how the community envisions the city's future, it also sets forth strategies for achieving the desired vision; it does so by directing regulations and implementing actions and services that support the vision.

A plan has three characteristics. First, it is comprehensive. The plan encompasses all the geographic and functional elements that have a bearing on the community's physical development. Second, it is general. The plan summarizes the major policies and proposals of the City but does not usually indicate specific locations or establish detailed regulations. Third, it is long range. The plan looks beyond the current pressing issues confronting the community to the community's future. Although the planning horizon for this plan is twenty years, many of its policies and actions will affect the City of Black Diamond well beyond that horizon.

While a Comprehensive Plan is meant to provide a strong and constant vision for the future, it is also meant to be a living document that must accommodate change. Therefore, the plan is meant to be regularly updated to account for changing issues or opportunities that the City faces. The amendment process is described in the implementation and amendment section of this Introduction chapter.

Functions of a Comprehensive Plan

Comprehensive Plan serves many purposes, including policy determination, policy implementation, and communication/education.

Policy Determination - First, it encourages City officials to look at the big picture, to step away from current pressing needs to develop overriding policy goals for their community. Second, it creates an environment for the City Council to guide its decision-making openly and democratically. The plan serves to focus, direct, and coordinate the efforts of the departments within City government by providing a general comprehensive statement of the City's goals and policies.

Policy Implementation - A community can move more effectively toward its goals and implement its policies after they have been agreed to and formalized through the adoption of a Comprehensive Plan. The Comprehensive Plan is a basic source of reference for officials as they consider the enactment of ordinances or regulations affecting the community's physical development (such as a zoning ordinance or a particular rezone), and when they make decisions pertaining to public facility investments (such as capital improvement programming or construction of a specific public facility). This ensures that the community's overall goals and policies are accomplished, by those decisions.

Guidance - The Plan also provides a practical guide to City officials as they administer City ordinances and programs. This ensures that the day-to-day decisions of City staff are consistent with the overall policy direction established by the Council.

Communication/Education - The Comprehensive Plan communicates to the public and to City staff the policy of the City Council. This allows the staff, the public, private developers, business people, financial institutions, and other interested parties to anticipate what the decisions of the City are likely to be on any particular issue. As such, the plan provides predictability. Everyone is better able to plan activities knowing the probable response to their proposals and to protect investments made on the basis of policy. In addition, the Comprehensive Plan can educate the public, the business community, the staff, and the City Council itself on the workings, conditions, and issues within their City; this can stimulate interest about the community affairs and increase the citizen participation in government.

1.2 Planning Framework

In 1990, the Washington State Legislature passed the Growth Management Act (GMA) to provide a basis for local, regional, and state solutions to growth pressures. Since 1990, the GMA has been amended several times, including the 2003 amendment requiring jurisdictions to review and update their plans every 7 years. More frequent (annual) reviews are allowed.

Cities and counties planning under GMA are required to prepare comprehensive plans to guide growth and development for a 20-year period. The GMA establishes mandatory elements for local comprehensive plans. These mandatory elements include land use, housing, capital facilities, utilities, transportation, economic development, parks and recreation. The state legislature added economic development and parks and recreation as additional required elements with the understanding that they would not be required until state funding was put in place to help cities develop them. When this update was completed, such funding had not been authorized. However, this Plan includes economic development and parks and recreation elements due to their importance for the overall well-being of the City and its residents.

A key requirement of GMA is that a city demonstrates the capacity to accommodate 20 years of forecasted growth within its UGA. The City of Black Diamond comprehensive plan accommodates 20 years of growth as required by GMA. Cities and counties are also required to periodically update their plans to comply with updates in regional and state requirements, as well as changes in local conditions.

Summary of GMA goals

RCW 36.70A outlines the goals with which this plan must comply. They are as follows:

- Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
- Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.
- Encourage efficient multi-modal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans
- Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.
- Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.
- Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions.
- Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability.
- Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands and discourage incompatible uses.
- Retain open space, enhance recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks and recreation facilities.
- Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.
- Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.
- Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time of occupancy and use without decreasing current service levels below locally established minimum standards.
- Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.



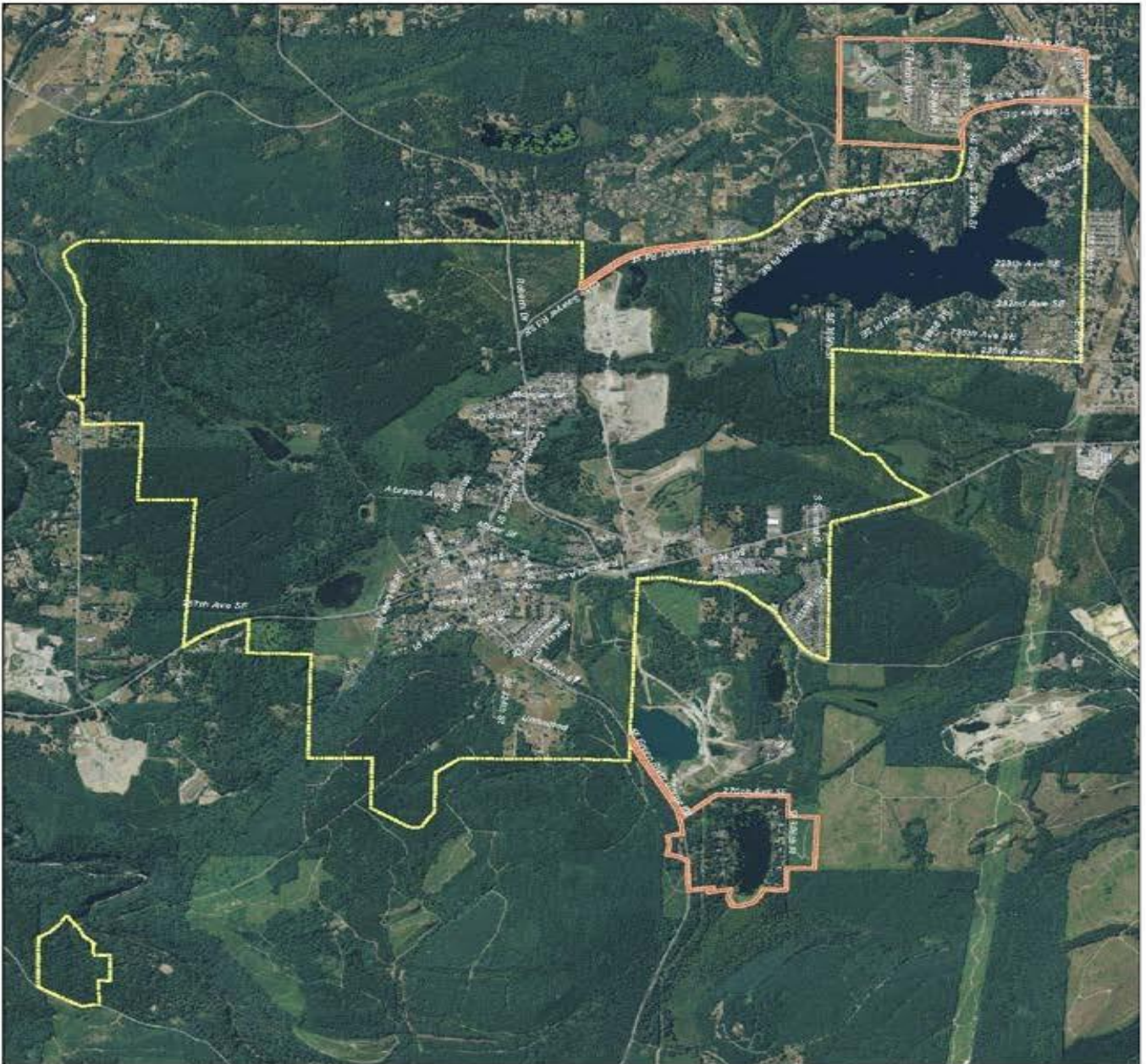
City of Black Diamond

Figure 1-1

AERIAL

Urban Growth Area (UGA)/Potential Annexation Areas (PAAs)

City Limits



City of Black Diamond, WA
Map prepared December 2021

This map is a Geographic Information System (GIS) map. It is not a survey map. It is not intended to be used as a legal document. It is not intended to be used as a legal document. It is not intended to be used as a legal document.

This Comprehensive Plan (the Plan) describes a vision and establishes goals and policies to guide the City's future for parks, recreation, trails, open space, the natural environment, land use, housing, transportation, and economic development. As required by the state's Growth Management Act (GMA), the Plan sets priorities for the next 20 years until 2035, a period in which Black Diamond is expected to grow rapidly and will need robust guidance to maintain its quality of life.

As part of the GMA, King County adopted and the cities endorsed, Countywide Planning Policies (CPPs), which provide a consistent planning framework to guide each city's plan. The CPPs also address the need to plan outside of city boundaries by establishing Urban Growth Areas (UGAs) and in the City's case, Potential Annexation Areas (PAAs). CPPs focus on planning issues that are regional in nature, such as housing, employment, essential public facilities, and critical infrastructure demands for issues around things like transportation and energy.

Also, part of the GMA is the Puget Sound Regional Council (PSRC) and the adopted Multicounty Planning Policies (MPPs) which are part of Vision 2040. Vision 2040 is an integrated long-range vision for maintaining a healthy region. The MPPs focus on the promotion of regional growth strategies to address land use, economic development, transportation, public facilities, and environmental issues. This regional growth strategy forecasts the geographic distribution of people, residential units, and jobs resulting from population growth. The MPPs serve as the regional guidelines and principles used for the Regional Council's certification of policies and plans.

PSRC is the federally designated Metropolitan Planning Organization (MPO) for the four-county central Puget Sound Region. As such, PSRC controls the distribution of federal transportation funds to the City. Chapter 2 includes more information about consistency with the King County CPPs and PSRC MPPs.

Vision 2040 Regional Planning Statement

The City's comprehensive plan sets out a vision and policies for how Black Diamond will accommodate growth until 2035 while meeting the regional objectives expressed in Vision 2040. At its core, Vision 2040 embraces sustainability principles. Sustainability is the balance of economic, environmental, and social equity. Simply defined, a sustainability lens is about meeting the needs of the present without compromising the ability of future generations to meet their own needs. The sustainability lens allows us to preserve and enhance what we have in order to plan for and achieve a livable community now and in the future.

This Comprehensive Plan incorporates a sustainable approach to planning and includes policies which preserve wetland, flood, habitat, geologic, shoreline, and aquifer critical areas as key features around which the City will develop. It requires large developments to employ master planning principles such as open space preservation, local economic development, mixed uses, compact form, and accessible civic spaces.

Specifically, the Black Diamond Comprehensive Plan addresses each of the major policy areas in Vision 2040 summarized as follows:

❖ Environment:

- Chapter 4 “Natural Environment” protects water quality, critical areas, and air quality.
- Chapter 5 “Land Use” promotes compact development and preserves open space.
- Chapter 7 “Transportation” promotes a multi-modal transportation system consistent with the compact development pattern promoted in the land use chapter.

❖ Development patterns:

- Chapter 5 “Land Use” encourages infill and orderly annexation of unincorporated areas.
- Chapter 2 “Community Character and Demographics” supports the regional growth projections.
- Chapter 5 “Land Use” promotes compact development, establishes community commercial/mixed-use centers and community design concepts that promote multimodal transportation options, and it sets up a transfer of development rights (TDR) program.

❖ Housing

- Chapter 6 “Housing” promotes housing affordability and diversity.

❖ Transportation

- Chapter 7 “Transportation” promotes a safe, well-maintained, multimodal, and sustainable transportation system.

❖ Public Services

- Chapter 8 “Capital Facilities” and Chapter 9 “Utilities” Elements ensure that public services, including stormwater, sewer, water, parks, administrative, fire and emergency services, and franchise utilities are adequate to serve growth and development.

❖ Economy

- Chapter 10 “Economic Development” promotes job retention and attraction.

1.3 Implementation of the Comprehensive Plan

Purpose and Relationship to GMA - A comprehensive plan is implemented through the goals and policies it identifies to guide and coordinate local decision making. The plan's policies shape the course of action taken by the community as it begins to implement the plan. The GMA encourages innovative implementation methods that are both regulatory and non-regulatory. Regulatory actions may include the adoption of a zoning ordinance or other land use regulations, while non-regulatory actions include implementation of the capital facilities plan, economic development strategies, and promotion of affordable housing development.

Regulatory Measures - The GMA requires that local governments enact land development regulations that are consistent with and implement the Comprehensive Plan. In order to accomplish this, the development regulations should be regularly reviewed to ensure consistency with the Comprehensive Plan in order to identify the need for amendments. In particular, the zoning code and zoning map must be consistent with the future land use map and policies established in the plan. The future land use map and land use policies in the Comprehensive Plan establish the use, density, and intensity of future development within the City.

Concurrency Management - Comprehensive plan policies also meet the GMA requirements for concurrency by establishing Level of Service (LOS) standards for capital facilities. The concurrency management system sets forth the procedures to be used to determine whether public facilities have adequate capacity to accommodate a proposed development. The concurrency management system also identifies the responses to be made by the City when it is determined that the proposal will exceed the level of service established, and therefore exceed the defined capacity, failing to maintain concurrency. The includes the criteria the City uses to determine whether development proposals are served by adequate public facilities and establishes monitoring procedures to enable periodic updates of public facilities and services capacities. Under the GMA, concurrency management must be established for transportation; however, jurisdictions may establish concurrency for any public services or facilities for which they have established level of service standards in their comprehensive plan. Level of service standards may be established for fire and emergency facilities, police, schools, sewer and water, transportation, and parks and recreational facilities and services.

Six-Year Capital Improvement Plan - Another major implementation tool of the Plan is the six-year schedule of capital improvements. The Capital Improvements Plan, or CIP, sets out the capital projects that the City must undertake within the next six years in order to implement the Plan. The six-year schedule is updated every other year, with the first year of the schedule acting as the capital budget for the fiscal year. During the annual updating of the six-year schedule, the cost estimates and funding sources listed are updated and revised to reflect any additional information that the City has received. The CIP schedule is also to be revised to include any additional capital projects that are needed to maintain the City's adopted level of service standards.

Coordination with King County - Through the CPPs, the City is a partner with King County and the other cities in shaping regional policies and actions. This includes updating the CPPs and evaluating UGA issues.

Consistency with PSRC - The City recognizes the need for regional planning and is therefore committed to keeping its policies and actions consistent with Vision 2040.

Administrative Actions - The Plan includes a number of policies that should be carried out through administrative actions, such as inter-local agreements, revised development and review procedures, and public involvement programs. Development and review procedures must be revised to implement concurrency and to ensure that new development complies with the performance standards established.

Public Involvement. For the Plan to remain alive, the citizens of the community must remain in touch with its implementation. As the plan is tested by development, there will be the need for ongoing amendments to respond to changing conditions. As the community matures, the vision of the future will change, and new needs and priorities will emerge. Continued public involvement and communication is crucial to keeping the process fresh and engaging so that the planning "wheel" does not have to be reinvented every few years. The City has adopted a public participation program which is incorporated into this Comprehensive Plan.

1.4 Amending the Comprehensive Plan

The Comprehensive Plan is intended to reflect the community's vision and to plan to accommodate expected change. Through its Comprehensive Plan, the City intends to manage its future effectively. In order to do so, the comprehensive planning process should be approached as continuous, with ongoing review and updating as necessary to reflect changes that occur over time. This plan should be reviewed annually and amended as appropriate.

For the Plan to function as an effective decision-making document, it must be flexible enough to accommodate changes in public attitudes, developmental technologies, economic forces and legislative policy, yet focused enough to insure consistent application of development principles. The GMA requires that the City establish a public participation program that identifies the procedures and schedules to be used to update or amend the Comprehensive Plan.

Other than the 7-year review and update process, the GMA limits comprehensive plan amendments to occur no more frequently than once per year, with exceptions. Exceptions to the GMA annual amendment cycle include the following: the initial adoption of a subarea plan, the adoption or amendment of a shoreline master program, the amendment of the capital facilities element of the plan that occurs concurrently with the adoption or amendment of the 6-year Capital Improvement Plan, and the resolution of an appeal of a comprehensive plan filed with a Growth Management Hearings Board or with the court.

In addition, proposed amendments must be reviewed relative to the plans of adjacent jurisdictions, and all proposed amendments proposed in any one year must be considered concurrently so that the cumulative effect of the various proposals can be determined.

Annual Plan Review and Amendment Process

The annual review and plan amendment process provides an opportunity to refine and update the Comprehensive Plan and to monitor and evaluate the progress of the implementation strategies and policies incorporated therein. During the review and amendment process, the Planning Commission and City Council shall consider current development trends to determine the City's progress in achieving the economic, land use, and housing goals established in the Plan.

This process allows for any individual, organization, corporation or partnership, general or special purpose government, or entity of any kind to propose an amendment to the Comprehensive Plan. In some cases, amendments to the Plan may be necessitated by amendments to the GMA or Countywide Planning

Policies or changes in federal or state legislation. These types of plan amendments may be recommended by the City Council, Planning Commission, City staff, or any citizen.

A proposed amendment to the Comprehensive Plan may be site-specific or area-wide in scope. If the proposed amendment involves specific real property, then the property owner must provide written consent for the proposal. A proposal that is not initiated by City Council or the Planning Commission shall be submitted to the Planning Commission in writing on a form as required by the Community Development Department, together with required filing fees.

The City requests that Comprehensive Plan amendment proponents provide the following information in their application for amendment:

- An environmental checklist for SEPA determination
- Name, address, and phone numbers of the applicant and contact person, if any.
- A general and legal description of the property and owners' consent if the amendment concerns specific real property.
- A description of what is proposed to be changed and statements addressing why the amendment is being requested.
- A statement of the anticipated impacts of the change, including geographic area affected and issues presented.
- A description of any changes to development regulations, modification to capital improvement programs, or functional plans required for implementation so that regulations will be consistent with the Plan.

Criteria to amend the Comprehensive Plan

Information to be considered for justifying a proposed amendment rests with the applicant who must demonstrate that the request fully complies with the following as applicable:

- The proposed change is consistent with the goals, objectives, and policies of the Comprehensive Plan; and
- The existing land use designation was made due to an error or oversight; or
- There has been a change in conditions since the plan was last adopted/amended that needs to be addressed; or
- There is an inconsistency between the comprehensive plan and the GMA, King County CPPs, or Vision 2040.

Information to assess necessary Comprehensive Plan amendments relates to such issues as whether:

- Growth and development are occurring at a faster or slower rate than envisioned in the Plan.
- Capacity to provide adequate services is diminished or increased.
- Land availability to absorb amounts and types of development envisioned in the Plan is not adequate.
- Assumptions on which the Plan is based are found to be invalid.
- The effect of the Plan on land values and housing is contrary to the Plan goals.
- The overall population growth and relative comparison with the forecasted growth projections contained in the Plan (and the inclusion of updated projections where appropriate).

The annual review and amendment process require public participation, both through community meetings to familiarize the public with the amendment proposals, as well as formal public hearings before the Planning Commission and City Council. Proposed plan amendments must be submitted to the State Department of Commerce (DOC) for review at least 60 days prior to final City Council adoption.

Policies for Comprehensive Plan amendments

The following policies guide the annual plan review and amendment process:

- **Policy CP-1:** Amendment procedures shall be fully outlined in the City’s land development regulations.
- **Policy CP-2:** The City shall schedule an annual review of the Comprehensive Plan to consider the need for amendments.
- **Policy CP-3:** The Director of Community Development shall maintain a list of all amendment submittals; this shall be known as the “docket” and shall be the official method of tracking all known requested changes or additions to the comprehensive plan.
- **Policy CP-4:** The Director of Community Development shall conduct an annual review of the docket with the Planning Commission to initiate formal consideration for inclusion as part of the amendment process.
- **Policy CP-5:** All Comprehensive Plan amendments, both City-initiated and all others shall be processed together with any necessary zoning, subdivision, or other ordinance amendment, to ensure consistency.
- **Policy CP-6:** All amendment proposals shall be considered concurrently by the Planning Commission and the City Council so that their cumulative impacts can be determined.



Annual Plan Review and Amendment Schedule

The plan amendment process is designed to be flexible to accommodate unique conditions such as the nature, complexity, or amount of plan amendment requests in a single year. The annual “window” of plan amendment submittals from the public will be open throughout the year, (that is, the public can submit requests for amendments at any time) however, they will only be “processed” in accordance with the adopted regulations. The timing of the annual update process is represented by the following generalized schedule:

- ❖ First Quarter - City accepts initial public requests for comprehensive plan amendments (docket).
- ❖ Second Quarter - Planning Commission reviews the docket and forwards its recommendations to the City Council for consideration. City Council decides which proposed amendments should be considered and establishes a plan amendment schedule.
- ❖ Third Quarter - Planning Commission evaluates the proposed amendments, holds a public hearing, and forwards its final recommendation to the City Council. Environmental and state agency review is conducted.
- ❖ Fourth Quarter - City Council reviews the recommendation, holds a public hearing, and decides on adoption of the proposed amendments.

Emergency Plan Amendment Consideration

The Comprehensive Plan may be amended outside the normal schedule if findings are adopted (by City Council resolution) to show that the amendment was necessary, due to an emergency in which property or human safety is in jeopardy, or to resolve an appeal of the Comprehensive Plan filed with the Central Puget Sound Growth Management Hearings Board.

1.5 Our Future Vision for Black Diamond for 2035



Public Process and Visioning

Black Diamond adopted its first Comprehensive Plan in 1980. With the passage of the GMA in 1990, the City was required to plan under the new legislation. In 1991, a statement of the City’s collective vision was prepared through a public process.

An updated GMA compliant Comprehensive Plan was adopted in 1996 and again in 2009. The Plan has been subsequently amended over the years, although the City’s Vision has remained substantially unchanged.

THE BLACK DIAMOND VISION

In the year 2035, Black Diamond will be a beautiful, active, friendly community based on a rich historic heritage and exceptional natural setting, with a small-town atmosphere. Forested areas and open space remain, while development maintains a healthy balance of moderate growth and economic viability.

The economic base will be a mix of retail, industrial/business park, office, tourist, and local cottage industries. Residential development will be a mix of types, sizes, and densities, clustered to preserve maximum open space and to access a system of trails/bikeways/greenbelts which connect housing, shopping, and employment with nearby regional parks and recreational facilities.

Citizens actively participate in an effective and open government decision-making process that reflects community values. There will be good cooperation among nearby jurisdictions, adequate public services, and environmental protection to provide a safe and healthy quality of life for all citizens, from children to seniors.

1.6 Vision Goals

The vision statement is amplified with the following over-arching goals that direct the more specific goals and policies of the plan elements.

- ❖ **Community Character Vision Goal 1:** Preserve and encourage the “small town” atmosphere.
- ❖ **Parks, Recreation, and Open Space Vision Goal 1:** Support the stewardship of natural resources and amenities throughout the community in the form of parks, trails, open space, and recreation.
- ❖ **Natural Environment Vision Goal 1:** Retain the City’s natural environment and scenic beauty.
- ❖ **Natural Environment Vision Goal 2:** Conversion of natural of spaces to developed land is discouraged or occurs only in areas where natural systems present the fewest environmental constraints while exercising responsible stewardship over natural resources and amenities.
- ❖ **Land Use Vision Goal 1:** Establish a pattern of development that maintains and enhances a safe and healthy quality of life within the community, from children to seniors.
- ❖ **Housing Vision Goal 1:** Make housing available to all economic and social segments of the community.
- ❖ **Transportation Vision Goal 1:** Establish and maintain a transportation system that provides safe and cost-efficient movement of people and goods.
- ❖ **Transportation Vision Goal 2:** Minimize the environmental and social impacts of transportation to critical areas.
- ❖ **Transportation Vision Goal 3:** Provide a transportation system that has adequate financing for necessary transportation improvements.

- ❖ **Transportation Vision Goal 4:** Maintain a transportation system that is consistent with Puget Sound Regional Council's forecasts and vision.
- ❖ **Capital Facilities Vision Goal 1:** Ensure that public services are available to support development future development.
- ❖ **Utilities Vision Goal 1:** Utility facility planning will be consistent to meet public service obligations for future growth.
- ❖ **Economic Development Vision Goal 1:** Encourage job creation by making the community a better place to live, work, and do business.

1.7 Plan summary

The Comprehensive Plan is based on these major findings:

- It is important to retain Black Diamond's small-town, historic character and preserve open space and historic treasures as the City grows.
- The City's sensitive area ordinance and shoreline management plan should be consistently applied. If a conflict should arise, the most restrictive provisions shall prevail.
- Transportation needs are one of the City's biggest challenges and therefore, the transportation element must address transportation issues and link them to strategies and options to minimize traffic congestion.
- Recommended level of service standards for parks, transportation, administrative services, police and fire protection must be upheld and new development must be served by adequate public facilities and cannot cause the level of service to be degraded below these adopted standards.
- A diversity of housing options within the community must be available to support the City's affordable housing needs.
- A coordinated system of recreational opportunities including local parks and trails must be connected to the regional systems and that these recreational areas are considered differently than the City's Open Space areas which are set aside for the purpose of preservation and conservation.
- A development pattern containing a mix of land uses necessary to support a healthy balance of jobs to housing.

CHAPTER 2. COMMUNITY CHARACTER AND DEMOGRAPHICS

2.1 Introduction

This Chapter provides an analysis of demographic characteristics that define our community. The data used for this analysis such as information about population, age, employment, education and income may be found in Appendix 1 to this Plan; *Community Character and Demographics*.

It is useful to compare current characteristics, or existing conditions, with future conditions because a better understanding of who we are and what we might become helps to steer the City's policies and regulations toward achieving its Vision. Such knowledge is needed to enable the City to plan for housing, employment, services and facilities, and infrastructure needs.

Planning Framework

The Growth Management Act (GMA, Revised Code of Washington [RCW] 36.70A.110) requires counties and cities to accommodate 20 years of growth based on the Office of Financial Management (OFM) growth forecasts. The GMA also requires countywide and regional coordination. The King County Growth Management Planning Council (GMPC) is the formal organization that develops and implements countywide policies. The GMPC includes King County and the cities within. Countywide coordination involves the GMPC's establishment of urban growth area (UGA) boundaries, population projections, and growth targets for planning purposes. These along with countywide planning policies (CPPs) create a coordinated countywide land use system. Black Diamond is required to have sufficient land to accommodate its growth targets for the twenty-year period.

Additionally, Black Diamond is located within a regional UGA, the Puget Sound Regional Metropolitan area. This area encompasses King, Snohomish, Pierce, and Kitsap counties. The Puget Sound Regional Council is the organization responsible for planning in the Puget Sound metro. The PSRC's mission is to plan for regional transportation, growth management and economic development. The GMPC Countywide Planning Policies (CPPs), growth projections, and targets implement the PSRC's larger regional growth strategies. This Comprehensive Plan must be consistent with the PSRC regional plans.

2.2 Existing Conditions

Population and growth trends

The OFM estimates that Black Diamond had 4,200 residents as of April 2015. The City experienced moderate growth in the 1980s and rapid growth in the 1990s. The rate of growth during this time far exceeded King County and the state.

The annexation of Lake Sawyer in 1998 doubled the number of Black Diamond residents. Growth after 2000 has slowed down. This is largely attributed to the 2008-2011 recession and a 10-year moratorium on applications for master planned developments. Another growth spike is anticipated to occur with the eventual build-out of two approved master planned developments, Lawson Hills and The Villages. Future growth projections are included later in this chapter.

Gender and age

The population is mostly evenly divided between males and females with 49.8% males and 50.2% females. This is consistent with the county and state. According to the 2010 Census, the City's median age was 41 years compared with the County and state at 37 years. The 2000 Census reports the median age in Black Diamond was 36 years. The City's aging trend is consistent with the national trend. The National Institute on Aging states that for the first time in history, people age 65 or older will outnumber children under the age of 5. Societal aging may affect economic growth and many other issues, including the sustainability of families and the ability of communities to provide resources for older citizens.

Black Diamond has a higher percentage of young people, 19 years and under, than the county and state. The City should take this into account when planning for recreational facilities and school impacts. It is also notable that the City has a smaller portion of people aged 20 to 64 years than the county and state: the largest gap is with people aged 20 to 30 years.

Race and Ethnicity

The predominant race in Black Diamond is white (92%) followed by Asian and Black or African Americans at 1.2% of the population. Those of Hispanic or Latino ethnicity make up about 4.6% of people living in Black Diamond. Given the City's history, there is a wide ethnic population mix that came to work the mines, including Italian, Welsh, Austrian, Yugoslavian, Finnish, Belgian, French, and Polish.

Educational Attainment

Education is often associated with socio-economic status and it is useful to consider as a component of economic development. The percent of high school graduates is substantially higher than the county and state. However, fewer Black Diamond residents have four-year or advanced college degrees than the county and state.

Household Composition

Approximately two-thirds of Black Diamond's 1,546 households are headed by married couples as compared with half in the state and slightly less than half in the county. Non-family households, the second largest category, include people who live alone or nonrelatives living together, such as unmarried partners or roommates. According to the US Census these non-family households are increasing nationally. This trend is also occurring in Black Diamond. Additionally, from 2000 to 2010, there are fewer households with children under the age of 18.

Household Size

Household size in Black Diamond is larger compared to the county and state. Although, households in Black Diamond are getting smaller. According to the 2000 Census, the average household size in the City was 2.73 people per household (PPH) compared to 2010 with 2.68 PPH. King County's average was 2.4 and the state's 2.51.

Income

Black Diamond's median household and median per capita incomes are higher than for the county and state. Household income is a measure of the combined incomes of all people sharing a household or place of residence and includes every form of income such as salaries, wages, retirement income and government transfers which include things like disability payments, veteran benefits, and social security.

Median per capita income finds the median value, or midpoint wage, after combining the range of all wages earned per person in a given area. At the same time, its average per capita income is lower than that of the county, but higher than that of the state. Average per capita income is measured by dividing the area's total income by its total population. These higher income levels are a positive sign for the local economy and for housing affordability.

Employment

According to the Puget Sound Regional Council (PSRC), 1,970 City residents were employed in Black Diamond as of 2014. The PSRC estimates employment by jurisdiction and in 2014 there were 470 jobs in Black Diamond. The breakdown for job categories and jobs categorized by industry may be found in Appendix 1. The majority of jobs in Black Diamond fall into the major category of services which includes information, professional, scientific and technical services, educational services (private), health care and social assistance, arts, entertainment, and recreation. The construction and resource job category is the second largest with Government and Education tracking closely behind.

Commute Time

Most Black Diamond residents commute out of town for work. According to the US Census, the mean travel time to work is around 36 minutes. This is approximately 10 minutes longer than residents of the state or King County. According to 2013 data from the US Census bureau, Center for Economic Studies, the breakdown for commute times to work is as follows:

- 22.6% commute less than 10 miles
- 61.7% commute between 10 and 24 miles
- 14.% commute between 25 and 50 miles

By and large, Black Diamond workers commute to the north and west. The top five employment areas for Black Diamond residents are Seattle, Kent, Renton, Auburn, and Maple Valley. These longer drives to work translate into higher commute costs meaning Black Diamond residents have a smaller proportion of their total income available for housing and other necessities and is likely impacting the quality of life for some residents. The City should aggressively develop economic development strategies to increase the number of job opportunities closer to home.

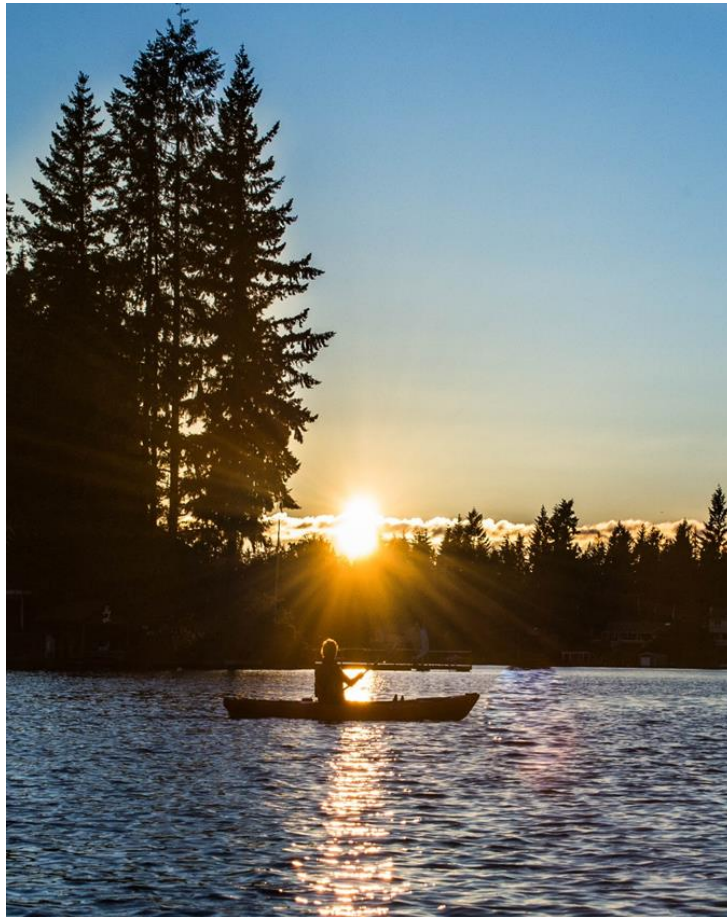
Unemployment

The unemployment rate for Black Diamond residents was 3.3 percent in 2013, approximately half that of the state and county. While Black Diamond has a lower unemployment rate than the county or state, the city itself has few local jobs. This low ratio of jobs to households is discussed in the Jobs/Housing Balance below.

Jobs/Housing Balance

The jobs/housing balance, as expressed by the ratio of jobs to households, is another indicator of commute patterns, economic conditions, and overall quality of life in a community. In 2009, Black Diamond had 0.3 jobs per household or approximately one job for every three housing units, reconfirming that the city is a net exporter of workers who travel to other locales for work.

A comparison of five rural small towns in King County including Carnation, Duvall, Enumclaw, North Bend, and Snoqualmie and the City's two neighboring jurisdictions, Covington and Maple Valley show that Black Diamond has a far lower job to housing ration. This means that fewer jobs are available within Black Diamond than in comparable towns and cities. The reality is that Black Diamond has a jobs/housing imbalance. The planning implications of this imbalance include a greater strain on transportation infrastructure, lower disposable incomes (since more is spent on commute costs) and impacts to quality of life such as less time for non-work activities (leisure, community, family, etc.).



However, the positive quality of life attributes of Black Diamond (e.g., access to the outdoors, scenic views, and a family-oriented community) help offset commute impacts and make Black Diamond a highly desirable place to live.

Ideally the jobs available in a community should match the labor force skills, and housing should be available at prices, sizes and locations suited to workers who wish to live in the area. The City should address the jobs/housing imbalance by investigating the types of mismatches that exist between the types of jobs in the area with labor force skills and housing options.

2.3 Future Conditions

Puget Sound Regional Council (PSRC) Land Use Target Forecast

In 2014, PSRC projected that Black Diamond would have 9,159 residents, 3,643 households, and 2,073 jobs in 2035.¹ The PSRC forecasts are not consistent with the anticipated growth from the two approved master planned developments (Lawson Hills and the Villages). Based on the permitted densities and the approved Development Agreements for these master planned developments, the City is planning for an additional 6,050 new housing projects by the year 2026.² Because of this, the City is not consistent with King County growth targets and the Regional Growth Strategy.

The City is working with PSRC to reconcile the differences in forecasting for the approved developments which will add 6,050 housing units and approximately one million square feet of commercial and employment uses to the existing 1,627 housing units and 561 jobs the result of which will be 19,262 residents; 7,674 households; and 3,709 jobs in 2035.

King County Growth Targets

King County first adopted the countywide planning policies (CWPPs) in 1992. The CWPPs provide a framework for the county and the cities within it to plan for growth. The CWPPs contain policies addressing topic areas such as environment, development patterns, housing, economy, transportation, and public facilities and services; the CWPPs also contain housing and employment growth targets and establishes urban growth area (UGA) boundaries to sufficiently accommodate future growth.

King County and the cities within coordinate to set growth targets based on the 20-year OFM forecast. The cities and county collectively amend and update the CWPPs. Policy DP-13 in the CWPPs requires that each jurisdiction plan to accommodate the minimum growth targets specified in the CWPPs. Consistency with the CWPPs ensures Black Diamond's compliance with the GMA.

The King County CWPPs set growth targets for the period 2006-2031. The planning horizon for this comprehensive plan update is 2035. Therefore, King County provided updated growth targets extending to the year 2035 for consistency. These growth targets reflect the minimum number of new housing units and jobs that Black Diamond must plan for to accommodate regional growth projections.

The 20-year targeted growth forecast for Black Diamond by King County for the year 2035 is 2,204 housing units and 1,218 jobs. Black Diamond's projected growth far exceeds the King County targets. Even so, the City is committed to manage growth responsibly and mitigate for its impacts. Chapters 3 and 5 discusses Black Diamond's capacity to accommodate growth.

2.4 Land Capacity

In 2012, King County released the "The King County Buildable Lands Report 2014," or the BLR. The BLR assessed the capacity of the cities and unincorporated areas of King County to accommodate projected growth to the year 2031, including areas within the boundaries of the City of Black Diamond. Using 2035 extended population and employment forecasts for King County. Table 2-1 shows the remaining housing

¹ Puget Sound Regional Council, Land Use Targets Maintenance Release 1 (LUT-MR1), release date April 14, 2014.

and employment targets for Black Diamond, accounting for housing and job growth from 2013–2015 as compared with King County growth targets.

According to King County buildable lands assumptions, within the boundaries of the City of Black Diamond, there is capacity to accommodate approximately 4,211 housing units, far exceeding the 2,204 units targeted for the city by King County. Likewise, Black Diamond has capacity to accommodate approximately 4,766 additional jobs, 3,533 jobs more than have been targeted for the city by King County. Based on these estimates, Black Diamond has more than enough capacity to accommodate the population and employment growth allocated to it by King County under GMA for the year 2035.

King County growth targets represent the minimum numbers of households and jobs each jurisdiction is required to accommodate under the GMA, but do not represent numbers of units or jobs that may actually result in Black Diamond as a result of legislation or market forces. In addition, King County’s estimates include only the area within the boundaries of the City of Black Diamond, but do not include capacity within the PAAs.² For these reasons, King County underestimates the land use capacity of Black Diamond.

The City anticipates a much higher number of households and jobs than have been allocated for it by the King County growth targets. Communications with Black Diamond and PSRC resulted in projections of 5,470 more households and 2,491 more jobs than have been targeted for it by King County due to the approved MPD permits. The disparity among King County growth targets and PSRC model is that the MPDs have not been forecasted even though development is underway and the City must expect that they will be built as permitted in the 2011 DAs.

Black Diamond is projected, and has the capacity to have, at least 19,262 people, 7,674 households, and 3,709 jobs in the year 2035, not including undeveloped portions of the Lake 12 and West Lake Sawyer UGA/PAAAs. Because it assumes higher population, housing, and employment levels, the Black Diamond/PSRC “unofficial” forecasts are used in this Comprehensive Plan update and form the basis for evaluating land use, transportation, and capital facility’s needs.

² Based on personal communication with Chandler Felt, King County Demographer, June 10, 2015.

Table 2-1 2035 Estimated Black Diamond Housing and Employment Capacity and Growth Targets

Housing Capacity	
Black Diamond Housing Capacity (2012)	4,231 Units
King County 2035 Housing Target (2013)	2,204 Units
Minus 20 Units Permitted 2013-2015.....	4,211 Units
Remaining 2035 King County Housing Target.....	2,184 Units
Surplus Capacity for Housing Target.....	2,027+ Units
Employment Capacity	
Black Diamond Employment Capacity (2012)	4,771 jobs
King County 2035 Employment Target (2013)	1,218 jobs
Minus Employment Gain of 5 jobs in 2013	4,766 jobs
Remaining 2035 King County Job Target.....	1,213 jobs
Surplus Capacity for Jobs Target.....	3,553+ jobs

Source: King County and personal communication between Black Diamond and PSRC

CHAPTER 3. PARKS, RECREATION, TRAILS AND OPEN SPACE

3.1 Introduction

The City's parks, recreation, trails and open space areas are a vital component of the health and wellbeing of the community. Access to these places contribute to Black Diamond's physical, mental and environmental health as they support the City's economic vitality and provide valuable fish, wildlife and vegetation habitat. Conservation and enhancement of ecological resources within the City is a key concept in this Comprehensive Plan.

City residents and visitors enjoy access to a system of citywide and regional parks, trails, and open space areas. The City parks, recreation, trails and open space system comprises about 5% of the total city land area and includes a range of uses from conservancy to active play areas. Lake Sawyer, the fourth largest natural lake in King County, offers public access for boating, water skiing, swimming and fishing.

Other agencies, such as King County and Washington State Parks, also provide significant recreational and open space opportunities for Black Diamond residents. All in all, Black Diamond and other public and private agencies have amassed an impressive amount of open space acreage. Much of it encompasses and preserves valuable streams, wetlands and habitat conservation areas. Almost every type of park, trail and open space experience is within or very near the City's boundaries.

3.2 Planning Framework

Regulatory Setting and Relationship to Other Plans:

Growth Management Act (GMA)

Cities planning under Washington State's Growth Management Act (GMA) are required to include a parks and recreation element in their comprehensive plan. RCW 36.70A.070(8) of the GMA states that the parks and recreation element must implement and be consistent with the parks and recreation facilities identified in the Capital Facilities Element. The element must also include three components:

- Estimates of park and recreation demand for at least a 10-year period;
- An evaluation of facilities and service needs;
- An evaluation of intergovernmental coordination opportunities to provide regional approaches for meeting park and recreational demand.

This Element meets these directives. The Parks, Recreation, Trails and Open Space Appendix provides an inventory and evaluation of demand and facility and service needs.

Americans with Disabilities Act (ADA)

The ADA was signed into law in 1990 and it is an important piece of legislation that ensures physical accessibility for people with disabilities. The City of Black Diamond is committed to providing equal access under Title II of the ADA for its parks, recreational and trails system.

Washington Recreation and Conservation Office (RCO)

The RCO is a significant source of grant funding for parks and recreation in the State of Washington. The RCO oversees parks and recreation planning throughout the state and through its grant program and ongoing planning activities, the RCO seeks to enhance and maintain statewide opportunities for recreation and protect the best of the state's wild lands and threatened and endangered species.

The RCO program provides leadership, funding and technical assistance to help communities plan for and implement parks and recreation projects. These projects may include trails, playfields, and other park facilities. In addition, the program helps to protect and restore the state's important habitat and biological heritage through open space protection and conservation.

Countywide Planning Policies

The King County Countywide Planning Policies (CWPPS) require the identification and protection of local open space in comprehensive plans. The Community Character and Open Space chapter of the King County Comprehensive Plan includes a requirement that all jurisdictions shall identify, establish and protect recreational open space and environmentally sensitive areas (King County, 2012). This requirement encourages policies that establish and contribute to the protection and stewardship of open space lands and green corridors.

3.3 Parks, Recreation, Trails, and Open Space Concepts

The Black Diamond Parks, Recreation, Trails, and Open Space Element highlights the following Vision Goals:

- ❖ **Natural Environment Vision Goal 1:** Retain the City's natural environment and scenic beauty.
- ❖ **Land Use Vision Goal 1:** Establish a pattern of development that maintains and enhances a safe and healthy quality of life within the community.
- ❖ **Capital Facility Vision Goal 1:** Ensure that public facilities and services are available to support future development.
- ❖ **Parks, Recreation, Trails, and Open Space Vision Goal 1:** Support the stewardship of natural resources and amenities throughout the community in the form of parks, trails, open space, and recreation.
- ❖ **Economic Development Vision Goal 1:** Encourage job creation by making the community a better place to live, work, play, and do business.

Black Diamond is committed to the continued provision of accessible and well-maintained facilities and services for current and future residents and to promote environmental conservation and education for publicly owned natural open space areas. The City endeavors to provide a system of parks, trails and recreational facilities that are located within easy reach of every resident and which meets the community's diverse recreational needs. The City will most likely continue to face the challenges of meeting the needs of a diverse range of age groups and interests, but it will work to strategically and creatively deal with these demands.

To meet the community's park and recreational needs, the City will have to focus on existing gaps in its parks and recreational system and resolve to meet future needs as it grows over the next 20 years. Meeting current and future needs includes having a full variety of park types, such as neighborhood and community parks as well as enough recreational facilities to support the City's population. Trails are an important feature of the open space system. Trails provide people with valuable links and nonmotorized transportation between neighborhoods, parks, schools and other public facilities, and commercial areas. By developing its trail system, the City will improve social interactions, health and mobility for its residents.

These needs can be met through the strategic location of new parks, trails and recreational facilities and by maintaining and upgrading existing facilities. Adherence to adopted Levels of Service (LOS) standards assures that the City is serious about meeting its citywide parks and recreational needs, as will an ongoing dialog with city staff and legislators regarding system wide capital improvements and funding levels. LOS standards will guide the type and location of the new parks and facilities needed and enable the City to require new development to pay its proportionate share of such facilities.

Planning for and maintaining a network of open space areas and green corridors in and around Black Diamond as it develops is critical for the City to achieve desirable land use and development patterns over time. The intent of this is to enhance and protect the overall appearance and character of the city; to retain its sense of place, design and character. Connected open space areas and green corridors serve many important functions including recreation, fish and wildlife habitat and the connection of individual features that comprise a natural system (e.g. wetlands linked by a stream in a watershed). They help connect people with nature and provide numerous economic, health, and educational benefits as well as allowing spaces where the City's residents can play and rest. Black Diamond open space and green corridors are composed of parks and other publicly owned land, along with sensitive areas and their buffers.

Black Diamond continues to look for ways to improve its parks, recreation, trails, and opens space system. Coordination with other agencies and service providers is necessary for ensuring efficiencies in the utilization of park and recreational facilities and services. The City's network of open space, green corridors and trails needs to have connectivity with the broader, regional network to optimize system wide recreational, social and environmental functionality.

3.4 Financing

The City's Capital Improvement Program (CIP) and Capital Facilities Plan contain capital project needs and funding sources for park projects. The parks, recreation, trails and open space projects included in the City's CIP are the result of the overall strategic park planning efforts that include adopted LOS standards.

Capital project financing comes from a variety of sources including current operating funds, Real Estate Excise Tax (REET), reserve funds, grants, private sector support, and voter-approved general obligation bonds. Additional funding sources such as park impact fees, user/concession fees, special use agreements, public-private partnerships, service contracts, and joint development ventures should be explored to ensure the City's financial capacity to meet its parks and recreational needs. In considering various park and recreation revenue sources as described above, funding sources should generally be matched to specific needs in order to take advantage of each fund's specific possibilities.

Specific funding strategies may include park and recreation program services user fees and general fund resources for facility maintenance, operation, minor construction, and facility development. Capital improvements can be funded through the general fund, real estate excise taxes, park impact fees, or other funding sources as described above.

3.5 Parks, Recreation, Trails, and Open Space Goals and Policies

- ❖ **PRTO Goal 1:** Support the stewardship of natural resources and amenities throughout the community in the form of parks, trails, and open space.
- ❖ **PRTP Goal 2:** Develop an interconnected system of local and regional parks, trails and open space.
- ❖ **Policy PRTO-1:** Include a variety of active, passive, developed, and natural parks, trails and open spaces that are accessible to all residents.
- ❖ **Policy PRTO-2:** Black Diamond's natural beauty and ecology shall be represented in the parks, recreation, trails and open space system.
- ❖ **Policy PRTO-3:** Provide a citywide system of recreational facilities that are attractive, safe, functional, assessable and accessible to all segments of the population.
- ❖ **Policy PRTO-4:** Continue development of a trail system which shall connect the City's historic district, neighborhoods, Jones Lake, and Morganville with an integrated King County regional trail system, the Lake Sawyer park sites, and a state trail system along the Green River.

- ❖ **Policy PRTO-5:** Budgeting for repair and maintenance of existing park and recreational facilities shall be a priority.

- ❖ **Policy PRTO-6:** Development of new parks, trails and open space areas within the City shall involve:
 - Strategic planning to identify need, location, partnerships and funding opportunities,
 - Obtaining land by purchase or dedication,
 - Emphasizing accessibility, recreational and environmental benefits, connectivity for nonmotorized transportation, and highlighting the historical aspects of the town's character, and
 - Ensuring adequate maintenance and operational funding prior to development of new parks or recreational facilities.

- ❖ **Policy PRTO-7:** Maintain an up-to-date Parks Plan.

- ❖ **Policy PRTO-8:** Coordinate with property owners, neighboring cities, school districts, King County and Washington State Parks in the planning and provision of recreational activities and facilities.

CHAPTER 4. NATURAL ENVIRONMENT

4.1 Introduction

This Natural Environment chapter is the framework for protecting the natural resources of the City. Black Diamond has an abundance of natural resources. The forests and fields, lakes, streams and natural drainage systems provide rich habitat for fish and wildlife unlike any other city in King County. The City's extensive natural beauty and intricate ecosystems form the basis of our natural resource and open space network that is integral to enjoying a high quality of life.

4.2 Planning Framework

Washington's Growth Management Act (GMA) requires cities and counties to designate critical (or sensitive) areas, which GMA defines as wetlands; critical aquifer recharge areas (CARAs); fish and wildlife habitat conservation areas; frequently flooded areas; and geologically hazardous areas. According to GMA, critical areas must be protected using the "best available science" for designating, preserving, and mitigating for impacts when critical areas are affected by development.

The goals and policies in this chapter provide for the protection, preservation, and maintenance of sensitive areas to provide open space for the enjoyment of City residents; furnish habitat for fish, wildlife, flora and fauna; improve water quality; and reduce the risk to residents of flooding and geologic hazards. The City's sensitive areas ordinance (Black Diamond Municipal Code Chapter 19.10) regulates land use and development consistent with this Chapter. Maps illustrating the general area and distribution of the City's Sensitive Areas may be found in Appendix 3.

4.3 Natural Environment General Goals and Policies

❖ **NE Goal 1:** Designate and protect the City's sensitive areas.

- **Policy NE-1:** Use best available science to preserve and enhance the functions and values of sensitive areas through policies, regulation programs, and incentives.
- **Policy NE-2:** Actively engage with King Conservation District to develop a stewardship program to encourage private landowners to manage their land in ways that support the preservation of sensitive areas and associated buffers.
- **Policy NE-3:** Encourage the use of creative and appropriate site design and housing types to balance environmental protection and achievable density.

- **Policy NE-4:** Encourage clustering and density transfers for both commercial and residential development to retain natural features, habitat and sensitive areas as open space.
- **Policy NE-5:** Coordinate with adjacent jurisdictions and tribes to identify, protect, and develop enhancement plans and actions for habitat networks and wetlands that cross jurisdictional lines.

4.4 Wetlands Goals and Policies

Wetlands are areas that are inundated through ground or surface waters, either permanently or seasonally, such that they are able to support vegetation typically adapted to saturated soils. Wetlands perform many ecological functions, including flood control, reductions of erosion and siltation, water storage, groundwater recharge, water quality maintenance, nutrient absorption, and supplying fish and wildlife habitat. Additionally, wetlands provide opportunities for open space enjoyment, research and scientific study, and outdoor education, and are economic resources for hunting, fishing, and recreation.

❖ **NE Goal 2:** Protect wetlands as ecosystems, and essential elements of watersheds.

- **Policy NE-6:** Conserve areas of native vegetation that connect wetland systems, through regulations, incentives and non-regulatory means.
- **Policy NE-7:** Ensure wetlands can fulfill their natural functions as recipients of floodwaters and as habitat for wildlife through the sensitive areas ordinance.
- **Policy NE-8:** Prevent fragmentation of habitat areas and enhance biodiversity through development review procedures.

4.5 Fish and Wildlife Conservation Areas Goals and Policies

Fish and wildlife habitat conservation areas are lands meant for maintaining populations of species in suitable habitats within their natural geographic distribution so that the habitat available is sufficient to support viable populations over the long term. Fish and wildlife areas are fundamental to the quality of life of the Black Diamond community. Healthy systems that sustain fish and wildlife habitat provide ecosystem services that include clean and abundant water, protection from flooding and climate extremes, and recreational opportunities, and are sources of aesthetic and educational values.

❖ **NE Goal 3:** Promote preservation of fish and wildlife habitat corridors.

- **Policy NE-8:** Avoid disturbance to valuable fish and wildlife habitat through the proper location, design, construction, and management of new development.
- **Policy NE-9:** Minimize disruption of areas in current use by endangered wildlife species or by unique wildlife populations.
- **Policy NE-10:** Protect and preserve habitats for species which have been identified as endangered, threatened, or sensitive by the State or federal government.
- **Policy NE-11:** Implement salmon habitat protection and restoration priorities identified in the Water Resource Inventory Area (WRIA) 9 plans.
- **Policy NE-12:** Minimize habitat fragmentation by linking wildlife habitats via corridors. Connect wildlife habitats with each other within the City and the region to achieve a continuous network.
- **Policy NE-13:** Coordinate land use planning and management of fish and wildlife resources with adjacent jurisdictions and Tribes.
- **Policy NE-14:** Maintain a long-term management strategy to prevent the spread of noxious weeds and manage these weeds where they are present in the City.
- **Policy NE-15:** Implement the Shoreline Master Program Restoration Plan.

4.6 Geologically Hazardous Areas Goals and Policies

The City of Black Diamond contains areas that are susceptible to the geologic hazards of erosion, sliding, earthquakes, or other geologic events such as differential settlement. In addition, portions of the Black Diamond area are subject to the hazards caused by geological events to areas of coal extraction, known as coal mine hazards. All of these types of hazards pose a threat to health and safety of the Black Diamond community when incompatible development is sited in areas of significant hazards.

❖ **NE Goal 4:** Avoid and/or minimize potential impacts to life and property from geologic hazards such that the site is rendered as safe as one not containing such hazard.

- **Policy NE-16:** Permit and condition development in geologic hazard areas when it is demonstrated that potential hazards will be stabilized through engineering or structural solutions.

- **Policy NE-17:** Minimize areas of vegetation loss and grading disturbance to protect water quality and prevent erosion, when developing on moderate and highly erodible soils.

4.7 Critical Aquifer Recharge Areas (CARA) Goals and Policies

The City is located within the South King County groundwater management area. The groundwater management plan for South King County identifies the western and northwestern portions of the City as having 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” (Figure 4-1). As shown on the figure, the map is intended for informational purposes only and is not specific enough to be integrated into City regulations.

❖ **NE Goal 5:** Protect the quality and quantity of groundwater used for public water supplies.

- **Policy NE-18:** Encourage the reduction of the use of pesticides and chemical fertilizers to the extent feasible and identify alternatives that minimize risk to human health and the environment.
- **Policy NE-19:** Reduce the rate of expansion of impervious surface in the City consistent with local, state, and federal regulations.
- **Policy NE-20:** Improve programs and management strategies designed to prevent and reduce contamination of street runoff and other sources of stormwater.
- **Policy NE-21:** Use LID (Low Impact Development) techniques to manage stormwater runoff pursuant to Title 14 of the Black Diamond Municipal Code and Stormwater Management Manual for Western Washington (SMMWW).

4.8 Frequently Flooded Areas Goals and Policies

Frequently flooded areas are floodplains and other areas that are subject to flooding. They typically include areas within the 100-year floodplain, which is designated by the Federal Emergency Management Agency (FEMA). Frequently flooded areas are generally flat and low-lying and are adjacent to rivers or streams that flood during storm events. These areas perform important hydrologic functions and may present a risk to persons and property from the movement of large volumes of water and debris downstream during storm events.

❖ **NE Goal 6:** Reduce flood related financial and public safety impacts.

- **Policy NE-22:** Minimize the alteration of natural surface water features by man or wildlife that retain or carry floodwaters and prevent land alterations that would increase potential flooding.
- **Policy NE-23:** Seek to meet or exceed regulatory standards for floodplain development as these standards are updated for consistency with relevant local, state, and federal requirements including those related to the Endangered Species Act.

4.9 CLIMATE CHANGE

❖ **NE Goal 7:** Recognize the value of ongoing preparation and planning climate change impacts by participating in and supporting local and regional efforts to reduce greenhouse gas emissions and prepare for climate change impacts.

- **Policy NE-24:** Reduce greenhouse gases through energy conservation, urban forests, and a reduction in vehicle emissions.

Policy NE-25: Encourage the innovation of renewable energy resources.

- **Policy NE-26:** Promote energy conservation and maximize energy efficiency with programs and educational initiatives aimed to “reduce, re-use, and recycle” at individual and community-wide levels.
- **Policy NE-27:** Support the use of renewable resources and improvements in energy efficiency for new and existing development.

4.10 Air Quality

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

❖ **NE Goal 8:** Identify and reduce or eliminate sources of air pollution.

- **Policy NE-28:** Adopt local land use planning and development control procedures designed to avoid and mitigate adverse cumulative air quality impacts prior to project approval and construction.
- **Policy NE-29:** Discourage using wood as a source of heat for residential development in low-lying areas susceptible to pollution accumulations.
- **Policy NE-30:** Conform to the federal and state clean air acts.

4.11 Water Quality

The City's policies regarding water quality recognize the importance of groundwater and surface waters as a resource and a critical source of drinking water, especially in rural areas. Groundwater is also used for industrial purposes, to generate power, and to irrigate farmland. A finite amount of precipitation is available to replenish local water resources and most of this occurs during the fall and winter. The precipitation that reaches the ground replenishes groundwater and provides base flow for streams, wetlands, and rivers during the dry months of spring and summer. The base flows sustain fish, wildlife, and their habitats, and recreational values.

❖ **NE Goal 9:** Ensure the long-term protection of the quality and quantity of groundwater resources within the City.

- **Policy NE-31:** The City recognizes the need for aquifer protection and will continue to coordinate planning efforts with King County in maintaining the management plan for South King County ground water through the South King County Ground Water Advisory Committee.
- **Policy NE-32:** Adopt stormwater regulations consistent with Ecology's Surface Water Management Manual for Western Washington (2012 or as revised).
- **Policy NE-33:** Require the installation of temporary erosion control measures before construction begins and, after the completion of construction, their maintenance through the stabilization of the site to control the quantity of sediment entering surface water.
- **Policy NE-34:** The City should encourage and practice low impact development approaches for managing stormwater to protect water quality by controlling pollutants and minimizing flooding and erosion.

4.12 Native Vegetation

The City's native vegetation policies address the value of protecting native vegetation and enhancing Black Diamond by planting native vegetation. It helps stabilize the environment's ecological balance by helping to cool and purify the air, generating oxygen, absorbing carbon, slowing and absorbing stormwater runoff, stabilizing slopes, reducing erosion, masking noise, containing glare, and conserving energy. Native vegetation enhances the community's appearance, identity, and natural beauty while providing habitat for fish and wildlife.

Along waterways, wetlands and lakes, native vegetation provides many important functions: it shades the water, thus reducing its temperature in the summer, and it slows stormwater, thus reducing its erosive forces and stabilizing steep slopes. Native vegetation is the basis of the food web that supports local fish and wildlife and it provides habitat elements for their survival.

Clearing and grading native vegetation for development can affect the community negatively because it can increase stormwater runoff by removing the vegetation and organic soils that absorb rainwater. Excessive erosion can be very damaging to water quality on adjacent and downstream water bodies, including those that support salmon and other fish. Requirements for clearing and grading and for preserving and replanting native vegetation help prevent these negative impacts by minimizing runoff and erosion.

❖ **NE Goal 10:** Preserve trees and native vegetation to protect habitat and ecological functions.

- **Policy NE-35:** Require protection of significant trees and limit unnecessary disturbance of vegetation during all phases of development and require mitigation as needed, including replacement for trees removed during development.
- **Policy NE-36:** Preserve existing natural trees and vegetation on steep hillsides, along stream banks and other habitat areas, and where visual buffers between uses or activities are desirable.
- **Policy NE-37:** Preserve native vegetation within streams, wetlands, and their associated buffers.
- **Policy NE-38:** Plant suitable native vegetation within degraded stream, wetland, and lake buffers. Encourage planting suitable native trees and native vegetation within steep slopes.
- **Policy NE-39:** Encourage removal of noxious and invasive species as a significant threat to native ecosystems.

- **Policy NE-40:** Require native vegetation that supports wildlife instead of non-native plant species and eliminate the use of invasive species when landscaping new developments.

- **Policy NE-41:** Monitor compliance with the City’s Tree Preservation Ordinance as a means to maintain rural character.

CHAPTER 5. LAND USE

5.1 Introduction

The land use element is central to the City of Black Diamond comprehensive plan and is intended to influence or alter development patterns over time. Decisions about the types and locations of land uses will determine where people live, shop, work, and play. The land use designations included in the element are meant to positively affect the quality of life in Black Diamond by determining the patterns and location of land uses and reducing the environmental impacts of future development and redevelopment. The land use element should be sensitive to the natural environment and physical constraints of land, while accommodating anticipated future growth and including community involvement in the comprehensive plan process.

5.2 Planning Framework

The Growth Management Act (GMA) requires a land use element to address the following items:

- ❖ proposed general distribution, location and extent of land uses,
- ❖ population densities, building intensities and estimates of future population growth over the next 20 years,
- ❖ provision of open space,
- ❖ protection of critical (sensitive) areas and public land,
- ❖ protection of the quality and quantity of groundwater used for public water supplies,
- ❖ review of drainage, flooding, stormwater runoff in the area and nearby jurisdictions, including guidance for corrective actions to mitigate or cleanse discharges that pollute waters of the state, and
- ❖ planning approaches to physical activity.

This chapter addresses all the above except for sensitive areas which are discussed in Chapter 4, Natural Environment, and water quality, stormwater runoff, flooding, and the provision of land for public purposes which are discussed in Chapter 8, Capital Facilities.

The community's vision is to guide and manage growth in a manner that promotes the City's natural beauty, friendly and community based small town atmosphere, and economic viability. This land use element supports the vision by providing a means to achieve and maintain desirable land use balances and development patterns over time.

5.3 General Land Use Goals and Policies

Black Diamond's overall land use concept is a shared desire to develop as a balanced community like traditional small towns that retain their distinctive local identity. A balanced, traditional small town means that the City will provide a variety of housing types, retail goods and services, and employment opportunities in proximity to one another. As the City grows, it is committed to protecting its sensitive areas, Treasured Places (e.g., historic structures and sites) and to retain the open spaces as key elements around which other land uses will be organized.

- ❖ **LU Goal 1:** Establish a pattern of development that maintains and enhances a safe and healthy quality of life within the community.

- ❖ **LU Goal 2:** Provide physical accessibility throughout the City.
 - **Policy LU-1:** Provide adequate land balance with a diversity of places to live, shop, work, and recreate.

 - **Policy LU-2:** Create an open space system that frames and separates distinct areas of development within City limits and urban growth areas (UGAs)/potential annexation areas (PAAs).

 - **Policy LU-3:** Explore new and existing funding sources to provide public services, amenities and infrastructure.

 - **Policy LU-5:** Promote the health and well-being of Black Diamond residents by incorporating the importance of recreational facilities and opportunities for physical activity into development proposals.

 - **Policy LU-5:** Explore regulatory and financial incentives to encourage and support development that meets higher performing energy efficiency and environmental standards.

 - **Policy LU-6:** New developments should be designed to incorporate features to encourage alternative travel modes, such as biking, walking, and transit.

Transfer of Development Rights (TDR) Program

The City's TDR Program was established as part of the Black Diamond Urban Growth Area Agreement (BDUGAA) and the Black Diamond Opens Space Agreement (BDOSPA). The TDR Program is central to the MPD Development Agreement for providing density bonuses to appropriate development sites while at the same time removing development rights from areas that have been determined to be of a greater public benefit as open space, parks, or community facilities. The TDR Program map shown in the Land Use Appendix in designates sending and receiving areas. TDR receiving areas are shown as an overlay on the Future Land Use Map, Figure 5-2.

Treasured Places

Treasured Places are part of the City's Transfer of Development Rights (TDR) Program. Treasured places are sites that offer outstanding environmental, resource or recreational value and/or provide significant public benefit by preserving or defining the character of the City. Treasured Place status is granted from City Council on property upon request. To qualify, the property must offer a unique public benefit using the following evaluation criteria:

- The property is a significant land resource that supports multiple environmental, resource or recreational purposes.
- The property offers educational or recreational value.
- The size of the property is of such size that the preservation of its environmental, resource or recreational values contribute to the character of the city.
- The property's open space value is substantially threatened due to encroaching, incompatible development patterns.
- The lands designated as treasured places become TDR "sending sites".

5.4 Community Character and Design Goals and Policies

Community character relates to the types of land uses and overall function, look and feel of different parts of the City. Character and design relates to key design elements, mixtures of uses, and the related activities and intensities of development. These are expressions of the relationship between the natural and built environment. The land use designations in this chapter define the intended character and function of the respective area. The City's "traditional" zoning approach must be implemented in a manner that achieves the intent of these small-town "character designations".

The community has expressed its strong desire that the City preserves forested areas and open spaces, views of Mt. Rainier, treasured places (e.g. historic and cultural places and structures), and a strong sense of community. The City will apply these fundamental principles to retain its small-town character:

- Retain the natural setting.
- Identify and protect treasured places and landmarks.
- Provide a mixture of uses and continuity of form.

- Encourage small scale residential, commercial and mixed used development.
- Implement Design Guidelines.
- Recognize that the City is integrally connected to the larger region.
- Provide public spaces for social interaction, neighborliness, community and civic life.

❖ **LU Goal 3:** Preserve the urban forest, significant trees, open spaces, views of Mt. Rainier, Treasured Places (e.g. historic and cultural places and structure), that are part of the community's identity.

- **Policy LU-7:** Use development regulations such as the Lighting/Dark Sky Ordinance to enhance and protect the overall appearance and character of the City.
- **Policy LU-8:** Retain a sense of place by protecting the community's important natural features and Treasured Places and support the City's Tree Preservation Program.
- **Policy LU-9:** Use building design, zoning regulations, and design standards to promote the development of buildings of a character and scale appropriate to the site and foster building variety while providing for designs that reflect the distinctive local character, historical character, and natural features.
- **Policy LU-10:** Develop incentives for infill development, redevelopment, and reuse of existing buildings and sites, provided that they enhance the existing character of the areas around them.
- **Policy LU-11:** Continue to rely on, evaluate, and enhance the City's Transfer of Development Rights (TDR) Program as an innovative technique to focus growth outside sensitive areas.
- **Policy LU-12:** Major entrances into the City will be given symbolic markers and landscaping to create a gateway effect around SR 169 and Roberts Drive.

5.6 Historic Preservation Goals and Policies

Maintaining the City's distinct historical settlement pattern as it grows, requires the retention of important historical elements. Historical resources make significant contributions to a sense of community and its quality of life and are sources of pride.

Historical downtowns and neighborhoods have invigorated local economies and these assets should be broadly interpreted to include structures, landmarks, sites, and views.

Design guidelines have been developed for areas of historical character. The intent is to ensure that the renovation and alteration of existing structures, as well as the construction of new buildings, are done in a manner that maintains the character of the district and improves its economic viability. Design guidelines for commercial and residential structures in historical areas were developed that address topics such as exterior building design and materials, setbacks from the street, and signage, sidewalks, building bulk, site design, and materials.

❖ **LU Goal 4:** Preserve historic resources to maintain the character of the City's core historic fabric.

- **Policy LU-13:** Provide reasonable flexibility in applying development requirements and building codes to promote the preservation and rehabilitation of historically and culturally valuable buildings and sites.
- **Policy LU-14:** Explore alternatives to the demolition or inappropriate exterior modification of structures and sites that are historically significant or otherwise deemed eligible for state, or national registers to accommodate private or public-sector development proposals.
- **Policy LU-15:** Promote Old Town as the City's primary historical component with the use of design standards.
- **Policy LU-16:** Encourage land uses and development that retain and enhance significant historical resources and sustain historical community character.
- **Policy LU-17:** Protect views of Mt. Rainier as the City develops and grows by using innovative and flexible development standards such as ability to alter setbacks and require changes in building size and shape to preserve view corridors.
- **Policy LU-18:** Partner with county, state and tribal agencies to ensure preservation of archaeologically significant sites.

Future Land Use Designations

The following describes each of the City's future land use designations and the goals policies for implementing them. This coupled with the Future Land Use Map in Figure 5-2 provides the framework for organizing and directing land uses in Black Diamond. When densities are referred to in this chapter, they are expressed in the number of units per net acre of land, which is the total area within a parcel boundary excluding sensitive areas and buffers. Geologically hazardous areas are not subtracted as part of calculating net density.

5.7 Master Planned Development (MPD) Overlay

An overlay is a tool that is placed or laid “over” a base land use designation and establishes regulations that are in addition to those of the “underlying” zoning designation. The intent of the MPD overlay is to tailor criteria and implementing regulations for lands that have been proposed for an MPD. The MPD overlay is intended to take advantage of opportunities to create a clustered mix of residential, commercial or civic uses along with open spaces 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 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, Figure 5-2. Areas with an MPD overlay designation are intended to develop only after 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 or site plan shall be prepared and will specify the residential and nonresidential uses, densities and intensities, phasing of development, and specific development standards that apply to the site. Some MPD sites may also be designated as TDR receiving areas.

There are two Master Planned Developments (MPDs) currently under construction in the City of Black Diamond. The build-out of these MPDs will result in housing units that exceed the Countywide adopted growth targets and the regional growth strategy, as discussed in Chapter 2 of this Plan. In order to align the City’s future growth with countywide and regional growth projections, the allowance for any new MPDs must be carefully considered.

MPD Designation Criteria

- The designation of any new MPD should be discouraged until full buildout of the two currently under construction and until such time as the City’s growth projections are within the range of adopted growth targets consistent with the King County CWPPs and the PSRC regional growth strategy, Vision 2050.
- Existing or planned public facilities are adequate to support the planned development density.
- The area is not predominated by environmentally sensitive areas, and/or the development plan contains standards that will allow development while providing appropriate protection to the environmentally sensitive areas. The level of protection must be equal or better than that provided by the City’s environmentally sensitive area policies and regulations.
- There is either a need for or benefits that will clearly derive from providing flexibility in zoning that cannot be provided by other mechanisms.
- The parcels are at least 80 contiguous acres in area and in single or unified ownership.

- The development plan requires flexibility to meet the requirements of an MPD.
- The MPD will provide public benefits, in the form of preservation or enhancement of physical characteristics, conservation of resources, provision of employment, improvement of the City's fiscal performance, provision of adequate facilities, and other public benefits identified by the City.
- At least 50% of the MPD site is devoted to open space uses, which may include recreational amenities. ○ Adequate mitigation, consistent with Black Diamond Municipal Code and state and federal codes for adverse impacts on the community, neighborhood, and environment is provided.
- MPD densities are urban (min 4 dwelling units per acre).

MPD Goals and Policies

- ❖ **LU Goal 5:** Provide for alternative, innovative forms of development that preserve open space and promote a balanced mix of housing, employment, civic and recreational activities.
 - **Policy LU-19:** Provide significant opportunities for public involvement when considering an MPD proposal
 - **Policy LU-20:** Require innovative site design and use of progressive techniques to provide for environmentally sustainable development. This will include the use of "low impact" engineering techniques and the employment of "green infrastructure and construction" as feasible.

5.8 Transfer of Development Rights (TDR) Receiving Area Overlay

The TDR Receiving Areas Overlay is applied to lands that, pursuant to City policies, annexation agreements, or other legal instruments of records, are identified as areas that are suitable to receive development density bonuses through the TDR Program. Properties to which the TDR Receiving Area Overlay is applied should be those identified through the City's TDR program, as codified in the Black Diamond Municipal Code. The TDR Receiving Areas are intended to develop at urban densities only after the transfer of development rights. General criteria for designating TDR Receiving Areas includes the following:

- Existing or planned public facilities are adequate to support the planned development density.
- The area is not predominated by environmentally sensitive areas, and/or the development plan contains standards that will allow development while providing appropriate protection to the environmentally sensitive areas.

- The level of protection must be equal or better than that provided by the City's environmentally sensitive area policies and regulations.
- There is either a need for or benefits will clearly derive from providing flexibility in zoning that cannot be provided by other mechanisms.

5.9 Gateway Corridor Overlay

The purpose of the gateway corridor overlay is to provide standards to protect the scenic character of the city's gateways along the SR 169 corridor, with its commanding views of Mount Rainier and other attractive natural features and also along the Auburn-Black Diamond Road to provide a positive transition from the adjacent rural unincorporated area.

The Gateway Corridor Overlay is applied to the following areas:

- Within two hundred feet of the State Route 169 right of way, commencing at the city's northern most boundary to the north side of the Roberts Drive intersection; and
- Within two hundred feet of the Auburn Black Diamond Road from the western city limits eastward to its first intersection with an arterial street.

5.10 Urban Reserve Goals and Policies

Under the provisions of the GMA, counties must identify Urban Growth Areas (UGAs) around existing cities within the County to accommodate planned growth. A UGA defines the area around the city that is available for its expansion during the 20-year planning period.

The UGA defines the limit within which the full range of urban services will be provided. Urban services typically refer to sanitary sewer and public water. GMA discourages the provision of urban services beyond UGA boundaries. Growth is first directed into areas already urbanized and that have existing public facility and service capacities. The purpose is to promote more compact urban development within, and adjacent to, existing urban areas in order to insure efficient utilization of land resources and to facilitate economic provision of urban services.

The King County designated UGA encompasses all cities located within the county. The boundary of the UGA is established by the County in consultation with the cities through consideration of land use demand projections, identification of critical and resource lands, and determination of areas already characterized by urban growth.

Potential Annexation Areas (PAAs) are areas adjacent to incorporated areas, within the King County designated UGA that have not yet been annexed to a city. As part of development of the Countywide Planning Policies (CPPs), King County and the cities throughout the county collaborated in determining each jurisdiction's most logical boundaries for long-term delivery of urban governmental services. The PAAs developed by the cities are included in the King County CPPs.

As of 2016, Black Diamond's PAAs include two areas totaling approximately 390 acres that have been identified as appropriate for future annexation. The PAAs are shown on the Future Land Use Map as "UGA/PAA". These two areas are the Lake 12 annexation area including a portion of SE Green River Gorge Road and West Lake Sawyer Annexation Area located west of Lake Sawyer along the Covington– Sawyer road, including Kentlake High School.

The Urban Reserve designation recognizes Planned Annexation Areas (PAAs) that will not be considered for annexation until a plan for extending the required utilities is developed and financed. The Urban reserve designation allows for single-family residential uses, their accessory uses and public and semipublic uses that meet appropriate development standards.

- ❖ **LU Goal 6:** Future annexation of the Potential Annexation Areas (PAA) will not occur until the City's growth is aligned with countywide growth targets and the regional growth strategy.

- ❖ **LU Goal 7:** Annexation may only occur in areas that can be serviced by adequate public facilities, utilities, and services.
 - **Policy LU-21:** Monitor growth in conjunction with adopted King County population projections and cooperative planning with the county to anticipate future urban growth area needs.

 - **Policy LU-22:** Give priority to infill development within the city limits and existing urbanized unincorporated areas.

 - **Policy LU-23:** Urban development within a Potential Annexation Area will not occur without annexation; unless there is an interlocal agreement with King County defining land use, zoning, annexation phasing, urban services, street and other design standards and impact mitigation requirements.

 - **Policy LU-24:** Consider only annexations that are within the PAA. Annexations shall be phased to coincide with the ability of the City, public services districts and utility providers serving the area to provide a full range of urban services to areas to be annexed.

 - **Policy LU-25:** Approval of the annexation of the Lake 12 Area shall include permanent public access to the lake.

 - **Policy LU-26:** Prior to annexing the Lake 12 Area, a traffic study shall be completed to determine the appropriate city road standards that apply to all public roads within the annexation area.

- **Policy LU-27:** Development in the Urban Reserve designation shall not be allowed until plans for public water, sewer, and other services are available and planned for with adequate funding mechanisms. Such plans shall be developed prior to or concurrent with annexation.

5.11 Residential Goals and Policies

Low Density Residential (LDR)

The Low Density Residential (LDR) designation provides primarily for single-family residential neighborhoods on lands suitable for residential development. This designation is intended to foster stable and attractive residential neighborhoods. It should be applied to both existing developed neighborhoods and areas intended for future development. Some of these areas are also designated as TDR receiving areas and are potentially eligible for additional density. Increased density in the LDR designation would only be possible within an approved MPD area with a transfer of development rights from a designated sending area. Residential densities may range from a base density of 4 units per acre to 6 units per acre with the acquisition of TDRs.

LDR Designation Criteria

Properties designated Low Density Residential should generally reflect all the following criteria:

- Existing or planned public facilities are adequate to support residential development at this density.
- The area is free of significant amounts of environmentally sensitive areas, excluding aquifer recharge areas.
- If the area is undeveloped, it is proximate to a neighborhood of single-family dwellings or is well suited to that use and is not suited to more intense residential development.
- The area is identified for Low Density Residential (LDR) development as part of an MPD.

Medium Density Residential (MDR)

The Medium Density Residential Development designation provides for stable and attractive residential neighborhoods of small lot, single-family homes, or attached single- and multi-family residences on lands suitable for these residential intensities. Medium Density Residential areas should be located near commercial services, employment, and arterial roads, and may also be in mixed-use developments. The base residential density in these areas is 8 units per acre. Increased density may be approved up to 12 units per acre with the acquisition of TDRs.

MDR Designation Criteria

Properties designated Medium Density Residential (MDR) should reflect all the following criteria:

- Existing or planned public facilities are adequate to support residential development at this density.
- The area is free of significant amounts of environmentally sensitive areas.

- The area fronts an arterial.
 - The area is developed and consists of a mix of attached and detached housing types. A residential neighborhood that is primarily single family with a strip of multifamily housing along an arterial does not meet this criterion.
 - Medium density housing can be developed to be compatible with existing development.
 - The area is identified as a receiving site for density under the TDR program.
- ❖ **LU Goal 8:** Protect and enhance the viability, livability, and affordability of residential neighborhoods while integrating multifamily development and higher residential densities where appropriate.
- **Policy LU-28:** Promote a variety of housing types to provide homes for all income levels and all family sizes on a mix of small and large lots.
 - **Policy LU-29:** Residential development patterns must allow for efficient provision of public services and utilities.
 - **Policy LU-30:** Promote developments to achieve maximum zoned density through clustering to create compact new communities surrounded by open space.
 - **Policy LU-31:** Allow multi-family residential in identified areas or when integrated as part of an MPD.
 - **Policy LU-32:** Use the MPD process to review all proposals on sites larger than 80 acres.

5.12 Industrial, Light Industrial/Business Park Goals and Policies

Industrial (I)

The Industrial (I) designation is intended to provide for industrial enterprises that manufacture and distribute goods for regional, national, or worldwide markets, and that supply jobs and a tax base for the economic growth and stability of the community and region. The industrial zone will accommodate changing industrial technology and facility siting requirements under performance standards that protect nearby properties and environmentally sensitive areas and will protect industrial uses by prohibiting intrusion by non-industrial uses except those that are considered accessory to industrial enterprises. Uses will provide appropriate opportunities for manufacturing, warehousing and distribution, including outside manufacturing and mineral resource processing, where continuing operations do not harm surface and groundwater resources.

Light Industrial/Business Park (LI/BP)

The Light Industrial/Business Park (LI/BP) designation encourages manufacturing activities and manufacturing-related businesses with attractively designed and efficiently used areas for research and development and advanced technology manufacturing. To protect the community and the natural environment, allowed uses are those that do not create significant hazards or negative impacts. The allowed uses and site regulations in the light industrial/business park zone will provide appropriate opportunities for manufacturing, advanced technology manufacturing, research and development, light industrial uses, wholesale businesses and essential public facilities, located in a campus-type setting. Corporate and general offices will also be allowed. Limited commercial and retail service activities that support the employees of the immediate area may also be found in this designation. Uses that require significant amounts of storage (both indoors and outdoors) of materials and equipment may be allowed subject to screening requirements and an evaluation of compatibility with adjacent uses.

- ❖ **LU Goal 9:** Provide sufficient opportunities for industrial and business park development sites within the community.
 - **Policy LU-33:** Provide local employment opportunities that support the City as a sustainable community.
 - **Policy LU-34:** Create an aggressive economic development strategy, with the cooperation of the City, County and business and property owners.
 - **Policy LU-35:** Ensure that all Industrial, Light Industrial and Business Park development is consistent with all appropriate environmental standards.
 - **Policy LU-36:** Ensure that zoning regulations are sufficiently flexible to accommodate changing industrial needs.
 - **Policy LU-37:** Ensure that all Industrial, Light Industrial and Business Park development is functionally and aesthetically compatible with surrounding uses.
 - **Policy LU-38:** Recognize that Light Industrial and Business Park uses can be compatible with other less-intensive uses where appropriate performance standards are established.
 - **Policy LU-39:** Require Industrial and Light Industrial and Business Park areas to be functionally and aesthetically compatible with existing uses and to buffer impact generating uses from other uses, and site them carefully to minimize environmental impacts.

- **Policy LU-40:** Within areas approved for mineral extraction, require site reclamation and restoration pursuant to state mining laws and local environmental and land use regulations.
- **Policy LU-41:** Protect industrial lands from encroachment by incompatible uses and development on adjacent lands. Proposed conversions of industrial and employment lands to non-employment lands should be discouraged unless there is no net loss of employment within the City.

5.13 Commercial Goals and Policies

Town Center Commercial (TC)

The Town Center (TC) designation recognizes and continues the pattern of development found in the historic “Old Town” center as a community focal point. Black Diamond’s town center as reflected by the Town Center designation is the social and cultural heart of the community and its character should be protected and enhanced. Mixed uses in this area should be encouraged. The Town Center designation is intended to be applied to the historic Old Town center.

Community Commercial (CC)

Larger, community-scale centers outside of the Town Center are intended to meet the community’s growing needs, serve the needs of the surrounding area, and accommodate commercial uses that require larger sites, involve significant areas of outdoor product display or storage, or are oriented to the needs of the motoring public. Community Commercial areas will allow retail, restaurants, motels/inns, professional offices, entertainment and cultural uses, public and semi-public uses. Community Commercial areas may also include land-intensive commercial activities such as automotive sales, lumberyards, and other activities that include outdoor product display and/or storage.

Community Commercial areas should be located along major arterial routes, such as SR 169 to serve the broader community with a wider range of goods and services. Access to the arterial should be limited to combine access points to commercial developments, preferable that being an intersecting public street. Interconnectivity for both vehicles and pedestrians should be provided between sites. Sufficient land within the City should be designated to allow for development of uses that provide significant employment opportunities and potential of sales tax generation.

Neighborhood Commercial (NC)

Areas designated Neighborhood Commercial (NC) are intended to provide smaller scale neighborhood centers with convenience goods and services, while protecting neighborhood character. They are also intended to help reduce automobile trip lengths and frequency and to allow for non-motorized mobility.

Neighborhood Commercial areas will emphasize limited retail and service businesses that serve neighborhood pockets. Uses will include restaurants, food stores, day care centers, dry cleaning, personal care and medical and dental services, and similar services. Small B&B's up to eight units will also be allowed in the NC designation. The design and scale of these areas, and the size, location and design of parking areas, must be compatible with the surrounding the neighborhoods. Pedestrian and (future) transit access will be encouraged by providing shared parking and buildings sited near sidewalks.

This designation provides for a mix of uses, including residential development, on a single site ranging in size from three to a maximum of ten-acres. Development sites should be located in areas capable of being served by transit when available and capable of connecting to existing or planned pedestrian walkways or bikeways. Existing or planned public facilities must be adequate to support the intended scale of development.

Commercial goals and policies are as follows:

- ❖ **LU Goal 10:** Ensure that opportunities for convenient and concentrated commercial development are provided to support both the local and regional market.
- ❖ **LU Goal 11:** Encourage the concept of mixed-use development in the Town Center (TC) and Commercial zoning designations to create diverse and self-sufficient neighborhoods.
 - **Policy LU-42:** Retain and enhance the existing commercial areas while providing sites large enough to accommodate significant commercial uses.
 - **Policy LU-43:** Provide day-to-day retail goods and services within walking distance of most residential neighborhoods.
 - **Policy LU-44:** Encourage well-planned, coordinated commercial development within the SR 169 area and discourage strip retail development through the use of design standards.
 - **Policy LU-45:** Prioritize funding of infrastructure and community enhancement projects in the Town Center to encourage redevelopment and investment in this area.
 - **Policy LU-46:** The Town Center area shall be pedestrian oriented and include a mix of parks, residential, civic, retail, commercial, office, entertainment, services and hospitality services (inns and meeting centers).
 - **Policy LU-47:** Parking in Community Commercial areas should be located to the sides and rear of buildings.

- **Policy LU-48:** Require cross-access between sites to reduce the number of driveways along arterial streets. Pedestrian connections between sites should also be provided.
- **Policy LU-49:** Promote a compatible mix of land uses that create a diversified environment that mixes shopping, employment, recreation, and residential opportunities where appropriate.
- **Policy LU-50:** Promote quality in the design and construction of development through the use of design guidelines to maintain or enhance community character.
- **Policy LU-51:** Discourage the conversion of Community Commercial designated areas to uses that do not create jobs or ongoing sales tax revenue for the City.

5.14 Public Land Goals and Policies

The Public designation identifies properties under public ownership, whether by the City or other governmental entities that are either currently used or intended for uses such as public utilities, parks, libraries, community centers, or elementary schools. This includes the City's watershed, which is located approximately 1.5 miles southeast of the City limits and is otherwise surrounded by unincorporated King County. Lands falling within the Public category should be those intended to remain within public ownership and management for long periods.

❖ **LU Goal 12:** Ensure compatibility between land providing necessary services to the community and surrounding land uses.

- **Policy LU-52:** Public uses should respect the neighborhood and district context in which they are proposed by adherence to the City's design guidelines and zoning code.
- **Policy LU-53:** Public buildings and spaces should be designed to be compatible with Black Diamond's unique architectural heritage and qualities.
- **Policy LU-54:** Public buildings and spaces should fulfill their role as gathering areas and community resources.

5.15 Regional Coordination Goals and Policies

The City recognizes that coordination with neighboring cities, counties, and tribal government is a requirement for sustainable growth and prosperity. The GMA mandates regional coordination and Black Diamond shares planning and growth management responsibilities with King County and the Puget Sound Regional Council (PSRC). In addition to the regional coordination of comprehensive plan policies and allocation of population and employment growth targets, the GMA requires that city and county

development regulations identify a process to review the siting of “essential public facilities”. These are large scale land uses that provide regional benefits and include airports, state educational facilities, state or regional transportation facilities, state and local correction facilities, solid waste handling facilities, and inpatient facilities (e.g. substance abuse, mental health, group home, and secure community transition facilities).

❖ **LU Goal 13:** Coordinate land use and development actions with government agencies, adjacent jurisdictions, and tribes as appropriate.

- **Policy LU-55:** Use the countywide planning policies and PSRC Vision 2040 as a basis for regional coordination and land use decisions.
- **Policy LU-56:** Monitor implementation of the comprehensive plan for changed conditions in the City’s anticipated growth, consistent with the City’s vision, GMA requirements, countywide planning policies, and PSRC Vision 2040 and make amendments as necessary.
- **Policy LU-57:** Coordinate with other governmental jurisdictions to site, when necessary, essential public facilities that are typically difficult to site and which are necessary to meet the needs of the regions present and future growth.
- **Policy LU-58:** Conduct appropriate public review and hearing processes, including environmental impact assessments and statements where appropriate, to ensure regional input on the siting of certain development activities.
- **Policy LU-59:** Ensure that essential public facilities sited in the City are consistent with the goals, objectives, and policies of the City’s comprehensive plan.

5.16 Open Space Area Protection

A key implementing agreement of the Black Diamond Urban Growth Area Agreement, which provided for the City to expand through the annexation of approximately 467 acres in 1996, is the Black Diamond Area Open Space Agreement (BDOSA). This agreement was signed by King County, Black Diamond, the Plum Creek Timber Co. and the Cascade Land Conservancy in 2005. This agreement identified opens space lands around the City for permanent preservation, see Figure 5-1. Open space is essential to the quality of life in Black Diamond. The City identifies the following areas as opens space:

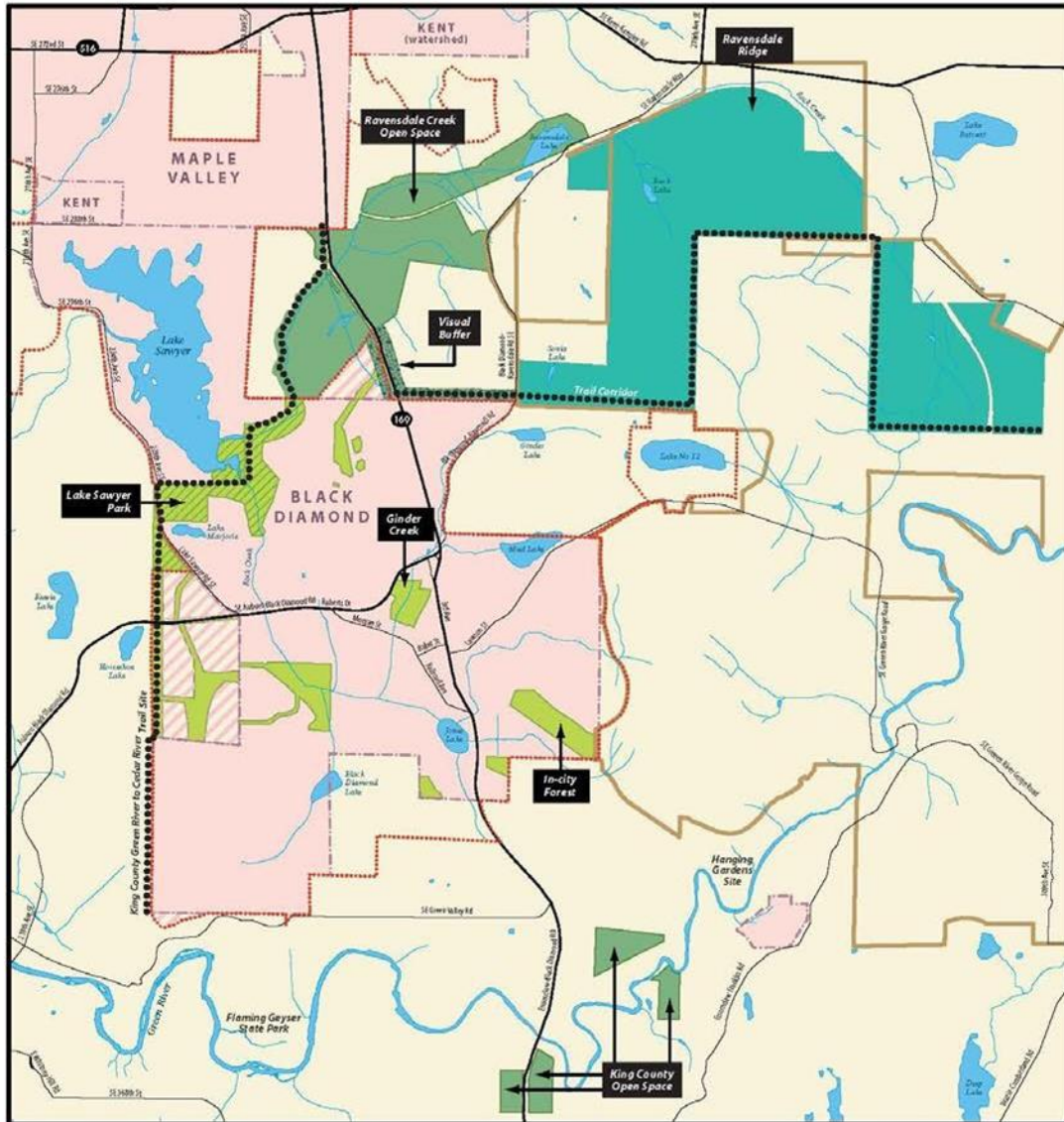
- All known environmentally sensitive areas, as regulated by the City.
- Lands adjoining the Rock Creek, Ginder Creek, Lawson Creek, Ravensdale Creek, and other riparian corridors.
- The following lakes: Jones Lake, Black Diamond Lake, Frog Lake, Lake Marjorie (Oak Lake), Lake Sawyer, and the land perimeters of those lakes when not subdivided.

- All existing and proposed public parks and open spaces.
 - King County- and City-identified wildlife habitat corridors.
 - All City, County, and State Parks and trails.
- ❖ **LU Goal 14:** Preserve existing open space areas and continue to develop an open space network that offers opportunities for outdoor recreation and enjoyment and the provision of important ecological functions that contribute to the community's aesthetic beauty and character.
- **Policy LU-60:** Create an open space system and map overlay for the primary unifying component of the comprehensive plan.
 - **Policy LU-61:** Integrate all known significant natural areas (wetlands, streams, steep slopes, geologic hazards, and flood hazard areas) into the open space overlay.
 - **Policy LU-62:** Protect and enhance the dominant natural features and open space structures, including gateways, viewpoints, and view corridors that characterizes the City.
 - **Policy LU-63:** Protect the City's historical sites and structures by connection to the open space system.
 - **Policy LU-64:** Plan for and retain a natural vegetation buffer around the perimeter of the City adjacent to unincorporated Rural-designated land. The buffer may vary in width based upon sensitive areas and other constraints. Once established by development, this buffer is to be permanent. Development adjacent to the buffer is encouraged to combine other open space features with the Urban-Rural buffer.
 - **Policy LU-65:** Encourage the preservation and protection of open space through a variety of approaches, including but not limited to, TDR, open space tax incentives, cluster development, public land acquisition, conservation easements, and other public and private initiatives.
 - **Policy LU-66:** Encourage the development of a stewardship plan for parks, recreation, trails, and open space. A stewardship plan would identify techniques and ways to maintain and enhance the active and passive open space areas (that lie outside the protected environmentally sensitive areas). The stewardship plan may rely on community involvement to implement the plan.

- **Policy LU-67:** Regularly review the Black Diamond Area Open Space Protection Agreement approved in 2005 to ensure that development is complying with this Agreement.

Figure 5-1

Area Map Black Diamond Area Open Space Protection Agreement

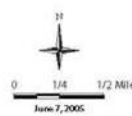


- | | | |
|--------------------------|-------------------|-------------------------------------|
| Black Diamond Open Space | Streams | Lake |
| King County Open Space | Minor Road | Incorporated Area |
| Conserved Forest Land | Major Road | Annexation Area |
| Visual Buffer | Future Trail Site | Urban Growth Area Line |
| Lake Sawyer Park | | Forest Production District Boundary |

Data Sources:
 Standard King County datasets: lakes, rivers/streams, urban/growth area line, forest production district, Custom King County GIS Center datasets: in-city forest, annexation areas, King County open space, trails.
 EAR Consulting Engineers, LLC (2008): In-City Open Space/Rivers, Glider Creek Open Space, Section 2 Visual Buffer.

Note:
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 GREGG and WIND Visual Communications and Web Ltd.
Map File:
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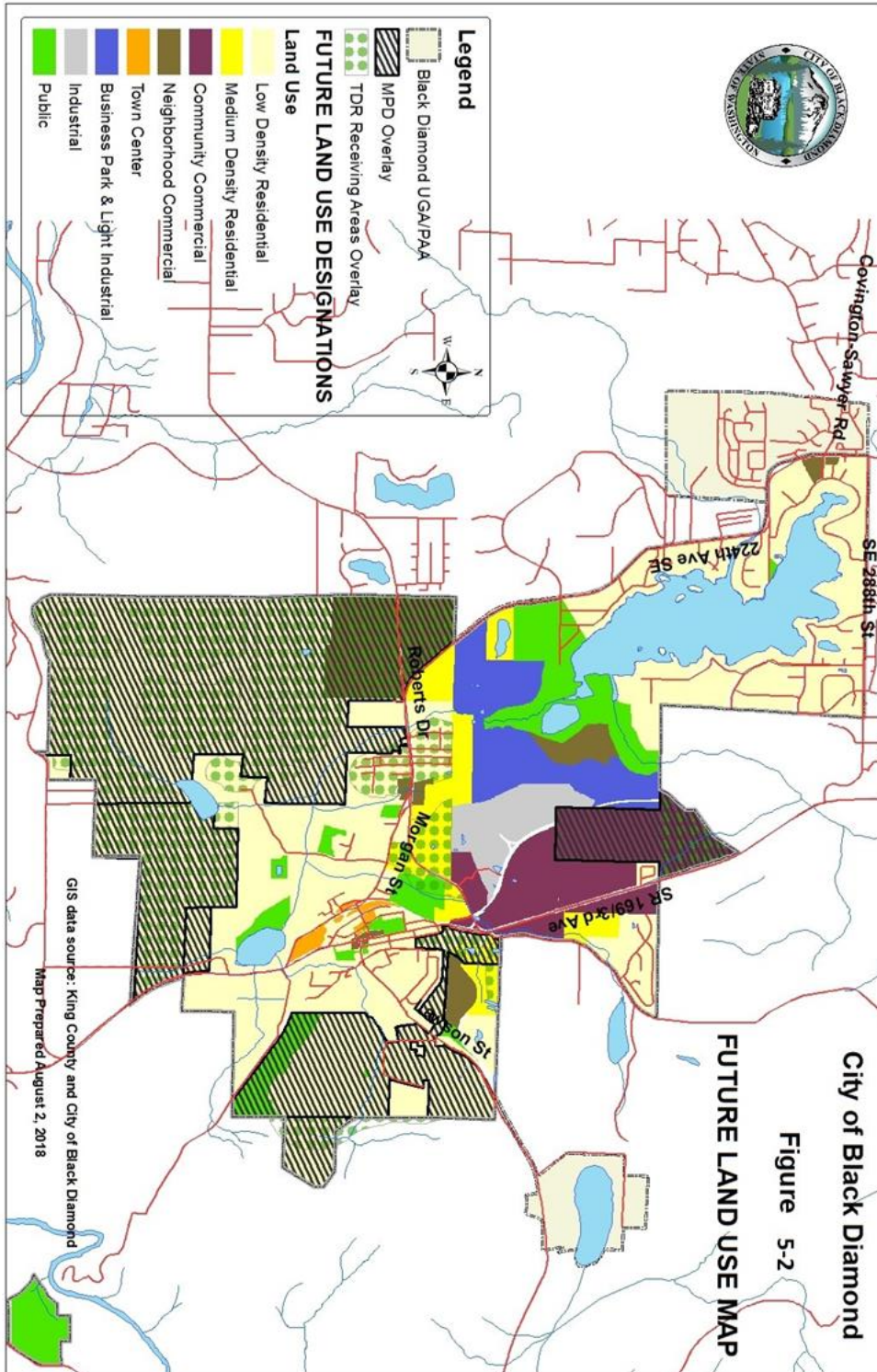


King County
 Department of
 Natural Resources and Parks
 Water and Land Resources
 Division

5.17 Shoreline Management

In 2014, the City updated its Shoreline Master Program (SMP) in accordance with WAC 173-26 and with a grant from the Department of Ecology. A map of shoreline jurisdiction is shown in the Land Use Appendix. Pursuant to RCW 36.70A.480, the Goals and Policies set forth in the City's Shoreline Master Program, including any future amendments, are hereby adopted and incorporated by reference into the Black Diamond Comprehensive Plan.

5.18 Future Land Use Map



CHAPTER 6. HOUSING

6.1 Introduction

This Housing Element is the City's policy guide to provide for available, affordable, and adequate housing for all persons across the economic and social spectrum consistent with the character of our community. It provides information describing the inventory and analysis of housing and forecasts future demands as well as implementation strategies for achieving housing goals.

The Growth Management Act states that the Housing Element of the Comprehensive Plan must recognize "the vitality and character of established neighborhoods" and must provide that it:

- Includes an inventory and analysis of existing and projected housing needs.
- Includes a statement of goals, and policies for the preservation, improvement, and development of housing.
- Identifies sufficient land for housing, including, but not limited to government- assisted housing, housing for low-income families, manufactured housing, multifamily housing, and group homes and foster care facilities.
- Makes adequate provisions for existing and projected needs of all economic segments of the community.

6.2 Context and Housing Strategies

Black Diamond is committed to plan for and accommodate future population growth which includes providing for the housing needs of all segments of the population, such as those with low incomes or special needs (young families, seniors, disabled persons, etc.). Understanding how the housing supply affects Black Diamond's land use and commute patterns, economy, and environment is important in taking a holistic approach to planning for future growth.

The City can be instrumental in facilitating a range of housing options to meet the varied needs of all residents by ensuring diversification of housing types such as single-family residences, duplexes, townhomes, apartments, and condominiums through new construction and rehabilitation.

Housing correlates directly with economic sustainability and jobs because if there are no affordable housing options near jobsites, then employers find it difficult to recruit and retain employees. Limited housing choices create long commute times for Black Diamond teachers, police officers, firefighters, and service employees who are forced to live elsewhere to obtain the housing they desire at an affordable cost.

Almost 90% of Black Diamond's housing stock consists of single family detached structures. A large portion of these structures are aging and there are few available units for low income earners or those with special needs.

The City is expecting robust growth over the next decade. At full build-out, the two approved Master Planned Developments (MDPs), Lawson Hills and The Villages, have planned to construct an additional 6,050 housing units in Black Diamond by 2026. These new developments make it even more important for the City to periodically monitor its housing supply to ensure the housing needs of all people are being met, especially with regard to affordable housing provisions.

The following goals and policies are intended to ensure suitable, decent, affordable, and alternative housing options for families, seniors, and persons with disabilities or other medical conditions in our community.

6.3 Housing Goals and Policies

- ❖ **H Goal 1:** Ensure adequate housing for all current and future residents of Black Diamond by achieving and maintaining quality housing and neighborhoods.
 - **Policy H-1:** Promote a variety of residential densities and housing types.
 - **Policy H-2:** Encourage the preservation of existing housing stock and development standards that minimize housing costs.
 - **Policy H-3:** Provide a balance of dwelling unit types, residential densities, and prices within the City.
 - **Policy H-4:** Provide flexibility in zoning and subdivision regulations to encourage a diversity of owner and rental housing types to ensure capacity to accommodate growth. A diversity of types and styles should include attached and detached units.
 - **Policy H-5:** Coordinate with PSRC and appropriate agencies to achieve goals of the Regional Housing Strategy.
 - **Policy H-6:** Adhere the same regulations to pre-manufactured and site-built structures.
 - **Policy H-7:** Encourage the preservation and maintenance of existing housing to ensure that such housing is safe and livable.

- **Policy H-8:** Promote housing affordability in coordination with transportation options, such as transit, bicycle, and pedestrian plans in proximity to transit hubs and corridors and planning for mixed uses in transit station areas.
 - **Policy H-9:** Monitor housing supply, type, and affordability to maintain diversity and affordability.
 - **Policy H-10:** Promote mixed-use residential/commercial development in designated Town Center, Neighborhood Center, and Community Commercial areas.
- ❖ **H Goal 2:** Encourage the availability of a wide range of affordable housing to meet the needs of households with varying economic status.
- **Policy H-11:** Work with King County, other local governments and appropriate agencies and programs to maintain the City's "fair-share" of affordable housing and provide affordable homeownership opportunities for very low, low, moderate, and middle-income households.
 - **Policy H-12:** Eliminate unnecessary or excessive requirements that create barriers to affordable housing. This may include any excessive requirements regarding siting and operating special needs housing.
 - **Policy H-13:** Coordinate with appropriate agencies to provide programs and services to needy households, special needs populations, and the homeless.
 - **Policy H-14:** Promote affordable housing in close proximity to employment, services, amenities, and multi-modal transportation opportunities.
 - **Policy H-15:** The City should identify regulatory, financial, and physical barriers to the development of affordable housing strategies to overcome such barriers.
 - **Policy H-16:** The City should consider inclusionary zoning tools which require developers to include a certain percentage of affordable housing in each development.
 - **Policy H-17:** Collaborate with King County to monitor the supply of affordable housing. Amend local housing policies in this chapter to address results of monitoring efforts.
 - **Policy H-18:** Preserve existing affordable housing units, where appropriate.

- ❖ **H Goal 3:** Recognize the need for and support housing for special needs populations.
 - **Policy H-23:** Support development of emergency, transitional, and permanent supportive housing with appropriate services for people with special needs throughout the city and region.
 - **Policy H-24:** Support opportunities for older adults and people with disabilities to remain in the community as their housing needs change, by encouraging universal design or retrofitting homes for lifetime use.
 - **Policy H-25:** Work with other jurisdictions and health and social service organizations to develop a coordinated, regional approach to homelessness.



CHAPTER 7. TRANSPORTATION

7.1 Introduction

The City of Black Diamond's (City's) transportation system is essential to its ability to move people and goods efficiently throughout the city and to provide connectivity between Black Diamond and the greater Puget Sound region. As with many communities, the City's development pattern, natural features and transportation system are inextricably linked. As a small community of predominantly rural character, the transportation network within Black Diamond is reflective of the original settlement pattern, varied topography, and gradual growth up to the present. As accounted for in this Comprehensive Plan update, significant amounts of new residential and commercial development are forecasted within the Lawson Hills and The Villages master planned developments (MPDs). This chapter of the comprehensive plan, also called the comprehensive transportation plan, identifies the policies and strategies for maintaining a safe, efficient, and effective transportation system that will serve both current and future needs for the City of Black Diamond. This chapter is supported by the Transportation Technical Appendix attached to this Plan, which summarizes the data analysis completed to support the comprehensive transportation plan.

7.2 Planning Framework and Consistency Statements

The Growth Management Act (GMA) (RCW 36.70A) includes planning requirements that link transportation directly to land use decisions and fiscal planning. The comprehensive transportation plan is structured within the context of these GMA requirements. Comprehensive Plans are required at a minimum to include the following elements for transportation:

- Inventory of local and state facilities and services
- Land use assumptions for estimating travel.
- Traffic forecasts for at least ten years based on adopted land use plan.
- Level of service standard for local arterials, state facilities and transit routes.
- Estimated traffic impacts and needs to meet current and future demands.
- Action plan to show compliance with level of service standards
- Pedestrian and bicycle component.
- Multiyear finance plan that identifies funding resources for action plan.

The GMA also requires coordination and consistency among planning efforts where there are "common borders or related regional issues" (RCW 36.70A.100). The Act also requires countywide and multicounty planning policies to serve as frameworks for ensuring consistency among local comprehensive plans (RCW 36.70A.210). The City's comprehensive transportation plan has been prepared consistent with State GMA requirements.

In addition, the Regional Transportation Planning Organization legislation, which was adopted with the GMA, mandates that regional agencies, PSRC in this case, certify that the transportation elements in local comprehensive plans are consistent with regional transportation plans (RCW 47.80.023). PSRC is tasked with reviewing local agency comprehensive plans to ensure that regional and local planning efforts are coordinated, and adopted regional policies and provisions are addressed. Most notably this includes Vision 2040, the region's strategy for addressing anticipated growth of population and employment through 2040, and Transportation 2040, the region's long-range transportation plan that outlines the investments and strategies needed to keep the region moving as growth occurs. Regional population and employment forecasts provided by PSRC that include city approved growth projections were used to estimate future transportation needs. The City's comprehensive transportation plan has been prepared consistent with PSRC's Vision 2040 and Transportation 2040 regional planning initiatives.

PSRC requirements for Comprehensive Plans include the following major elements for transportation: ○ Include transportation system management and demand management programs and strategies. ○ Use land development tools and practices that support alternatives to driving alone, including walking, biking, and transit use.

- Include complete street provisions and improve local street patterns for walking and biking.
- Avoid new or expanded facilities in rural areas. ○ Design transportation facilities to fit the community in which they are located.
- Use urban design principles when development and operating transportation facilities in cities and urban areas. ○ Incorporate environmental factors into transportation decision-making, including attention to human health and safety.
- Identify stable and predictable funding sources for maintaining and preserving existing transportation facilities and services.

King County requirements are generally consistent with those of the GMA and PSRC. One exception is that the County requires each local jurisdiction to establish mode-split goals for non-single-occupancy vehicle travel to all significant employment centers.

Need for the Comprehensive Transportation Plan

In 1996, the City completed its first comprehensive transportation plan which was updated in 2001 and 2009. This update provides a revised look at the existing transportation system; addresses changes in legislative requirements; reflects changes in economic conditions; evaluates current needs; and reviews the adequacy of the planned transportation improvements with consideration of the Master Plan Developments to meet future travel needs and conditions. Consistent with the regional update cycle, the City's comprehensive transportation plan is being updated to:

- **Determine Existing Transportation Deficiencies.** An inventory of the transportation system identifies the existing needs of the Black Diamond community. Some existing transportation deficiencies, including several on State Route (SR) 169, can be attributed to growth in other jurisdictions. These deficiencies could be addressed in a variety of ways, including improved interjurisdictional coordination and through the implementation of plans and programs that reduce reliance on single occupancy vehicle travel.
- **Meet GMA Requirements.** The City is required by the GMA to develop a comprehensive plan including a transportation chapter that includes a list of future system improvements to meet identified future needs and a multi-year financing plan.
- **Qualify for Funding.** State and Federal agencies require local governments to have a comprehensive transportation plan that demonstrates the community's vision of its future. The City's population has been steadily growing since 1996 and is anticipated to exceed 5,000 by 2021, which will provide expanded opportunities to pursue additional grant funds.
- **Plan for the City.** Both public and private sectors can use the comprehensive transportation plan when making decisions about the transportation system.

7.3 Elements of the Transportation Chapter

This Chapter of the Comprehensive Plan, with the information provided in the technical appendix, includes the following key elements:

- **Transportation Policies.** A list of policies the City will focus on to develop and maintain an efficient transportation system;
- **Transportation Improvement Program.** A list of transportation improvements to mitigate traffic congestion;
- **Funding Strategy.** A plan for funding the improvements and a contingency plan with additional funding sources; and
- **Concurrency Management System.** A monitoring system the City will use to make sure the transportation network will be able to accommodate development as it occurs.

7.4 Transportation Policies

The policies contained in this chapter are designed to guide development of the City's transportation system to serve development allowed under the land use chapter and adopted zoning. These policies are intended to guide the actions of the City, as well as private decisions related to individual developments.

Design, Construction and Maintenance

The following policies guide the design, construction, operation, and maintenance of the City's transportation system. An underlying objective is to develop a multi-modal transportation system to serve all existing and future land uses. The policies address design and construction standards of transportation facilities to accommodate all types of transportation safely and efficiently. Level of Service standards, maintenance standards, and the need for Transportation Demand Management strategies are also addressed.

- ❖ **Policy T-1 Roadway Design Policy:** The City will ensure adequate and safe access to property via a system of primarily public and limited private roads by:
 - Utilizing the functional classification system for existing and planned roadways to determine the level of mobility for all travel modes, level of access, and use.
 - Establishing a range of transportation standards and criteria to ensure roadways are designed in a manner that fits within the context of the built or natural environment, and consistent with the intended functional classification.
 - Implementing urban design principles in transportation programs and projects within the locally designated Town Center, Old Town.
 - Ensuring all roadway designs are coordinated with King County, Washington State, the Federal Highway Administration, and Metro Transit to achieve compatible design criteria, where applicable. The standards will also comply with federal and state design criteria.
 - Investigating the allowance of "low impact development" designs that minimize pavement width and emphasize the use of landscaping, and natural stormwater infrastructure treatment methods.

- ❖ **Policy T-2 Intersection Design Policy:** Intersection design should prioritize safety and efficiency for active and motorized modes of travel thus the roundabout is the preferred intersection control type for all new intersections when the mainline is an arterial or collector. Alternative intersection control types may be selected if roundabouts are determined to be unfeasible or inappropriate by the City engineer based on evaluation of the following considerations:
 - Safety for each mode of intersection users (e.g. pedestrians, bicyclists, motorists);
 - Adequacy of right of way and/or availability of additional right of way;
 - Environmental risks that could result in significant adverse environmental impact or substantially increase project costs; and
 - Physical context of project site including visual, natural and cultural setting.

- ❖ **Policy T-3 Connectivity Policy:** Improve local roadway features, and patterns in a manner that enhances walking, bicycling and transit use through improved connectivity.
 - The City of Black Diamond recognizes that increasing connections throughout the city not only reduces vehicle miles of travel and therefore, pollution and traffic congestion, but also increases the sense of unity in the community. Therefore, the City will limit the use of cul-de-sacs, dead end roads, loops, and other street layouts that form barriers to travel. Where roadway connectivity is impractical, pedestrian and bicycle access ways should be provided.
 - The City will encourage the use of trails and other connections that provide ease of travel at mid-block locations, between neighborhoods, and to key destinations. Private streets should generally only be allowed to serve a limited number of lots/dwelling units and/or only in unique circumstances. Private streets should not detract from overall motorized and non-motorized circulation.

- ❖ **Policy T-4 Level of Service (LOS) Standard Policy:** Monitor and adjust LOS standards that promote the optimal movement of people and goods. Ensure that new development does not degrade transportation facilities below adopted standards.
 - The adopted standard shall be LOS D for intersections along SR 169 and LOS C for all other arterial and collector roadways, and transit routes within the Black Diamond city limits. The LOS shall be based upon the Highway Capacity Manual and methodology detailed in the Transportation Element Support Appendix.
 - Assess transportation LOS standards for potential inclusion of pedestrian, bicycle, and transit.

- ❖ **Policy T-5 Maintenance Policy:** Maintain the City's transportation system at a level with a goal of achieving and maintaining a Transportation Improvement Board (TIB) average pavement rating of 70 to 80 and that seeks to use sustainable processes and materials.
 - The City will establish programs and schedules, such as a pavement overlay program, for the level and frequency of maintenance on its roadways, bikeways, and sidewalks.

- ❖ **Policy T-6 Driveway Spacing Policy:** Limit and provide driveway access to the road network in a manner consistent with the function and purpose of each roadway.
 - The City will seek consolidation of access points to state highways, arterials, and major collectors. This will complement the highway and arterial system, reduce interference with traffic flows on arterials, and discourage through traffic on local roads.
 - New roadways or redeveloping properties must comply with the spacing standards to the extent practical, as determined by the city. As the opportunity arises through redevelopment, roadways not complying with these standards could improve with

strategies such as shared access points, access restrictions (through the use of a median or channelization islands), or closure of unnecessary access points, as feasible.

- ❖ **Policy T-7 Local Access Policy:** Implement standards to limit the number of access points for each lot that may be served before a second point of access is required. Limit the length of dead end streets by either distance or number of lots served. Safe and convenient access requires multiple routes of ingress and egress. This is important for both residential convenience and for fire and police protection. A standard should be developed that balances unique topographic characteristics, future development plans, and the need for providing adequate access.

- ❖ **Policy T-8 Transportation Demand Management (TDM) Policy:** Transportation demand management (TDM) helps people use the transportation system more efficiently through education, incentives, products, and programs that remove barriers to non-drive alone modes such as transit, carpool, vanpool, walking, biking, and teleworking. TDM activities help get the most out of transportation investments. TDM implementers seek to accomplish a primary objective: connect all people with travel options that optimize the transportation system's capacity. TDM activities produce wide-ranging benefits to individuals and the transportation system—saving people time and money and reducing traffic congestion, vehicle emissions, and fuel consumption while supporting physical activity and enhanced safety. TDM activities make existing transportation investments perform better, extend the life of existing infrastructure, and can improve outcomes for new investments. TDM is typically implemented through programs administered by employers, major institutions, local jurisdictions, transportation management agencies, transit agencies and other transportation agencies and providers. Examples of TDM actions include:
 - Encouraging employers to provide information and promote the use of transit, carpools, or vanpools; promoting reduced employee travel during the daily peak travel periods through flexible work schedules and programs to allow employees to work part- or fulltime at home or at an alternate work site closer to home; and encouraging employers to provide TDM measures in the work place through such programs as preferential parking for High Occupancy Vehicles (HOVs), improved access for transit vehicles, and employee incentives for sharing rides.

 - Establishing mode-split goals for non-single-occupancy vehicle travel to all significant employment centers in the City.

 - Managing parking by including incentives for rideshare vehicle parking.

 - Promoting reduced parking requirements for new construction.

 - Promoting investments in walking and cycling infrastructure.

- ❖ **Policy T-9 Transportation System Management Policy:** Transportation System Management (TSM) is an approach to mitigating congestion and improving traffic operations through better management and operation of existing transportation facilities rather than expanding capacity.

TSM techniques are designed to improve traffic flow, air quality, and movement of vehicles and goods, as well as enhance system accessibility and safety using low-cost but effective strategies such as:

- Intersection and signal improvements
- Roadway bottleneck removal programs
- Data collection to monitor system performance
- Special events management strategies

The City of Black Diamond will encourage management of the transportation system by:

- Maintaining the existing transportation system assets;
- Supporting use of HOVs, including buses, carpools, and vanpool programs through both private programs and the direction of Metro Transit;
- Implementing roadway connectivity, and access spacing standards;
- Investing in pedestrian, bicycle, and transit facilities; and
- Coordinating with WSDOT or other affected agencies to determine if communications or other ITS infrastructure should be addressed as part of roadway design/construction. Identifying opportunities to improve travel reliability and safety with TSM solutions.

- ❖ **Policy T-10 Pedestrians, Bicycles, and Transit Policy:** Black Diamond recognizes the primacy of pedestrians and other non-motorized modes of mobility. The City shall lessen dependence upon and the influence of the automobile by encouraging complete streets and multi-modal travel for all users including pedestrians, bicyclists, and transit passengers of all ages and abilities. City actions will:

- Require new roadways to incorporate pedestrian, bicycle and transit facilities including appropriately spaced crosswalks on arterials and collectors.
- Provide for transit user needs beyond basic provision of service (e.g., by providing sidewalk and bicycle connections, bus pads, benches, shelters) to encourage higher levels of use.
- Continue to provide sidewalk, bike lane, and multi-use path infill along existing roadways.
- Implement the Black Diamond Trails Plan.

- Encourage development of a network of off-road facilities for non-motorized travel in connection with new development and to identify potential off-street bicycle routes (Class I) for cyclists wherever sufficient public demand and space can be made available.
- Ensure that the transportation system provides equitable access to underserved and vulnerable populations and is friendly and accommodating to travelers of all ages.
- Explore options to improve the walkability of the narrow streets lacking sidewalks typical of older portions of the City, including key sidewalk extensions, connections to trails, context-appropriate wayfinding signage, shared auto and pedestrian street policies and road improvements.
- Explore options to upgrade the physical environment of older existing neighborhoods to improve safety for pedestrians and bicyclists through reduced vehicular speed, warning signage, sidewalk widening at intersections, adding shoulders, improved paving, vegetation trimming to improve visibility and walkability to provide a safe and appealing walking environment.

In lieu of physical upgrades the City may, with the assistance of the City traffic engineer, designate certain streets as shared vehicle and pedestrian facilities. As part of the designation process, the City traffic engineer will examine speeds, signage and road improvements and adopt standards and ordinances to establish and facilitate reasonable accommodation for pedestrians.

- ❖ **Policy T-11 Safe Routes to School Policy:** Safe and desirable walking and bicycling routes shall connect schools to residential, recreational and commercial areas throughout the City of Black Diamond to encourage families to walk or ride to school. To implement this policy, the City shall:
 - Work with local school districts to develop appropriate route plans in compliance with WAC 392-151-025.
 - Seek funding to support pedestrian improvements through the State of Washington's Safe Routes to School Program.
 - Consider such factors as crash history, safety concerns and current or potential nonmotorized access when prioritizing non-motorized access to schools.
- ❖ **Policy T-12 Transportation Health and Safety Policy:** The City of Black Diamond will provide a transportation system that enhances the health and safety of residents by:
 - Improving safety at locations with known safety issues.
 - Minimizing conflict points (Location within intersection or roadway where two or more road users may share the same space at the same time resulting in potential collision) and improve safety of high accident locations.
 - Expanding the sidewalk, bike lane, and multi-use path network in the city.

- Periodically reviewing and improving messaging for the travelling public.
- Reducing the amount of collisions involving pedestrians and cyclists.
- Improving personal security (e.g., street lighting).
- Identifying transportation improvements along emergency response routes.
- Maintaining prevention and recovery strategies that are coordinated locally and regionally under the Regional Transportation Recovery Plan.

❖ **Policy T-13 Parking Policy:** The parking needs of the City will be balanced by:

- Encouraging the construction of additional parking in the historic “Old Town” area of Black Diamond, both within the public right-of-way and in off-street lots.
- Promoting the addition of parking spaces in the “Old Town”, possibly to include the use of a Local Improvement District (LID) to fund these parking improvements.
- Identifying available areas to provide parking facilities for weekend bicyclists.
- Continued discouragement of on-street parking along the SR 169 corridor.
- Encouragement of adequate, but not excessive on-street parking on commercial and residential streets where it can be safely accommodated through both minimum and maximum parking allowances and monitoring of parking utilization.
- Development of an off-street parking plan for Old Town to address provision of shared parking, a park-and-ride for City residents, and visitor parking to serve bicyclists who come to the City to ride on weekends.

Road Character Right of Way

Policies contained in this subsection promote the unique characteristics of Black Diamond and address issues regarding land use development emphasizing desired locations for development throughout the city. These policies also address the City’s view on right-of-way issues.

❖ **Policy T-14 Character of the City Policy:** Enhance the character that the City currently possesses by:

- Encouraging landscaping, parkway trees, and compatible architecture in the design and construction of roadways, especially SR 169, and other facilities along selected corridors. Minimize obtrusive signs through provisions in the zoning code;
- Limiting the number of traffic signals within Black Diamond by considering the use of roundabouts as the first solution where appropriate;

- Implementing road standards and development guidelines consistent with LOS standards, to minimize paving widths; preserve desirable trees and vegetation through minimized right-of-way clearing; and allow creative designs;
 - Implementing separate road standards for the older, historic areas within the city that are specific to individual street geometries, with the goal of not causing undue disruption to existing neighborhoods;
 - Identifying transportation investments that support mixed-use and pedestrian friendly development;
 - Prioritizing transportation investments that serve the locally designated Town Center, Old Town; and
 - Exploring all viable multi-modal transportation improvement alternatives to single occupant vehicle transportation.
- ❖ **Policy T-15 Environmental Protection and Conservation Policy:** Design transportation facilities within Black Diamond that minimizes adverse environmental impacts resulting from both their construction and operation. The City will fulfill this need by:
- Aligning and locating transportation facilities away from environmentally sensitive areas;
 - Encouraging Low Impact Development (LID) in the design of transportation infrastructure where practical;
 - Mitigating unavoidable environmental impacts;
 - Provide opportunity for expressing concerns and comments of interested parties, and;
 - Establish policies to minimize the use of de-icers or salt on roadways to protect the environment.
- ❖ **Policy T-16 Right-of-Way Policy:** Retain existing transportation system rights-of-way, and identify, acquire, and protect rights-of-way for future roadway and bikeway facilities. The policies provided in this Transportation Element will be used by the City to identify current and future transportation system needs. The City will identify specific transportation corridors and protect needed rights-of-way as soon as possible. Some methods used to acquire and preserve rights-of-way include:
- Requiring dedication of rights-of-way as a condition for development when the need for such rights-of-way is linked to the development and to support the City's economic development goals;

- Requesting donations of rights-of-way to the public;
 - Purchasing rights-of-way by paying fair market value when donations and/or required dedications are not possible;
 - Acquiring development rights and easements from property owners;
 - Protecting rights-of-way from encroachment by structures, substantial landscaping, or other obstruction is also encouraged by the City. Protection methods may include minimum setback requirements for property improvements and development of guidelines regarding installation and maintenance of landscaping within the public right of-way and;
 - Developing criteria and process for the vacation of public rights-of-way consistent with City goals and policies.
- ❖ **Policy T-17 Road Dedication Policy:** Road dedications shall be allowable on a limited basis consistent with the City's goals to increase the connectivity of the City's roadway network pursuant to the following provisions:
- Connector streets need to be public.
 - New publicly-dedicated roadways must comply with City street standards.
- ❖ **Policy T-18 Private Road Policy:** Private roads are discouraged and shall be allowable only if the following conditions are met:
- Private roads may provide local residential access, with no connections to the existing or future public street system.
 - Private roads shall meet all applicable public road standards, including right-of-way widths.
 - A financial analysis shall be performed to determine the amount of funding needed to maintain the road annually including funding to repave the road every 25 years.
 - Private roads must be privately maintained through recognized Homeowner's Associations (HOAs). The developer shall establish a street maintenance covenant with each home served by the road establishing the HOA and regular periodic contributions for maintenance and funds to be set aside for future major rehabilitation. The form of the HOA and covenant shall be approved by the City Attorney.
 - Internal circulation streets are private roads located within the boundaries of a commercial or multifamily development accessed directly from a public street. Internal

circulation private streets shall meet the public local access street pavement section requirements and provide safe pedestrian connections.

Funding, Concurrency and Impact Mitigation

The City faces the challenge of making the best use of the limited funds available to finance transportation projects. Issues addressed by these policies include concurrency, identifying favorable funding sources, and deciding impact mitigation assessments.

As described in Appendix 7, SR 169 serves as the primary north-south roadway connecting communities in southeast King County and northeast Pierce County to each other, as well as the larger transportation network. SR 169 experiences high traffic volumes during peak periods as drivers from Bonney Lake, Buckley, and Enumclaw pass through Black Diamond in the morning to access major job centers to the north and return southbound in the evening. These volumes contribute to existing transportation deficiencies at intersections on SR 169 in Black Diamond, for which the City is legally obligated to address, however, no mechanisms are in place to secure funding for improvements.

- ❖ **Policy T-19 Concurrency Policy:** Ensure that transportation improvements or strategies are constructed or financed concurrent with development, including roadway, pedestrian, bicycle, and transit facilities. This also includes coordinating the City's concurrency program with plans of other transportation agencies. While the City has the authority to adopt LOS standards for local roadways, the LOS for SR 169 is established by WSDOT. The City cannot accept a lower LOS for SR 169 as a mechanism to address concurrency. The most significant adopted policy of meeting concurrency standards is accomplished by the two major MPD Development Agreements that require the developer to implement any and all of the capacity adding projects in the City's comprehensive plan to maintain the City's level of service standards. To monitor these commitments, the City's Concurrency Management System includes the following:

- Assessing and determining compliance with the adopted level of service standards;
- Identifying facility deficiencies (e.g., sidewalk, bike lanes, multi-use paths and transit); and,
- Making appropriate revisions to the Six-Year TIP, including prioritization of improvements on SR 169, as the City cannot modify the adopted LOS for that facility.

In addition, the City could explore other means to improve LOS, such as the implementation of plans and programs that reduce reliance on single occupancy vehicle travel (e.g., transportation demand management).

- ❖ **Policy T-20 Funding Sources Policy:** Secure adequate long-term funding sources for transportation through all feasible and available methods. These methods may include:
- Adopting a Transportation Impact Fee (TIF) to fund capacity improvements that maintain adopted LOS standards for roadways;
 - Taking advantage of state funds, such as the Transportation Improvement Account (TIA), and the Public Works Trust Fund (PWTF);
 - Encouraging Washington State Department of Transportation (WSDOT) improvements on the state highway system;
 - Encouraging the use of LIDs by property owners to upgrade roads to meet City road standards;
 - Requiring impact mitigation and/or SEPA mitigation fees for projects as guided by this Plan. Impact mitigation payments and/or seeking voluntary contributions from developers may also be pursued;
 - Promoting the use of Transportation Benefit Districts and Capital Facility Districts;
 - Exploring the potential of assessing user fees to support maintenance and preservation of the transportation system; and
 - Seeking funding from federal agencies and all other available grant sources. Once Black Diamond’s population exceeds 5,000 (anticipated by 2021; to be confirmed by the 2020 United States Census), the City will be eligible to pursue grant funding available only to cities of that size. The grant programs available to large cities are generally bigger in overall size and the typical awards for funded projects are greater than those for small cities. This expands the City’s opportunities to secure significant funding for large infrastructure projects.
- ❖ **Policy T-21 Alternative Level of Service Policy:** Pedestrian and transit friendly development shall be encouraged within the locally designated Town Center, Old Town, and by allowing less restrictive LOS standards for roadways. If the adopted LOS standard cannot be maintained and expected funding for improvements to meet future transportation needs is found to be inadequate, then the City shall:
- Consider the impacts of land use on trip generation to reduce the travel demand placed on the transportation system; or
 - Phase or restrict development to allow more time for the necessary LOS-driven transportation improvements to be completed by the development community and/or responsible agency or jurisdiction(s); or
 - Reduce the LOS standard for the system or portions of the system to give the City more time to fund the needed transportation improvements.

- ❖ **Policy T-22 Financial Impact Mitigation Policy:** Require developers to contribute their fair share towards the transportation improvements required to meet the LOS standards. Impact mitigation efforts may include:
 - Requiring developers who are subject to an approved development agreement with the City to continue fulfilling all mitigation requirements imposed therein;
 - Requiring developers who are not subject to an approved development agreement, or for whom an approved development agreement has expired, to assist in providing additional funding through an adopted program, such as a TIF, transportation facilities, and/or services in proportion to the impacts and needs generated by development;
 - Encouraging developers to design projects that generate less vehicular traffic; and
 - Requiring developers at the beginning and mid-point of each phase of the MPD project to monitor traffic generation and distribution to determine if traffic impacts of MPD development are occurring as projected.

Coordination and Consistency Policies

The policies contained in this subsection address such issues as multi-agency planning and coordination, consistency of transportation improvement programs and designs among jurisdictions, and cooperation among agencies that fund, build and operate the transportation system within Black Diamond.

- ❖ **Policy T-23 Traffic Impact Analysis Policy:** Require that a Traffic Impact Analysis (TIA) be prepared for new developments. The City will require a TIA for new developments that are proposed in the city limits of Black Diamond that generate ten (10) or more vehicle trips in the PM peak hour or are otherwise determined to have the potential for an adverse impact upon the City's transportation system. The study should include site access points, arterial and collector roadways and intersections of arterials and collectors that are impacted by 10 or more PM peak hour trips and may not be limited to intersections located within the city. The TIA should also identify gaps in the sidewalk, bike lane, and multi-use path networks, review the collision history of study area roadways (i.e., to identify safety issues, and traffic-related fatalities, serious injury, and pedestrian and bicyclist involved collisions), and evaluate roadway connectivity, and access spacing compliance for the study area. The TIA shall be prepared by the City's traffic engineer and will be accepted after approval by the City.

- ❖ **Policy T-24 Intergovernmental Agency Coordination Policy:** Coordinate planning, construction, and operations of transportation facilities and projects with other governmental agencies. This policy supports and complements the transportation functions of Washington State, King County, neighboring cities, PSRC, Metro Transit, and other entities responsible for transportation facilities and services within the city.

Explore establishment of a coalition of cities with the purpose of developing transportation solutions and their associated funding mechanisms to provide for safer and more efficient travel along the SR 169 corridor. Efforts of the coalition could include studying forecast anticipated deficiencies resulting from growth in all affected jurisdictions. Identifying solutions and developing an intergovernmental strategy to pursue state and/or joint grant funding, and equitably distribute developer-provided funds to all affected jurisdictions.

❖ **Policy T-25 Multi-modal Coordination Policy:** Coordinate planning and operation of efficient and varied means of transportation for the City of Black Diamond's transportation system. This will be accomplished by:

- Encouraging King County Metro Transit, as the provider of transit service in the Black Diamond urban area, to evaluate expanding regular fixed transit service within Black Diamond.
- Continued coordination between the City of Black Diamond and King County Metro Transit to provide transit connections between Black Diamond and other parts of King County.
- Supporting development of regional park-and-ride lot facilities by King County Metro Transit and WSDOT. The City encourages such lots on sites promoting compatible land uses and along primary travel corridors for travel between Black Diamond and other urbanized areas in King and Pierce counties.

CHAPTER 8. CAPITAL FACILITIES AND UTILITIES

8.1 Introduction

The Washington Growth Management Act (GMA) requires cities to prepare a Capital Facilities Element consisting of:

- An inventory of current capital facilities owned by public entities showing the location and capacities of those public facilities and identifying any current deficiencies;
- A forecast of the future needs for such capital facilities;
- The proposed capacities of expanded or new capital facilities;
- At least a 6-year plan that will finance capital facilities within the projected funding capacities and clearly identify sources of public money for such purposes; and
- A requirement to reassess the Land Use Element if probable funding fall short of meeting existing needs, and to ensure that the Land Use Element, Capital Facilities Element, and finance plan within the Capital Facilities Element are coordinated and consistent.

Under the GMA, a Capital Facilities Element is required to address all public facilities except transportation facilities, which are to be addressed separately under the Transportation Element of the Plan. Accordingly, this Comprehensive Plan contains a separate Transportation Element and it also places Parks, Recreation, Trails and Open Space facilities in a separate Element. The required inventories, forecasts of future needs, and proposed capacity of expanded or new facilities are housed in the supporting Capital Facilities and Utilities Appendix.

The GMA also contains requirements pertaining to the concept of concurrency, which seeks to mandate that the City adequately demonstrate within this plan that public utilities and modes of transportation will be available to support growth at the time such development occurs. Thus, the financial planning section included herein (as required by GMA) identifies a financial program for implementing improvements. The City adopted a General Facility Plan in December 2012 in accordance with the Washington State Department of Ecology requirements as outlined in WAC 173-240-050. Pursuant to RCW 36.94.030. The Sewerage plan is adopted as an element of this Comprehensive Plan.

8.2 Purpose of the Capital Facilities and Utilities Element

This Capital Facilities and Utilities Element has been prepared in accordance with Section 36.70A.070 of the GMA to address the need for and the financing of capital facilities and utilities within in the City of Black Diamond and its service area boundaries and surrounding Potential Annexation Area (PAA). The GMA requires all comprehensive plans to include a Capital Facilities Element that analyzes the need for future capital improvements to support the development goals stated in the Land Use Element, as well as

the funding mechanisms available for implementation. The City of Black Diamond defines Capital Facilities to mean any city-owned, operated or contracted facility including but not limited to parks, utilities, recreational facilities, schools, libraries, playgrounds, streets, transportation facilities, open space, police, fire or other buildings, including their related equipment which can be capitalized.

This Element provides the overall policy direction for the different capital facility plans and programs provided by the City. It is the intent of the GMA that all development requiring urban services will be in the Urban Growth Area (UGA), and that these services will be available in a timely and financially feasible manner. The Capital Facilities and Utilities Element is intended to guide the City in its decision-making process to achieve the community's goals; to provide utility service at an acceptable standard or approved minimum level of service (LOS), without compromising the existing levels of service that are currently provided.

This Element addresses the following capital facilities and utilities: Potable Water, Sanitary Sewer, Stormwater, Police Fire/Emergency Medical Services, Public Schools, and City Administrative Offices

8.3 LOS and Phasing

The establishment of LOS standards provides a useful basis to inform the assessment of future staffing and facilities needs based on anticipated population growth.

GMA states that cities must adopt LOS standards for transportation and that they may develop concurrency standards for other facilities deemed to be necessary for development. If a local government adopts LOS levels for these other facilities, they either 1) must be in place prior to occupancy or 2) a financial commitment must be in place to complete them within 6 years of occupancy. GMA also establishes that "those public facilities and services necessary to support development shall be adequate to serve that development at the time the development is available for occupancy and use without decreasing current levels below locally established standards" (RCW 36.70A.0202.12).

Fiscal Considerations

It is important to ensure a fiscal balance between capital expenditures, utility revenues, and adequate LOS. This balance requires that developers pay for the portion of capital improvements related to their level of demand on the system. At the same time, the existing capital facilities and utility infrastructure requires ongoing maintenance and restoration. Capital improvements includes planning, land acquisition, and the purchase of equipment, facilities and materials. Taking advantage of renewable resources and using efficient technologies can curb some of the need for new infrastructure. A commitment to sustainable infrastructure ensures the least possible strain on the region's resources which boosts the prosperity of the community in the long term. The City's Capital Improvement Plan is adopted by reference in this Plan.

Environmental Considerations minimizing environmental impacts due to construction is important for the protection of natural resources. Locating facilities and utility routes should avoid environmentally sensitive locations such as wetlands, habitat, rivers and creeks, and forested areas. Infrastructure projects should include an alternatives analysis that compares the impacts to the natural environment and cost. In some cases, it is not economically feasible to avoid these locations and therefore special construction techniques are necessary to minimize impacts. Restoration is particularly critical to ensure that the resource is restored to its original condition or better. Strict design and construction standards ensure that proper restoration is incorporated into construction documents. Those standards also ensure that construction activity will not pollute natural resources such as air, soil, and water.

8.4 General Capital Facility and Utility Goals and Policies

- ❖ **CFU Goal 1:** Ensure that public facilities and services are available to support future development.
 - **Policy GCFU-1:** Engage in joint use transportation rights-of-ways and utility corridors, where possible.
 - **Policy GCFU-2:** Design and construct construction standards that are environmentally sensitive, safe, and cost effective.
 - **Policy GCFU-3:** Facilitate the development of all utilities at the appropriate LOS to accommodate growth that is anticipated to occur in the City.
 - **Policy GCFU-4:** 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 GCFU-5:** Coordinate among adjacent jurisdictions and service providers to provide reliable and cost-effective services to the public.
 - **Policy GCFU-6:** Conduct City operations in a manner that leads by example through activities such as recycling, water conservation, energy conservations and low impact development whenever possible.
 - **Policy GCFU-7:** Require underground installation of existing utility lines when significant site improvements or development occur, with street improvement projects, or through a local improvement district.

- **Policy GCFU-8:** Require architectural screening for above-ground utility structures such as transformers and vaults.
- **Policy GCFU-9:** Create and maintain adequate reserve funds to pay for replacement of existing facilities and equipment.
- **Policy GCFU-10:** The City will invest in planning activities, including feasibility studies and comprehensive planning as necessary for siting and financing capital facilities and utilities to support growth.

8.5 Utilities Policies

The GMA and the PSRC and King County planning policies supply a framework for establishing local utility policies. GMA (RCW 36.70A.070.4) requires that comprehensive plans contain a utilities element which includes “the general location, proposed location, and capacity of all existing and proposed utilities.” The PSRC and Countywide Planning Policies similarly require that local jurisdictions address utilities and consider public health, safety, the environment, phasing, and service extension among other issues. This Utilities section of the Capital Facilities and Utilities Element with the supporting Appendix is consistent with state, regional, and Countywide Planning Policies.

The Capital Facility and Utilities Appendix includes a characterization and relevant information of all public and private utilities serving the City. These include water, sanitary sewer, stormwater, electricity, natural gas, telecommunications, and solid waste. This Comprehensive Plan specifically considers the location, condition, LOS (Level of Service) and funding of all existing and proposed City utilities including water, sanitary sewer and stormwater. Other public providers of water and sewer within the City include the Covington Water District and Soos Creek Water and Sewer District. Electricity, natural gas, telecommunications and solid waste services are from private and investor-owned utilities. Private utilities are regulated by the Washington State Utilities and Transportation Commission (WUTC). State law regulates the rates, charges, service, facilities and practices of investor-owned utilities.

Black Diamond must ensure the phasing of its utility system improvements to meet the growing or changing needs of the community. The anticipated growth from the Master Planned Developments (MPDs) will substantially expand the size and population of the City over the next 20 years. The City has executed development agreements that require the MPD developers to fund capacity adding utility improvements as development occurs to maintain the City’s adopted LOS standards. Every expansion of the City’s utility systems will be planned, designed, and constructed to increase reliability and sustainability. Expansion, maintenance and operations of the City’s utility systems will follow general capital facility and utilities policies as well as the utility specific policies listed below.

General Utility Policies

- **Policy U-1:** Consider utility permits simultaneously with development proposals and ensure all utilities necessary to support development are adequate and available prior to approving development.
- **Policy U-2:** Track water and sewer hook-ups to monitor available capacity in the City's utility systems.
- **Policy U-3:** Strive to upgrade existing system deficiencies within 6 years upon identification.
- **Policy U-4:** Regularly update water and sewer plans to ensure compliance with state rules and maintain consistency with the Comprehensive Plan.
- **Policy U-5:** Include alternative design and construction techniques in the City's design standards to minimize sensitive area impacts and allow for new technologies that have proven efficiencies.
- **Policy U-6:** Locate utility corridors in existing cleared areas, where possible.
- **Policy U-7:** Encourage the conversion and connection from private wells and septic systems to the City utility systems as available.
- **Policy U-8:** Employ tools such as capital facility charges to require new development to pay its fair share of expansion of utility systems but also encourage private investment in public infrastructure through latecomer fees or local improvement districts.

Potable Water Policies

- **Policy U-9:** Maintain the agreement with the City of Tacoma to ensure adequate water supplies for emergencies and growth.
- **Policy U-10:** Encourage water reuse and reclamation, especially for high-volume non-potable water users such as parks and schools.
- **Policy U-11:** Identify and develop additional water supply sources to meet long-term water needs with consideration of climate impacts and fisheries protection.
- **Policy U-12:** Focus on reducing water consumption through conservation, efficiency, reclamation, and reuse.
- **Policy U-13:** Initiate the protection of water supplies for potable water needs and environmental goals.

Sanitary Sewer Policies

- **Policy U-14:** Provide and maintain a sanitary sewer system that protects public and environmental health.

- **Policy U-15:** Require public sewer connections for all new residential and mixed-use subdivisions and new or expanded commercial or industrial developments.

- **Policy U-16:** Require public sewer connections for all new residential development or redevelopment on existing lots of record where sewer is available within 300 feet. New residential construction or redevelopment on existing lots of record will be allowed where sewer is not within 300 feet if, (1) King County Wastewater Disposal Regulations are met and (2) the property owner signs and records a no protest covenant for the potential formation of a local improvement district and agrees to negotiate frontage and connection fee costs.

- **Policy U-17:** Require all failing septic systems to connect to the sanitary sewer system if they are within 300 feet.

- **Policy U-18:** Coordinate capacity adding projects with King County and Soos Creek to ensure that regional system improvements are in place to support growth.

- **Policy U-19:** Update capital facility charge calculations regularly and consider a charge based on sewer flow and wastewater strength rather than single-family residential flow characteristics.

- **Policy U-20:** Serve new development within the urban growth area with sanitary sewer systems as appropriate.

- **Policy U-21:** Plan for regional pump stations and only allow “neighborhood-scale” pump stations on a case-by-case basis.

Stormwater Policies

- **Policy U-22:** Manage the quality of stormwater runoff to protect public health and safety, surface and groundwater quality, and the natural drainage systems.

- **Policy U-23:** Update the Storm Drainage Plan as needed to be compliant with the Department of Ecology and NPDES Phase II permitting requirements.

- **Policy U-24:** Design storm drain lines or pathways to minimize potential erosion and sedimentation, discourage significant vegetation clearing, and preserve the natural drainage systems such as rivers, streams, lakes, and wetlands.

- **Policy U-25:** Encourage the reduction of impervious surface and retention of natural vegetation through development regulations.

- **Policy U-26:** Ensure that the storm drainage facilities necessary to support construction activities and long-term development are adequate to serve the development.
- **Policy U-27:** Require developers to design and provide for efficient and economical drainage facilities to minimize increased runoff, avoid increased peak stormwater runoff, and prevent flooding and water quality degradation.
- **Policy U-28:** Consider upgrading existing stormwater ponds, facilities, or features when new technologies or methods prove more efficient or when upgrades can add aesthetic value to the community.

8.6 Police

The Black Diamond Police Department is a full-service agency that operates under the community oriented policing philosophy. The Department is committed to providing the highest quality service, preserving human rights, lives and property, and working in partnership with the City's citizens to problem solve, meet the challenges of reducing crime, and creating a safer environment and improving the quality of life.



The Vision of the Black Diamond Police Department

With our values at the forefront, the Black Diamond Police Department will be an open, friendly, and community-minded organization devoted to quality public service. We aspire to be a model of character and service and will emphasize the development of professional knowledge and leadership skills at every level of our organization. We will serve the community through professional conduct at all times.



The current adopted level of service (LOS) is 3.5 officers per 1,000 residents. With 1.9 officers per 1,000 residents, the City is not meeting its LOS standards. While this standard is common, according to the International Association of Chiefs of Police (IACP), "Ready-made, universally applicable patrol staffing standards do not exist. Ratios such as officers-per-thousand population are totally inappropriate as a basis for staffing decisions."

It should be noted the department does not solely rely on a staffing ratio system, but also utilizes a manpower staffing allocation that reviews workload data to determine the amount of resources needed to provide a specific level of service. Ultimately, the number of sworn officers is based on the needs of the community. In Black Diamond, the department is focused on continued and advanced training to provide a range of services, many of which do not show up as official statistics yet are often the types of services most highly valued by the community. These include crime and drug prevention programs, education and activities to strengthen police-community relations and promote safety.

By taking such a pro-active policing approach and providing advanced officer training, Black Diamond does not experience a high rate of serious crimes such as robberies, rapes, and assaults because it makes safety a priority. According to the State of Washington's City Crime Index, which measures crime rate per thousand citizens, Black Diamond's rate is one of the lowest in the state. In 2016, the City of Black Diamond was ranked #2 for "safest cities" in 2017.

As the City grows over the next 20 years, additional personnel and equipment will be required to meet service demands. The most pressing need outside of reinstating frozen officer positions is the need for additional space to accommodate evidence processing, firearms cleaning/safety, interviews and interrogation, and secured parking.

In addition, reduced response times are a critical measure for the delivery of high-quality services. Gated communities, improper street numbering, and inconsistent street naming conventions impede response times. Slower response times associated with land use and development decisions should be managed through the City's development review process with policies and regulations geared toward minimizing emergency response time impediments.

Police Policies

- **Policy P-1:** Ensure adequate provisions are made to accommodate the demands of new development on police services.
- **Policy P-2:** Locate new police facilities and equipment within a 5-minute response time from new facilities.
- **Policy P-3:** Develop service level indicators to determine sustainable levels of police staffing.
- **Policy P-4:** Strive to achieve a range of 3.5 to 2.75 police officers per 1,000 population-based economies of scale and service level indicators.
- **Policy P-5:** Develop and maintain standard procedures for street numbering and naming conventions to minimize emergency response times.

- **Policy P-6:** Apply CPTED (Crime Prevention Through Environmental Design) principles during the development review process to promote public safety.
- **Policy P-7:** Continue to participate in COPS principles to support community partnerships and develop localized problem-solving techniques.

8.7 Fire and Emergency Medical Services

The City of Black Diamond contracts with the Mountain View Fire and Rescue, King County Fire Protection District 44 (KCFD 44) to provide rescue, fire protection, fire suppression, fire prevention, fire marshal services, emergency medical services, Basic Life Support (BLS), hazardous materials response, dispatch services, administrative services and public education activities to citizens. Mountain View Fire and Rescue (KCFD 44) is a combination department consisting of both career and volunteer personnel. Fire investigative services are contracted through the King County Sheriff's Department.

The District operates out of eight fire stations, two of which are owned by the City of Black Diamond, Fire Station 98 and Station 99. Fire station 99 is in the center of the city at 25323 Baker Street and is not currently active. Fire Station 98 is near Lake Sawyer at SE 296th Street. A 2015 Fire and Emergency Medical Services study from the Ad Hoc Fire Committee reports that Station 99 is not adequate to meet Black Diamond's current needs for protection and should be replaced. The City established development impact fees for fire protection facilities in 2012 (Ordinance No. 12-980) and is planning and budgeting for the siting and construction of a new 8,000 square foot Fire Station to meet its needs.

The Ad Hoc Fire Committee also recommends using the City use NFPA (National Fire Protection Association) 1720 Section 4.3 standard as a benchmark to establish a Standard of Cover for the City to guide minimum staffing requirements and deployment for safe and effective operations. The NFPA defines "Demand Zones" for Standard of Cover that are based on population per square mile. Black Diamond's current population demographic falls within the NFPA "Suburban Area" Defined Zone with 500-1000 people per square mile. Standard Cover for Suburban sets a benchmark for a minimum of 15 staff to respond (including volunteers) with a 10-minute response time to "low hazard occupancy" (typically 2,000 square foot residential home) and being able to meet this objective 80% of the time. Current staffing levels are below the NFPA guidelines.

Advanced Life Support (ALS) services are provided by King County Medic One (KCM1). KCM1 is one of six ALS providers in the regional EMS system. It services approximately 520 square miles of south King county, an area with a population close to 725,000 people in 2015. ALS is considered a Second Tier of response and care is provided by Paramedics. The First Tier of Response, for BLS is provided by Firefighters and EMTs. Average response times for medic units in the county has been stable over time despite increased population. A review conducted in 2015 by the ALS Subcommittee concluded that there is adequate capacity within the region to manage anticipated demand.

Black Diamond has adopted standards for its water system which include regulating the design and construction of new development to achieve fire flow requirements. It is imperative that these standards be regularly reviewed and revised when needed to continually ensure there is enough water for fire protection throughout the system.

Future Fire and Emergency Medical Needs

As the City grows over the next 20 years, additional fire stations, equipment and personnel will be required to maintain adequate fire and emergency medical services. Additional water system improvements will also be needed to maintain adequate fire flow. The anticipated growth from the master planned developments will change the City's NFPA Demand Zone from Suburban to "Urban" Standard of Coverage.

Black Diamond is expected to grow from its current population of 4,200 to approximately 19,200. Based on the Ad Hoc Committee Report, Washington cities with populations between 15,000 and 25,000 average 2.3 fire stations and 7.4 on-duty firefighters. The NFPA standard indicates a need for 3 fire stations for Black Diamond when the master planned developments are fully developed. Using the NFPA Standard of Coverage for Urban Demand Zone, there will be a need for approximately twelve (12) paid firefighters to respond to fire emergencies. Typical fire station staffing in communities like Black Diamond is a 4-crew member per station. Specific capital improvement projects for fire stations and apparatus are shown in the Capital Facilities and Utilities Chapter.

Fire and Emergency Medical Services Policies

- **Policy FE-1:** Establish a Standard Level of Cover consistent with the NFPA 1720 Section 4.3 standards and strive to meet staffing standards for the Suburban Area Demand Zone which is six (6) firefighters/EMTs on duty.
- **Policy FE-2:** Consider relevant factors such as response time, call loads, growth of population and non-residential structures, geographical area, topographic and manmade barriers, natural hazards, and the NFPA standards when considering the level of service for determining the need for fire and emergency capital facilities and equipment.
- **Policy FE-3:** Take reasonable action to ensure that there is a fire station within a 1.5-mile radius or 6-minute travel time upon built roads from developed properties.
- **Policy FE-4:** Implement impact fees for fire and emergency medical capital facilities and equipment consistent with the City's impact fee ordinance.
- **Policy FE-5:** Make the replacement of Station 99 and Engine 99 a priority for public safety.
- **Policy FE-6:** Continue to work with Mountain View Fire to develop a work plan for long-term fire and emergency services needs as the City grows.

8.8 Public Schools

Black Diamond is within the Auburn, Enumclaw, Kent, and Tahoma School Districts. School Districts are responsible for conducting capital facility planning. The City adopts and incorporates each district's Capital Facility Plans into this Comprehensive Plan.

The City supports the location of schools within the community because it recognizes that public schools contribute significantly to the community. It is important to residents for their children to attend schools within or near where they live.

- **Policy PS-1:** Coordinate with school districts serving the City to encourage the provision of safe, secure, and permanent education space for all students.
- **Policy PS-2:** Work with school districts serving the City to identify new school sites within the City limits.
- **Policy PS-3:** Maintain a joint-use agreement for city and school facilities and land.
- **Policy PS-4:** Coordinate with school districts serving the City during review of residential development projects.
- **Policy PS-5:** Promote the development of a Safe Route to Schools program to implement actions aimed at increasing students walking and bicycling to school.

8.9 Administrative Services

The City's adopted funding for City Administrative services should be sufficient to provide needed public service, and were possible, "economies of scale" should be realized. New growth, which necessitates or benefits from these services (residential, commercial, or industrial), will pay its fair share of associated cost burden on the City. While the City recognizes that residents, employees and businesses, do contribute demand for City services, Black Diamond is committed to growing its economy to increase local employment.

To ensure that citizens receive adequate public services, the City has adopted LOS standards for its administrative buildings and services, which is to provide 330 square feet of space per each full-time equivalent employee (FTE). The purpose of this standard is to provide a helpful management tool. It is a guideline and is not subject to concurrency. The size of the City facilities will be dictated by the number of employees needed to serve City residents

Future Needs

Municipal space needs will be affected by several variables, including the development of large residential developments, commercial/ industrial growth, and policy decisions on how to deliver governmental services. The City already lacks enough permanent administrative office space to meet LOS standards, and this will increase as City staff increases. However, without any funding sources for new administration facilities, it may be some time before the facilities are built.

Administrative Services Policies

- **Policy AS-1:** Provide adequate City Hall and other municipal space and equipment as needed to meet the demands for City services.
- **Policy AS-2:** Require new development to finance the facilities, equipment, and services needed to support new development and to mitigate impacts from growth.



CHAPTER 9. ECONOMIC DEVELOPMENT

9.1 Introduction

The Economic Development Element establishes goals and policies that will support economic growth that enhances the City's character and quality of life, improves the City's tax base and creates local jobs. The incorporation of this policy framework into the City's Comprehensive Plan ensures that economic decision making is integrated into other aspects of growth and development within Black Diamond. This chapter is supported by the Economic Development Technical Appendix.

Economic Development Purpose Statement

The purpose of economic development is to strengthen the economy by providing more revenue within the community, including tax revenue. A strong economy must be balanced and diverse to provide a variety of job opportunities suited to all skill levels in the work force. Existing businesses are the foundation of the Black Diamond economy and it is in the best interest of the community for existing business to thrive and expand. Attracting new business can help diversify the local economy and strengthen existing businesses. This goals and policies in this element strive to support the retention and growth of existing business while attracting new business. Accordingly, land use decisions, infrastructure investments, and the natural environment are closely tied to the City's economic strategies.

9.2 Planning Framework

The GMA requires local comprehensive plans to contain economic development elements. However, this required element is not being enforced until state funding is made available. Nevertheless, Black Diamond recognizes that good growth management planning should factor economic considerations. The GMA established the following statewide economic development goal: *"Encourage economic development throughout the state that is consistent with adopted comprehensive plans; promote economic opportunity for all residents of the state, especially for unemployed and disadvantaged persons; and encourage growth in areas experiencing insufficient economic growth all within the capacities of the state's natural resources and local public services and facilities."*

Puget Sound Regional Council (PSRC)

PSRC establishes multi-county planning polices and forecasts through its VISION 2040 regional plan. VISION 2040 recognizes that small and locally owned businesses create jobs and make vital contributions to the sustainability of the regional economy.

PSRC's economic strategies emphasize enriching the region's businesses and employment market through job retention, growth and diversification and supporting small and locally owned business.

King County Countywide Planning Policies (CPPs)

The following CPPs are supported by the goals and policies in this Economic Development Element:

- EC-5 Help businesses thrive through:
 - Transparency, efficiency, and predictability of local regulations and policies;
 - Communication and partnerships between businesses, government, schools, and research institutions; and
 - Government contracts with local businesses.
- EC-7 Promote an economic climate that is supportive of business formation, expansion, and retention and emphasizes the importance of small businesses in creating jobs.
- EC-8 Foster a broad range of public-private partnerships to implement economic development policies, programs and projects.
- EC-17 Promote the natural environment as a key economic asset. Work cooperatively with local businesses to protect and restore the natural environment in a manner that is efficient and predictable and minimizes impacts on businesses.

9.3 Economic Development Strategies

Some of the things a City can do to shape how the local economic performs include, land use (zoning, development, design standards, and permit processing); public facility and infrastructure investments (utilities, transportation improvements, public safety, parks, and visitor amenities); and marketing cooperation and coordination with the Chamber of Commerce, county, and neighboring cities.

It is important to develop realistic strategies to achieve economic vitality. The City considered key negative and positive factors that may be impacting Black Diamond's economic health. These factors include the following perceived strengths, weaknesses, opportunities, and threats:

- ❖ Perception is important, and the City should find ways to tap into its unique style and energy.
- ❖ Some of Black Diamond's strengths include:
 - SR 169/good highway access
 - Development opportunities
 - Picturesque setting
 - "Small town" quality of life that has a good feel, is cute, neat and old fashioned
 - Historic local businesses such as the Bakery
 - Amenities like the museum, boat launch, regional park, Lake Sawyer, Franklin Mine Tours, and festivals like Miner Days and Labor Days
 - Community minded people
 - Low crime rate

- ❖ Some of Black Diamond's weaknesses include:
 - "Small town" may not be good based on perception
 - Few places to go and not much to do
 - No draw or amenities
 - People tend to pass through on their way to another location
 - Lack of local schools, except elementary
 - Insufficient infrastructure
 - Students served by multiple school districts leads to lack of cohesiveness

- ❖ Opportunities to expand upon:
 - Affordability
 - Stores in historic core; baker, antique store, smoked meats, etc.
 - Scenic destination such as the Green River Gorge, regional parks and trails
 - Unique businesses with locally produced products such as PCCC
 - Views of Mount Rainier along SR 169

- ❖ Threats to work on:
 - Public perception that Black Diamond lacks sophistication
 - Political instability, governance
 - Too many uncertainties

Nurturing a healthy business climate in Black Diamond will be achieved by building on the City's economic development potential and overcoming constraints. The economic development strategies listed below will build positive momentum toward achieving the City's goals for a balanced and healthy economy.

- ❖ Have enough land and the right type of appropriately zoned land to support future commercial and manufacturing business.

- ❖ Streamline the permit processing system, provide for a more timely, fair and predictable permit process.

- ❖ Ensure that appropriate public services and facilities are in place to attract and support economic development.

- ❖ Foster cooperation and coordination to ensure working together to develop and implement consistent strategies to promote economic health and diversity.

- ❖ Promote community retail trades by providing and maintaining public infrastructure and improvements.

- ❖ Encourage small businesses that are engaged in diverse activities such as small scale "clean" industries and cottage-based businesses that are appropriate to the City's resources and vision.

- ❖ Integrate and promote tourism and recreation into the economy.

- ❖ Improve and maintain signage, both directional and interpretive throughout the City.
- ❖ Invest in public improvements to help create an inviting environment such as clearly marked streets and good pathways between parking areas and businesses.
- ❖ Continue working with merchants to promote events to enliven businesses and tourism.
- ❖ Target infrastructure investment especially transportation, water and sewer in areas east/west of City to facilitate development.
- ❖ Work on business retention and expansion.
- ❖ Focus on Gateway overlay district and find ways to promote the scenic beauty, like pull out to stop and photograph mountain.
- ❖ Leverage highway access to attract people traveling north/south (along SR 169) with wayfinding signs and other amenities such as seasonal hanging baskets.
- ❖ Leverage the charm Old Town with design standards for new development.
- ❖ Strive for “non-branded corporate” image by requiring franchise and chain stores to fit into the City’s historic image.
- ❖ Honor and value the City’s unique past and work to preserve it.

9.4 Economic Development Goals and Policies

- ❖ **ED Goal 1:** Develop and support a diversified economy to achieve a sound fiscal base and living wage jobs for the City’s residents.
 - **Policy ED-1.1:** Ensure an adequate supply of land to support a range of employment uses and economic activities.
 - **Policy ED-1.2:** Work with other public and private interests to identify and promote sites which can be suitably developed for a variety of local employment opportunities.
 - **Policy ED-1.3:** Provide reasonable guidelines and standards for the siting of homebased businesses in residential neighborhoods without altering or impacting the residential character of the neighborhoods.

- **Policy ED-1.4:** Enable and encourage low-impact light industrial uses such as artist’s studios, commercial kitchens, and small-scale manufacturing to locate within the City’s designated commercial areas.
 - **Policy ED-1.5:** Recognize tourism and recreation as contributing to the City’s economic diversity.
 - **Policy ED-1.6:** Promote a healthy economy by supporting existing business and encouraging business expansion.
 - **Policy ED-1.7:** Determine a reasonable “target” population-to-jobs ratio and strive to achieve a balance between available employment opportunities and the local population base.
 - **Policy ED-1.8:** Encourage the use of master planned projects to co-locate new commercial spaces with new housing units.
- ❖ **ED Goal 2:** Provide long-term committed leadership to implement economic development goals.
- **Policy ED-2.1:** Allocate sufficient resources to process development projects efficiently and professionally.
 - **Policy ED-2.2:** Provide transparency, efficiency, and uniformity of city regulations, policies and procedures.
 - **Policy ED-2.3:** Enable the establishment of new businesses and expansion of existing businesses through fair, consistent, and timely permitting and licensing processes.
 - **Policy ED-2.4:** Initiate cooperative and collaborative economic development efforts with other governments, private corporations and nonprofit entities to identify innovative development methods and increase economic vitality.
 - **Policy ED-2.5:** Invest in public infrastructure and aesthetic improvements to demonstrate the City’s commitment to providing a high quality of life for its residents.
- ❖ **ED Goal 3:** Stimulate economic development by leveraging local resources, amenities and assets.
- **Policy ED-3.1:** Emphasize and enhance the role of the historic district as the heart of the community and make it the “place to be” for social and civic activities by creating pedestrian friendly spaces.
 - **Policy ED-3.2:** Value and preserve the historic district to create a visible link to the City’s unique past.

- **Policy ED-3.3:** Prioritize bicycle and pedestrian facility improvements that connect the historic district with surrounding residential areas.
 - **Policy ED-3.4:** Recognize Black Diamond's unique cultural, historic, recreational and environmental assets as important marketing and image building tools.
 - **Policy ED-3.5:** Encourage the continuation and expansion of events, promotions, and holiday festivals and strive to market them as unique experiences to residents and visitors.
 - **Policy ED-3.6:** Recognize local arts and cultural programs as a contribution to the City's economic diversity by expanding and supporting cultural experiences and investments in tourism.
 - **Policy ED-3.7:** Identify and encourage the preservation of lands, sites and structures that have historical, cultural, scenic, and or archaeological importance.
 - **Policy ED-3.8:** Increase the amount of retail and service sales occurring within by promoting the City's locally-produced goods and unique services.
- ❖ **ED Goal 4:** Prioritize infrastructure improvements to sites which provide the greatest development capacity for potential property development to create greatest possible returns in extending and providing service.
- **Policy ED-4.1:** Focus investment in infrastructure and services that align with projected population, housing and job growth targets.
 - **Policy ED-4.2:** Prioritize infrastructure improvements within the City.
- Policy ED-4.3:** Encourage full utilization and development of designated commercial and industrial areas and take advantage of areas where significant infrastructure investments have already been made.
- **Policy ED-4.4:** Foster partnerships with community leaders and business to explore equitable cost/benefit trade-offs between private and public sector interests for the costs involved in the provision of water, sewer, access roads, fire and police protection and the public benefit which may be realized by the creation of local jobs and increased tax revenue.

- **Policy- ED-4.5:** Coordinate with the Washington State Department of Transportation (WSDOT), King County, and adjacent cities to plan for access improvements, intersection improvements, and infrastructure maintenance in the SR 169 corridor.
- **Policy ED-4.6:** Support local business development efforts and property investment projects and programs.
- **Policy ED-4.7.** Balance economic development with environmental protection in a manner that enhances quality of life as Black Diamond grows.
- **Policy ED-4.8:** Encourage the use of “green” materials and techniques and low impact development in all types of construction to increase the City’s “green job” employment sector.
- **Policy ED-4.9:** Encourage citywide solid waste reduction and recycling methods and opportunities.
- **Policy ED-4.10:** Develop and maintain regulations that allow for continued economic growth while respecting the environment and quality of life in Black Diamond.
- **Policy ED-4.11:** Promote the efficient use of services and resources including conserving water and energy, reducing waste & work cooperatively with local business to help protect the natural environment.



City of Black Diamond 2015-2035 Comprehensive Plan Appendices



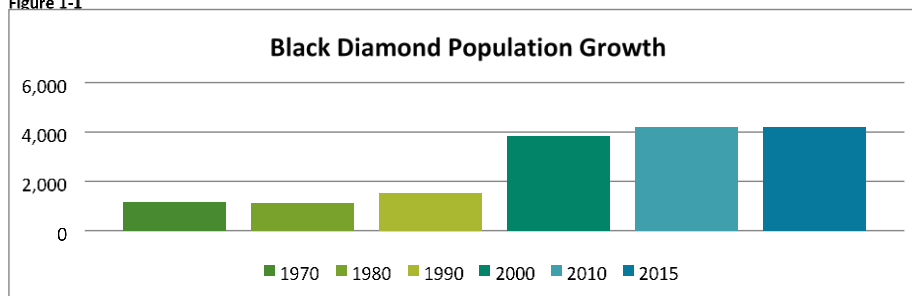
The following Appendices provide data and technical information to support the goals and policies of this Plan. It is important to note, that the Growth Management Act (GMA) mandated the completion of the City's Comprehensive Plan Update by June 15, 2015. In good faith, the City of Black Diamond began its required update in 2013. For many reasons, it has taken several years to complete. As result, some of the data in the following appendices appears dated. Even so, it remains relevant to this Plan.

Appendix 1. Community Character and Demographics

City of Black Diamond Population Total and Growth Trends

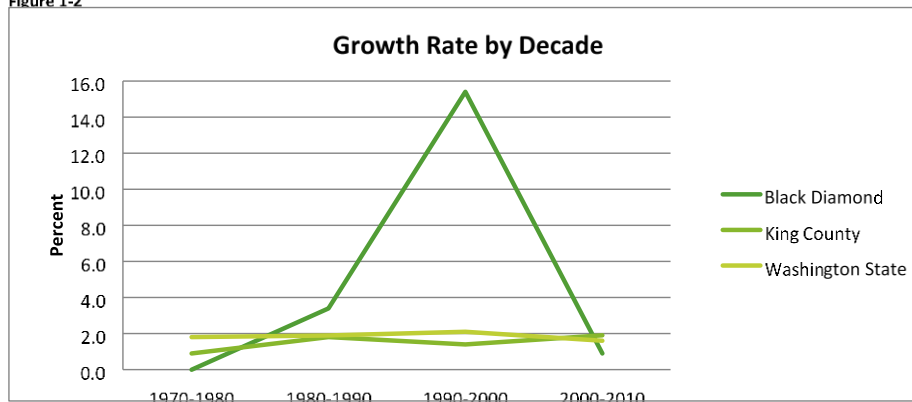
The Washington State Office of Financial Management (OFM) estimates that Black Diamond had 4,200 residents as of April 2015. The City experienced moderate growth in the 1980s and rapid growth in the 1990s due to new home construction. The rate of growth during this time far exceeded King County and state. The City population spiked between 1990 and 2000 due to the annexation of Lake Sawyer. Another growth spike is anticipated to occur with the eventual build-out of two approved master planned developments, Lawson Hills and The Villages applications for master planned developments.

Figure 1-1



Source: US Census

Figure 1-2



Source: US Census

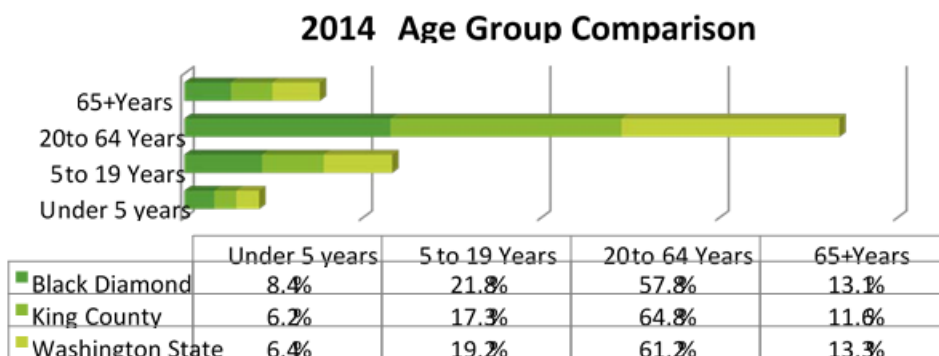
Gender and Age

The population is mostly evenly divided between males and females with 49.8% males and 50.2% females. This is consistent with the county and state. According to the 2010 Census, the City’s median age was 41 years compared with the County and state at 37 years. The 2000 Census reports the median age in Black Diamond was 36 years. The City’s aging trend is consistent with the national trend. The National Institute on Aging states that for the first time in history, people age 65 will outnumber children under the age of 5.

Societal aging may affect economic growth and many other issues, including the sustainability of families and the ability of communities to provide resources for older citizens. The City should take this into account when planning. The population data displayed below (Figures 1-4 and 1-5) shows the largest gap is with people aged 20 to 30 years. Black Diamond has a higher percentage of young people, 19 years and under, than the county and state. For recreational facilities and school impacts, it is notable that the City has a smaller portion of people aged 20 to 64 years than the county and state.

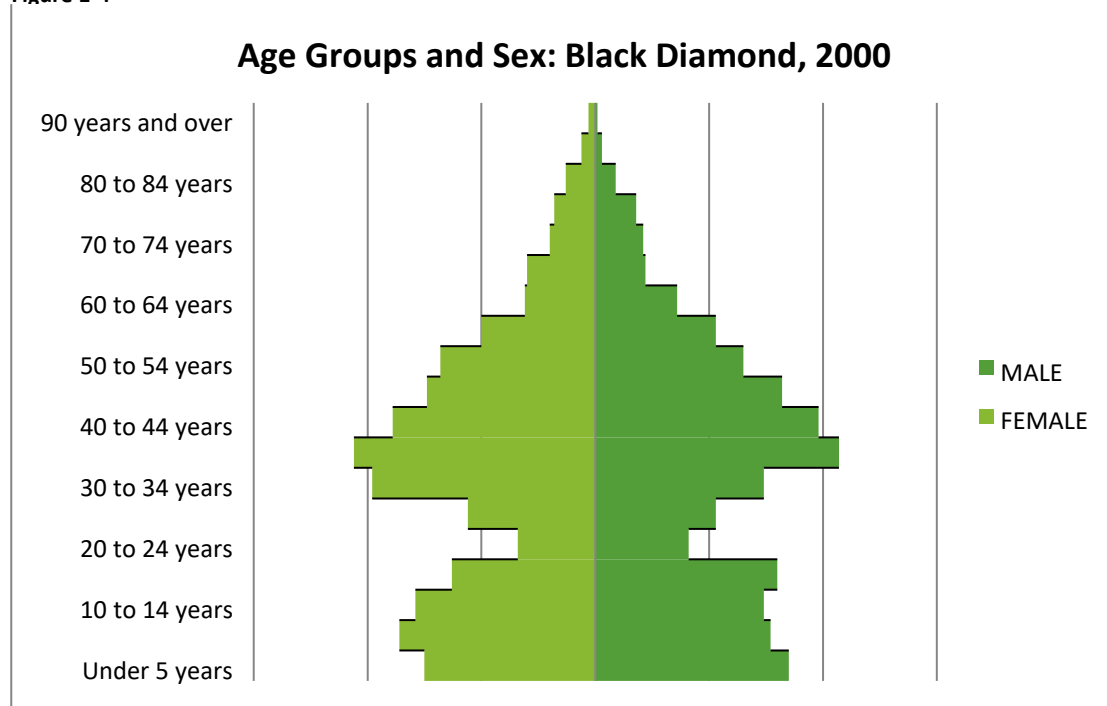
The predominant race in Black Diamond is white (92%) followed by Asian and Black or African Americans at 1.2% of the population. Those of Hispanic or Latino ethnicity make up about 4.6% of people living in Black Diamond. Given the City’s history, there is a wide ethnic population mix that came to work the mines, including Italian, Welsh, Austrian, Yugoslavian, Finnish, Belgian, French, and Polish

Figure 1-3



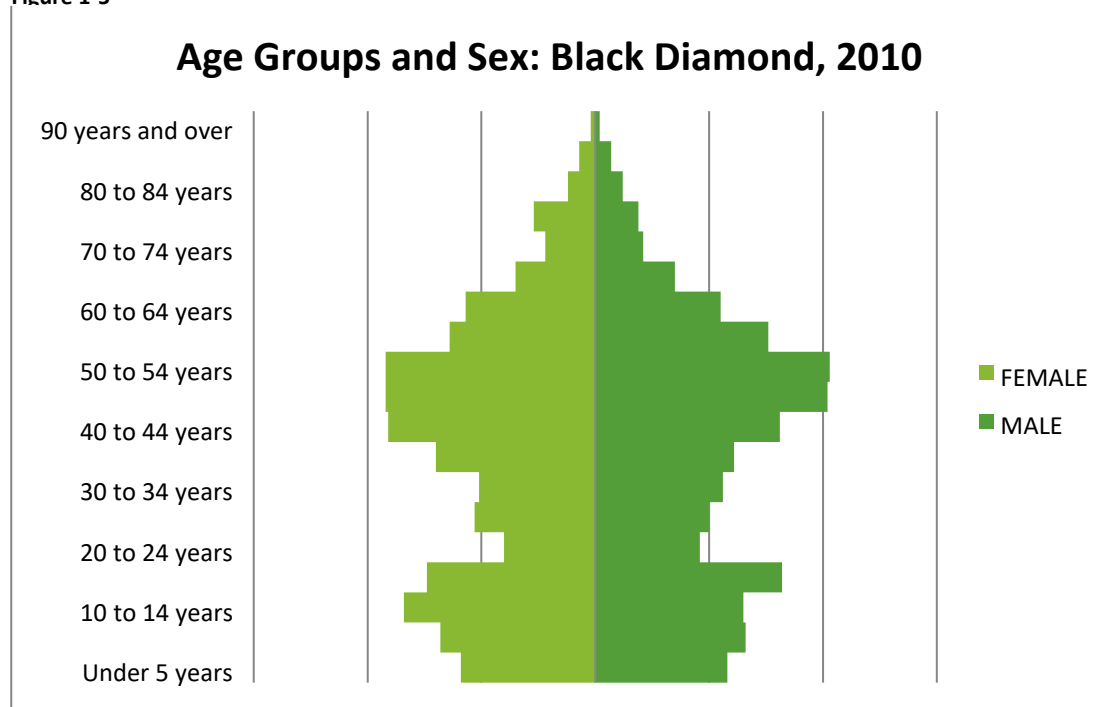
Source: US Census, ACS, 5-Year Estimates

Figure 1-4



Source: Age groups and sex: Decennial census 2000 & 2010 SF:1

Figure 1-5



Source: Age groups and sex: Decennial census 2000 & 2010 SF:1Race and Ethnicity

Figure 1-6 Educational Attainment

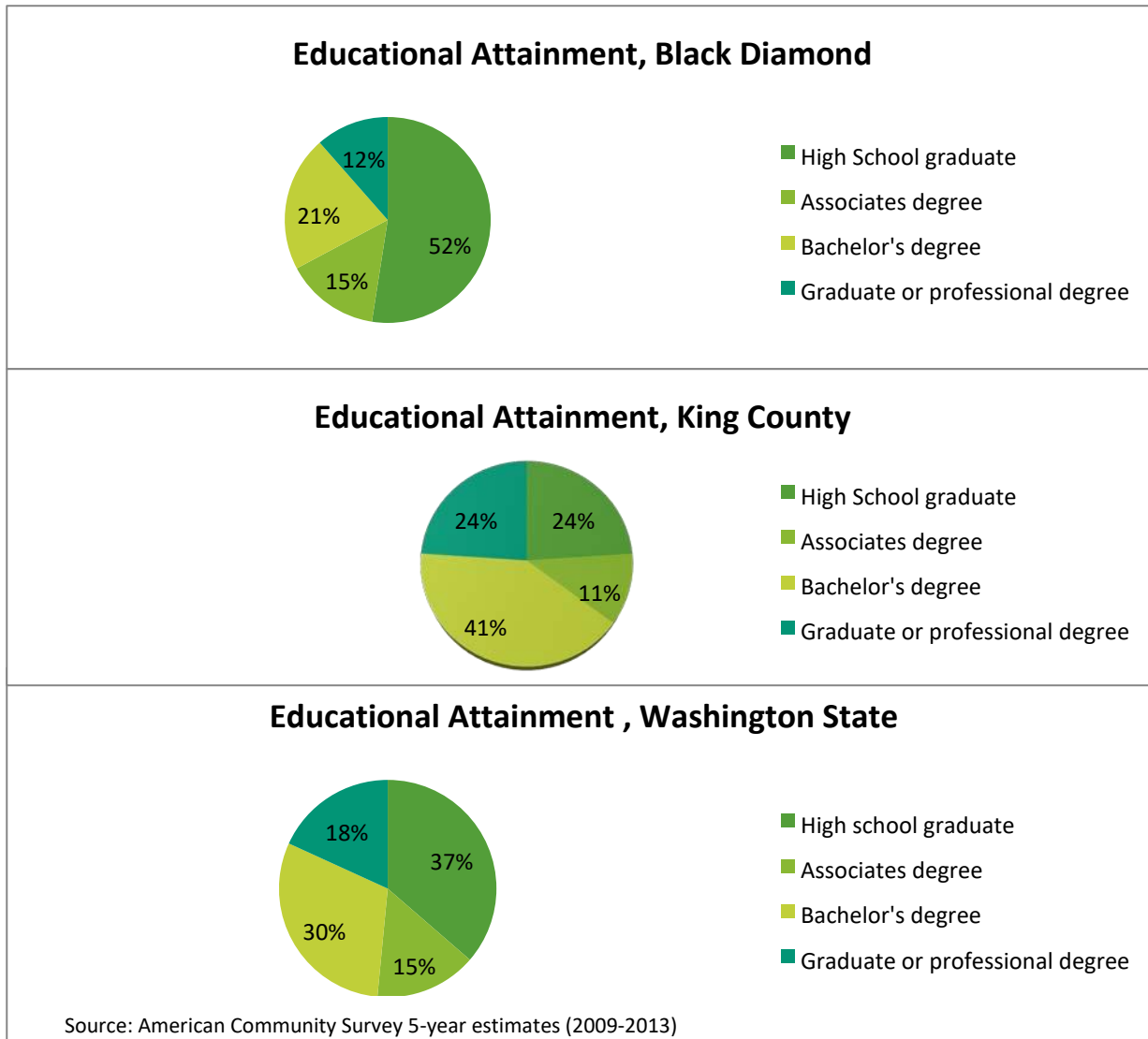


Figure 1-6 compares Black Diamond’s educational attainment with the county and state. Education is often associated with socio-economic status and it is useful to consider as a component of economic development. The percent of high school graduates is substantially higher than the county and state. Fewer Black Diamond residents have four-year or advanced college degrees than the county and state.

Household Composition

Approximately two-thirds of Black Diamond's 1,546 households are headed by married couples as compared with half in the state and slightly less than half in the county. This is consistent with the City's character as a traditional and family oriented. Non-family households, the second largest category, include people who live alone or nonrelatives living together, such as unmarried partners or roommates. According to the US Census these non-family households are increasing nationally. Table 1-1 shows this trend is occurring in Black Diamond. It also shows from 2000 to 2010 fewer households with children under the age of 18.

Table 1-1 Black Diamond Household Composition

	2000	2010
Married Couple Households	65.2%	62.9%
Married Couple Households w/children	33.4%	27.3%
Non-Family Households	22.3%	25.2%
Non-Family Households w/children	43.3%	37.5%
Persons Living Alone	17.2%	17.9%
Persons Living Alone 65 years and older	6%	6.1%

Source: 2000 & 2010 Decennial Census DP-1

Household Size

Household size in Black Diamond is larger compared to the county and state. According to the 2000 Census, the average household size in the City was 2.73 people per household (PPH) compared to 2010 with 2.68 PPH. King County's average was 2.4 and the state's 2.51.

Income

Black Diamond's median household and median per capita incomes are higher than for the county and state. Household income is a measure of the combined incomes of all people sharing a household or place of residence and includes every form of income such as salaries, wages, retirement income and government transfers which include things like disability payments, veteran benefits, and social security. Median per capita income finds the median value, or midpoint wage, after combining the range of all wages earned per person in a given area.

At the same time, its average per capita income is lower than that of the county, but higher than that of the state. Average per capita income is measured by dividing the area’s total income by its total population.

These higher income levels are a positive sign for the local economy and for housing affordability. Table 1-2 illustrates these income comparisons.

Table 1-2 Income Comparisons

	Washington State	King County	Black Diamond
Median Household Income (2013)	59,478	71,811	
Average Per Capita Income (2013)	30,742	39,911	34,232
Median Per Capita Income (2013)	32,900	40,540	43,675

Source: American Community Survey, 5-year Estimates (2009-2013)

Employment

According to the Puget Sound Regional Council (PSRC), 1,970 City residents were employed as of 2014. These jobs are categorized by industry as follows:

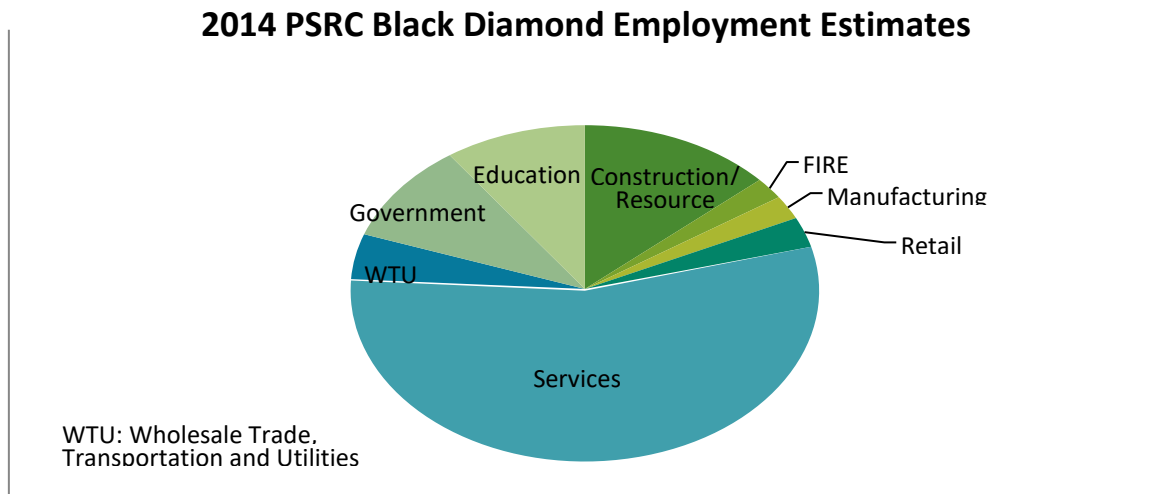
Table 1-3 Black Diamond Residents Jobs by Industry Sector

Agriculture, forestry, fishing and hunting, and mining	2%
Construction	12%
Manufacturing	18%
Wholesale trade	4%
Retail trade	10%
Transportation and warehousing, and utilities	10%
Information	2%
FIRE*	4%
Educational services and health care and social assistance	15%
Professional, scientific, and management, and administrative services	7%
Arts, entertainment, and recreation, and accommodation and food services	7%
Other services, except public administration	5%
Public administration	4%

*FIRE includes finance, insurance and real estate
 Source: 2010-2014 American Community Survey 5-year Estimates

The PSRC estimates employment by jurisdiction and in 2014 there were 470 jobs in Black Diamond. Figure 1-7 shows breakdown for employment in the City by major category.

Figure 1-7



Source: PSRC Covered Employment Estimates

Commute Time

Most Black Diamond residents commute out of town for work because of the number of jobs in relation to the working age population. According to the US Census, the mean travel time to work is around 36 minutes. This is approximately 10 minutes longer than residents of the state or King County.⁴ According to 2013 data from the US Census Bureau Center for Economic Studies, the breakdown for commute times to work is as follows:

- 22.6% commute less than 10 miles
- 61.7% commute between 10 and 24 miles
- 14% commute between 25 and 50 miles

Most of jobs in Black Diamond fall into the major category of services which includes information, professional, scientific and technical services, educational services (private), health care and social assistance, arts, entertainment, and recreation. The construction and resource job category is the second largest with Government and Education tracking closely behind.

By and large, Black Diamond workers commute to the north and west. The top ten employment areas are as follows:

- | | |
|-----------------|-------------|
| 1. Seattle | 2. Kent |
| 3. Renton | 4. Auburn |
| 5. Maple Valley | 6. Bellevue |
| 7. Tacoma | 8. Tukwila |

9. Issaquah

10. SeaTac

The jobs/housing balance, as expressed by the ratio of jobs to households, is another indicator of commute patterns, economic conditions, and overall quality of life in a community. Table 2-4 shows job to-household ratios for Black Diamond and other rural small towns in King County and in jurisdictions that neighbor Black Diamond.

Table 1-4 Jobs-to-Household Ratios

Black Diamond	0.3
<hr/>	
Rural Small Towns	
<hr/>	
Carnation	1.1
<hr/>	
Duvall	0.6
Enumclaw	1.0
North Bend	1.6
Snoqualmie	1.2
Neighboring Jurisdictions	
Covington	0.7
Maple Valley	0.5

Source: King County Buildable Lands Report, 2014 and City of Black Diamond.

In 2009, Black Diamond had 0.3 jobs per household or approximately one job for every three housing units, reconfirming that the city is a net exporter of workers who travel to other locales for work. Of the five rural small towns in King County and the two neighboring jurisdictions, Black Diamond had a far lower job to housing ratio, meaning that fewer jobs are available within Black Diamond than in comparable towns and cities.

Black Diamond has a jobs/housing imbalance. The planning implications of this imbalance include a greater strain on transportation infrastructure, lower disposable incomes since more is spent on commute costs and impacts to quality of life such as less time for non-work activities (leisure, community, family, etc.). However, the positive quality of life attributes of Black Diamond (e.g., access to the outdoors, scenic views, and a family-oriented community) help offset commute impacts and make Black Diamond a highly desirable place to live.

Ideally the jobs available in a community should match the labor force skills, and housing should be available at prices, sizes and locations suited to workers who wish to live in the area. The City should address the jobs/housing imbalance by investigating the types of mismatches that exist between the types of jobs in the area with labor force skills and housing options.

Appendix 2. PARKS, RECREATION, TRAILS AND OPEN SPACE

Existing Conditions

The City-owned parks, recreation, trails and open space system contains about 227 acres of land for active and passive activities. A detailed inventory and classification of the City's existing system is contained in the parks functional plan, titled, *City of Black Diamond Washington Parks, Recreation and Open Space Plan*, adopted December 2008. This Plan represents the background for the Parks, Trails, Recreation, and Open Space Element. It is noteworthy to recognize that the planning period for the City's functional parks plan was 2008-2013. While the inventory from this plan is an accurate reflection of existing conditions, the classification system and Level of Service (LOS) and facility standards may be revised when the plan is updated.

In May 2010, the City commissioned the *Black Diamond, Washington Non-Motorized Transportation & Park Trails Plan* which analyzed the supply, demand and need for public and private open space, nonmotorized transportation and park trails within the City's urban growth area. Inventories, major findings, and recommendations from that plan are also incorporated in this Element in support of the City's overall park, recreation, trails and open space concept.

Inventory

City Parks, Trails, Recreation, and Open Space Inventory

The City currently has limited park, trail and recreational lands, facilities, and programs due to funding limitations. The City owns approximately 227 acres of land committed to a diversity of uses ranging from natural open spaces to a BMX bicycle track and boat launch.

Of the 217-acres, 168 of them are included in the Lake Sawyer Regional Park located at the south end of Lake Sawyer. This area was transferred from King County for future development as a regional park. The park is undeveloped at this time and includes Frog Lake, extensive wetlands, streams, and riparian habitat. As part of the transfer, King County required a trail route be designated through the property to function as a regional trail link between the Green and Cedar River open space systems. The County also specified a 38.6-acre parcel in the southwest corner of the property be developed for active recreation to include athletic fields to meet Washington State recreational grant requirements. User groups have already developed portions of the property with a system of off-road single-track mountain bike and hiking trails.

In 1995, the City acquired 14 acres of land located around the east and northern boundaries of Jones Lake adjacent to the Black Diamond-Enumclaw Road south of the historic downtown. This site contains Jones Lake, adjacent wetlands and riparian habitat. Plans for this open space area include the construction of a trail around the lake. The City also acquired the 27.59-acre Ginder Creek open space parcel northwest of the historic downtown below the Auburn-Black Diamond

Road. This site includes Ginder Creek with its adjacent wetlands and riparian habitat. Both the Jones Lake and Ginder Creek sites provide significant opportunities for resource conservation, passive recreation and education.

The City owns and operates recreational facilities including a basketball court, tennis court, skate park at “School Park,” which is along Park Street adjacent to the Black Diamond Elementary School and the Lake Sawyer boat launch located at 296th Avenue on the west side of Lake Sawyer. Other recreational facilities within the City include a playfield located at the elementary school, a community gymnasium operated by the City, and a BMX bike track next to the gymnasium. Both the gym and BMX track are located off of Lawson Street. The total amount of citywide land used for active play areas is about eight acres.

Two pocket parks (Coal Car Memorial Park and “Union Stump”) serve as gateway elements for the City in the public right of way. Coal Car Memorial Park, at the intersection of State Route (SR) 169 and Roberts Drive, contains a coal car marker reminiscent of the City’s mining history. “Union Stump,” which is near Morganville, served as the speaker platform during the union/mining era. Each site is less than 0.30 acre, and neither provides recreational opportunities. The inventory of City parks, trails, recreation and open space areas is shown on Table 2- 1.

Table 2-1. City Parks, Trails, Recreation, and Open Space Inventory

Facility	Type	Acreage	Features
Union Stump	Pocket	0.23	Historical Marker
Coal Car Park	Pocket	0.27	Historical Marker
Jones Lake Open Space	Open Space	14.06	Lake, wetlands, and riparian habitat
Ginder Creek Open Space	Open Space	27.59	Creek, wetlands, and riparian habitat
Eagle Creek Community Park	Neighborhood	0.43	Basketball Court
Lake Sawyer Boat Launch	Community	1.80	Boat Launch, parking, picnic area, barbeque facilities, swimming, fishing
BMX Park	Community	0.25	Dirt Bike Track

Other public and private agencies have amassed significant amounts of acreage within and adjacent to the City for regional facilities, open spaces and park trails. These areas provide a unique opportunity for the City to create linkage between citywide and regional recreation and open space systems.

Lawson Hills Pocket Parks

Two small public pocket parks within the Lawson Hills subdivision with playground equipment and basketball hoop. These are owned and maintained by the Lawson Hills Homeowners' Association.

Black Diamond In-City Forest

A 50-acre conservancy park located on the hillside above the mining railroad spur and below Oakepointe's Lawson Hills Master Planned Development. The site includes a dense hillside and woodland habitat. The City is working to acquire this site as part of the Black Diamond Urban Growth Area Agreement (BDUGAA).

Black Diamond Natural Area

A 611-acre area extending north from Lake Sawyer Regional Park along Ravensdale Creek and across Black Diamond-Enumclaw Road and Ravensdale Road. This conservancy area contains extensive wetlands, riparian habitat and Ravensdale Lake. It is owned by King County and under the County's provisions the area is to remain in a conservancy state but may be improved with trails, interpretative facilities and supporting trailheads. Considerable portions of the property have already been improved by user groups for off-road single-track mountain bike and hiking trails.

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Black Diamond Open Space Area Protection Agreement (BDOSAP)

A conservation easement between King County and Plum Creek preserves 1,600 acres of forestland on Ravensdale Ridge to protect wildlife, views, and existing trails. It also includes 645-acres along the Ravensdale Creek corridor to protect water quality in Lake Sawyer. As part of the agreement, 55-acres directly north of the city is set aside as open space to provide a visual buffer along SR-169.

Equestrian Trailhead

A trailhead site located on the Westside of Lake Sawyer Road across from the Lake Sawyer Regional Park. King County intends to develop an equestrian trailhead to access an existing horse trail corridor extending south to the Green River Gorge and Flaming Geyser State Park.

Ravensdale Park

A 20-acre regional sport park complex located on the Kent-Kangley Road with multiple baseball diamonds, open fields and soccer fields.

Green River Gorge

Conservancy lands located on both sides of the Green River Gorge from Flaming Geyser State Park east and upriver to Kanaskat-Palmer State Park including Hanging Gardens and Jellum Site. This area includes extensive wooded hillsides and riparian habitat along river shorelines. Off-road hiking trails have been developed along portions of the southern bank of the Gorge.

Flaming Geyser Park

A 480-acre+ State multi-purpose park located on both sides of the Green River south of Black Diamond. The site has “geysers” (methane seeps) over the top of coal seams and over 3.0 miles of freshwater shoreline, wetlands, and riparian habitat along the river. The park is improved with kitchen shelters, picnic tables, a swimming beach, volleyball courts, a 25-acre field for equestrian use and 1 mile of horse trails, and 4.3 miles of hiking and biking trails.

Kanaskat-Palmer State Park

A 320-acre multipurpose park located on the south side of the Green River Gorge on a small, low plateau in a natural forest setting. The park has 2.0 miles of freshwater shoreline, wetlands and riparian habitat along the river. The park has been improved with hand-carry boat and raft launch sites on call IIIV river runs, fishing access, picnic ground, and campsites.

Ravensdale Ridge

Two extensive forest holdings owned and managed by the Washington State Department of Natural Resources (DNR) located between Black Diamond-Ravensdale Road and south of Rock Creek. Portions of the northern most property have been planned and are being developed by user groups for off-road single-track mountain bike and hiking trails.

King County Regional Trail System

Cedar River and Cedar to Green River Trails consist of 21 multi-purpose trail miles for hiking, biking and horseback riding located on an abandoned railroad track corridor extending from Lake Washington in downtown Renton parallel to the Cedar River through Kent and around Maple Valley to Landsburg Park on Summit Landsburg Road. The Cedar to Green trail extension extends north of Maple Valley SE to Kent-Kangley Road.

Henry's Ridge Mountain Bike Trails

About 7-miles of off-road hiking and single-track mountain bike trails developed within the common area of the Henry's Ridge residential development and the Ravensdale Creek Open Space Area.

Lake Sayer Mountain Bike Trails

About 4-miles of single-track mountain bike trails developed within the Ravensdale Creek Open Space on both sides of SR-169/Black Diamond-Enumclaw Road and the former Northern Pacific railroad corridor.

Park Types and Level of Service (LOS) Standards

The City adopted the current Parks Plan in December 2008. At this time, Park Types, Level of Service (LOS) and facility standards were adopted to help the City identify park needs and guide the timing and implementation of the Parks Capital Improvement Program. The City's adopted LOS standards are "spatially based" which means they emphasize access to different types of park and recreational facilities to ensure all residents are adequately served. This is the recommended approach by the Washington Recreation and Conservation Office (RCO). As previously stated, these criteria and standards may be revised when the City updates its functional park plan. Table 2 shows the proposed park types and associated LOS standards.

Park Types

The intent of park type classifications is to establish general parameters to guide siting, acquisition and design decisions for park sites and facilities. Black Diamond strives to organize recreational space in a manner that is responsive to the public needs and provides equitable, spatially balanced opportunities and experiences for all residents. The City's park types consider types of uses, size and relative service area of each park. The park types used in Black Diamond include:

Pocket Parks – small pedestrian-oriented areas, one-half acre or less, that provide greenery and open space in higher-density developed areas. They may include features such as play equipment, community gardens, historical/information markers, landscaping, seating, and public art.

Open Space – undeveloped areas or areas with limited development intended to preserve natural areas within the City for environmental, health, and/or aesthetic reasons. They may include features such as picnic areas, trails, and/or interpretive facilities.

Neighborhood Parks – small pedestrian-oriented parks, one acre or less, that serve residents of the immediate, usually residential, area. They may include features such as play areas, basketball courts, community gardens and/or open areas.

Community Parks – large parks, 1 to 5 acres in size, which provide active recreation facilities for the broader community. They may include features such as parking areas, baseball or softball diamonds, soccer or football fields, tennis courts, aquatic facilities and/or natural areas.

Trails (Non-motorized) – a network of pedestrian or bicycle-oriented paths for recreational and transportation uses. They can be within an existing park or open area or separate. Ideally, they should create a well-connected city- or region-wide system. They may include features such as parking areas, paved or graveled paths, picnic areas, and/or historical/informational markers.

Table 2-2. Park Types and LOS Standards

Park Types	LOS Standard
Pocket Park	None
Open-Space	10% of City's Land Area
Neighborhood Park	75% of population within 0.5 mile of a neighborhood park
Community Park	90% of population within 1.5 miles of community park
Trails (Non-motorized)	75% of population within 0.5 mile of a trail

Recreational Facility Standards

In addition to park LOS standards, recreational facility standards ensure specific community recreational needs are met as the population grows. These are citywide recreational needs that are usually met through the development of new or existing community parks. The combination of the recreational facilities standards and the park LOS standards will serve as a comprehensive guide for park and recreational development for the City. Table 2-3 shows the proposed recreational facility standards.

Table 2-3. Recreational Facility Standards

Facility Type	Minimum Units Per Population
Basketball Court	1:2,000
Soccer Field	1:2,000
Tennis Court	1:2,000
Youth Baseball/Adult Softball Field	1:2,000
Adult Baseball Diamond	1:5,000
Community Center	1:10,000
Skate Park	1:10,000

Facility Type	Minimum Units Per Population
Youth Football Field	1:10,000
BMX Track	1:20,000
Swimming Pool/Beach	1:20,000

Existing Need

According to the Parks, Recreation and Open Space Plan, in 2008 fifty-two percent of households were within 1.5 miles of a community park, well below the 90% standard. One park, “School Park,” provides many of the recreational facilities for the community. The Black Diamond Elementary School playfields and the baseball diamond adjacent to the school are being considered part of the “School Park” recreational facilities. The City currently has 5% of its gross land area designated as open space, which is half of the 10% LOS standard. There is only one neighborhood park, Eagle Creek Community Park, which serves about 11% of the population. This also falls far below the LOS standard for 75% of the population within 0.5 miles of a neighborhood park. The citywide trail system has not been analyzed to determine how the City is meeting its LOS standards for recreational trails. Tables 2-4 and 2-5 demonstrates the extent to which the City is not meeting its existing parks, trails, recreation and open space needs.

Table 2-4. Existing Park LOS

Type	LOS Standard	LOS
Pocket	None	Two
Open space	10% of gross land area	5% of land area
Neighborhood	75% of population within 0.5 mile	11% within 0.5 mile
Community	90% of population within 1.5 miles	100% within 1.5 miles
Trail (Non-motorized)	75% within 0.5 mile	Unknown

Table 2-5. Existing Recreational Facility Standards

Facility Type	Minimum Units Per Population	Existing Units Per Population ¹
Basketball Court	1:2,000	1:2,146
Soccer Field	1:2,000	0
Tennis Court	1:2,000	1:4,292
Youth Baseball/Adult Softball Field	1:2,000	1:4,292
Adult Baseball Diamond	1:5,000	0

Facility Type	Minimum Units Per Population	Existing Units Per Population ¹
Community Center	1:10,000	1:4,292
Skate Park	1:10,000	1:4,292
Youth Football Field	1:10,000	0
BMX Track	1:20,000	1:4,292
Swimming Pool/Beach	1:20,000	0

¹2013 Census population

To meet the current LOS deficits, new parks and trails will have to be added in the City, in addition to more extensive development of existing park land. The location of new parks will need to account for the “geographic deficit” in certain areas of the City.

For example, the City will need several new neighborhood parks to meet the LOS standard. One of these new parks would have to be located in the northern end of the City around Lake Sawyer, where there is a large amount of housing but no existing neighborhood park. Other gaps in neighborhood park coverage include the northeast corner of the City, in the vicinity of SR 169, and the area around the City Center.

Extensive development of a trail system will be required to bring the City up to the proposed LOS standard. There are a number of proposed and conceptual trails, however even if these trails get built, the City will still need new to plan for additional trail locations to ensure 75% of the population live within 0.5 mile of a trail. There is a significant amount of open space areas within and adjacent to the City that are not City owned. The analysis shows that the City would need an additional 200-acres of dedicated open space to meet LOS standards, but this does not include the other public and private dedicated open space areas.

Future Needs

An analysis of the City’s current parks inventory using the park type classifications and LOS standards indicates the City is lacking in parks, trails, and dedicated open-space lands. However, it is useful to also consider the significant amounts of dedicated county and state open space, park trails and regional recreational facilities that are near and accessible to Black Diamond residents.

In addition to the existing park and recreation needs, the City needs to consider the effects of future development on its park and recreational facility needs. The City population is expected to reach around 19,262 by 2035. Most of this projected growth is due to the approved Lawson Hills and Villages Master Planned Developments (MPDs). Such a large increase in population significantly increases the number of facilities needed in the city. The provision for parks, trails, recreation and open space areas in the MPDs is guided by the Development Agreement (DA). The Lawson Hills MPD is required designate 134-acres of open space and the Villages open space requirement is 481.4-acres. Additionally, both permit approvals include a requirement for the construction of trails. The master developer is obligated under the DA to provide recreational facilities based on the City’s adopted LOS standards.

The potential future recreational facility needs of the City are determined by applying standards to the City's projected 2035 population. Table 2-6 below lists the number of additional recreational facilities—beyond the current facilities—the City needs to meet its LOS standards at its projected 2035 population. Tables 2-7 and 2-8 demonstrate the MPD requirements for the provision of parks and recreational facilities.

Table 2-6. Future Recreational Facility Needs–2035

Facility Type	Minimum Units Per Population	Additional Facilities Needed
Basketball Court	1:2,000	7
Soccer Field	1:2,000	9
Tennis Court	1:2,000	8
Play Area	1:2,000	8
Youth Baseball/Adult Softball Field	1:2,000	8
Adult Baseball Diamond	1:5,000	3
Community Center	1:10,000	0
Skate Park	1:10,000	0
Youth Football Field	1:10,000	1
BMX Track	1:20,000	0
Swimming Pool/Beach	1:20,000	0

Table 2-7. Lawson Hills MPD Recreational Facilities Requirements

Facility Type	Required Facilities	Timing of Facilities	Fee-in-Lieu
Basketball Court	2	1 basketball court per every 800 dwelling units constructed. The second facility must be constructed prior to approval of the residential plat containing the 1250 th dwelling unit	Master Developer may elect to request City accept fee-in-lieu
Soccer Field	2	1 field prior to 800 th dwelling unit receiving Certificate of Occupancy. The second facility must be constructed prior to approval of the residential plat containing the 1250 th dwelling unit.	Master Developer may elect to request City accept fee-in-lieu
Youth Baseball/Adult Softball Field	2	1 field prior to 800 th dwelling unit receiving Certificate of Occupancy. The second facility must be constructed prior to approval of the residential plat containing the 1250 th dwelling unit.	Master Developer may elect to request City accept fee-in-lieu
Tennis Court	2	1 tennis court prior to 800 th dwelling unit receiving Certificate of Occupancy. The second facility must be constructed prior to approval of the residential plat containing the 1250 th dwelling unit.	Master Developer may elect to request City accept fee-in-lieu

Appendix 3. NATURAL ENVIRONMENT

This appendix contains information and analysis that was used to create and support the Natural Resources Element of the comprehensive plan.

Existing Natural Features

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

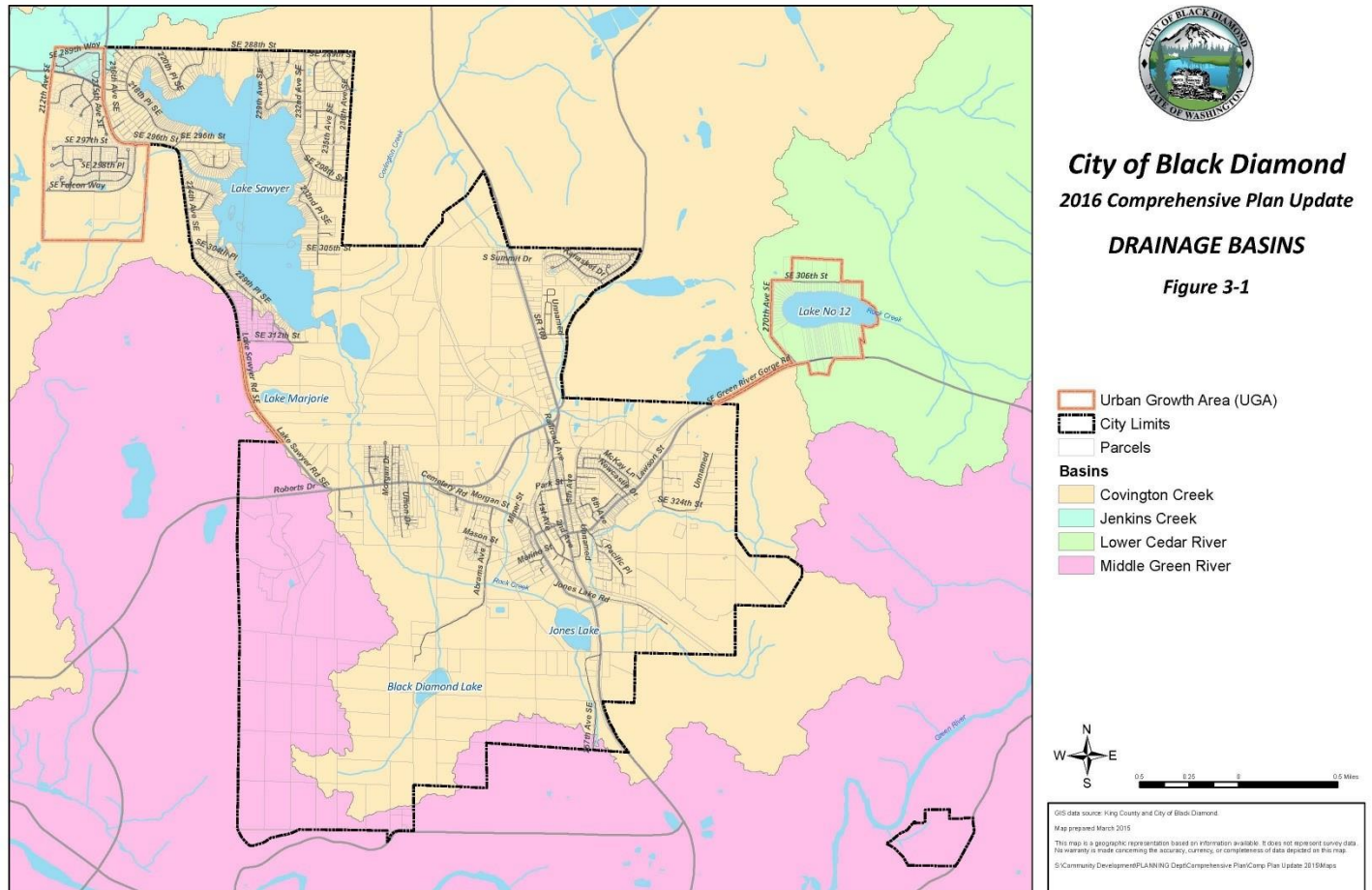
Nearly all of the planning area is located in the Rock Creek and Ravensdale Creek Drainage Basins. Rock Creek and Ravensdale Creek are two headwater drainage systems of Lake Sawyer and Covington Creek. Rock Creek drains to the south and southeast portion of Lake Sawyer, while Ravensdale Creek drains to the north and northeast 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 basins in the planning area is shown in Figure 3-1.



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 1991 using guidelines provided by the Washington State Department of Natural Resources (DNR), in compliance with the Growth Management Act (GMA). Creeks located in the planning area are Covington Creek, Ginder Creek, Lawson Creek, Mud Lake Creek, Ravensdale Creek, Rock Creek and several unnamed tributaries. These streams and water bodies are shown in Figure 3-2.

Covington Creek is classified as a Shoreline of the State, subject to the Shoreline Master Program. There is a small segment of Covington Creek where it exits Lake Sawyer within the City limits and continues into the City’s Urban Growth Area (UGA).

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. The lakes within the planning area are Lake Sawyer, Black Diamond Lake, Frog Lake, Horseshoe Lake, Jones Lake, Lake Marjorie (also known as Oak Lake), Mud Lake, Lake Number 12, and Lake Sawyer.

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 Shoreline Master Program. 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 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.

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 just before the first of the year. 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.

- Black Diamond Lake is part of an extended high-quality wetlands system. Black Diamond Lake is approximately 11 acres in size with an average depth of 6 feet and a maximum depth of 8 feet and is fed by surface water from a roughly 700-acre watershed and groundwater. Black Diamond Lake has recreational fishing values provided by bass and other warm water fish. The lake was stocked with rainbow trout by the Washington Department of Fish and Wildlife in 1958, 1963, and 1965. There is a high-quality peat wetland area located upstream from the open water lake.
- Frog Lake is located in the northwestern part of the planning area just southeast of Lake Sawyer. Frog Lake is approximately 25 acres in size. It is largely a forested wetland with an open water area. It is identified as Wetland 22 on King County’s iMap Sensitive Areas layer. As a wetland related to Lake Sawyer, Frog Lake is considered a shoreline of the state regulated by the City’s SMP.

- Jones Lake 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, characterized by relatively high concentrations of acidic organic materials in solution. These chemical conditions can reduce the rate or prevent the processes of bacterial breakdown that would otherwise recycle nutrients from dead organic material at the bottom. The bottom deposits of Jones Lake consist largely of unrated organic material which accumulates as peat. Jones Lake and Jones Lake Open Space have been acquired by the City using funds from the King County Open Space Bond Fund. Jones Lake has recreational fishing values. Stocking records available for Jones Lake (previously known as Lake 14) show the following plantings: 1915 - yellow perch; 1922, 1926, 1928, 1929 and 1930 - eastern brook trout; 1932 - kokanee; 1950 - rainbow trout; and 1956 - rainbow trout. Bass, crappie and brown bullheads have also been introduced into this system. Warm water species such as yellow perch, bass, crappie, and bullheads can spawn in lakes and establish self-reproducing populations.
- Horseshoe Lake, located just west of the City limits, is situated in a topographic depression with no outlet. It is fed by both surface water and groundwater and is particularly sensitive to local changes in the shallow groundwater table.
- Lake Marjorie has not been researched other than to identify it as an open water wetland. It is approximately 5 acres in size and is described as a groundwater depression. Lake Marjorie is isolated from the other lakes and the Rock Creek drainage system.
- Mud Lake is largely a wetland with a drainage basin of 378 acres. It was once part of a mining plan. However, disturbance of the lake is no longer proposed.
- Lake Number 12 covers 44 acres and is fed by surface runoff from a 500-acre drainage area and shallow groundwater flow over a less permeable substrate layer. The lake is known to have an aquatic weed growth problem associated with high phosphorus concentrations. Lake 12 is considered a "shoreline of the state" and is regulated by King County's Shoreline Master Program. Lake 12 is in the City's UGA northeast of the current City limits.

Groundwater

Ground water either moves laterally or remains in place as an isolated body of water and slowly moves downward. Shallow groundwater will generally reflect the influence of local precipitation and surface water phenomena. Deep groundwater is generally regional both in terms of size and immunity to local surface water changes. Groundwater characteristics depend largely on subsurface geologic features (stratigraphy) and surficial geologic features (soil type).

Major groundwater sources in the Puget Sound area are found in the glacial and non-glacial deposits formed during the Pleistocene epoch. Subsurface and surficial geologic features in the Rock Creek, Ravensdale Creek, and Crisp Creek watersheds resulted from the Vashon ice flow. The Vashon ice flow left deposits of outwash and till which form the major groundwater sources in the

Rock Creek, Ravensdale, and Crisp Creek drainage basins. Glacial outwash is a medium to highly permeable sand and gravel that produces nominal surface runoff. Precipitation and surface discharges infiltrate the outwash, which generally contributes to recharging deep, regional groundwater aquifers.

Groundwater occurs in three aquifer systems beneath the planning area. These aquifer systems include 1) a seasonal shallow or perched unconfined aquifer in the weathered soil and recessional outwash overlying till or bedrock, 2) an intermediate depth, regional unconfined and confined aquifer system within the pre-Vashon glacial and interglacial sediments, and 3) a confined regional aquifer system within the bedrock.

The shallow aquifer system is the primary water resource penetrated by most of the domestic wells in the planning area. The shallow aquifer is particularly vulnerable to contamination from the surface and may dry out seasonally in some areas. The intermediate depth aquifer is recharged over a very large area and is generally protected from contamination from the surface. The bedrock aquifer often contains water with elevated level of minerals, such as iron and sulfur that may affect water quality.

Ground water flow patterns have both vertical and horizontal components. In the planning area, the primary vertical component of flow is downward percolation from the shallow aquifer, through the underlying till or fractures in the bedrock, and into the intermediate or deep bedrock aquifer. Horizontal groundwater flow in the shallow aquifer discharges to surface water features in the Rock Creek, Ravensdale Creek, and Crisp Creek drainage systems.

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 continue to withdraw water supply from its springs so long as this source remains feasible.

Sensitive Areas

The City conducted an extensive sensitive areas update in 2008 including best available science. The city used King County mapping data as well as data from WA DNR, Parametrix and Jones & Stokes for the updated maps.

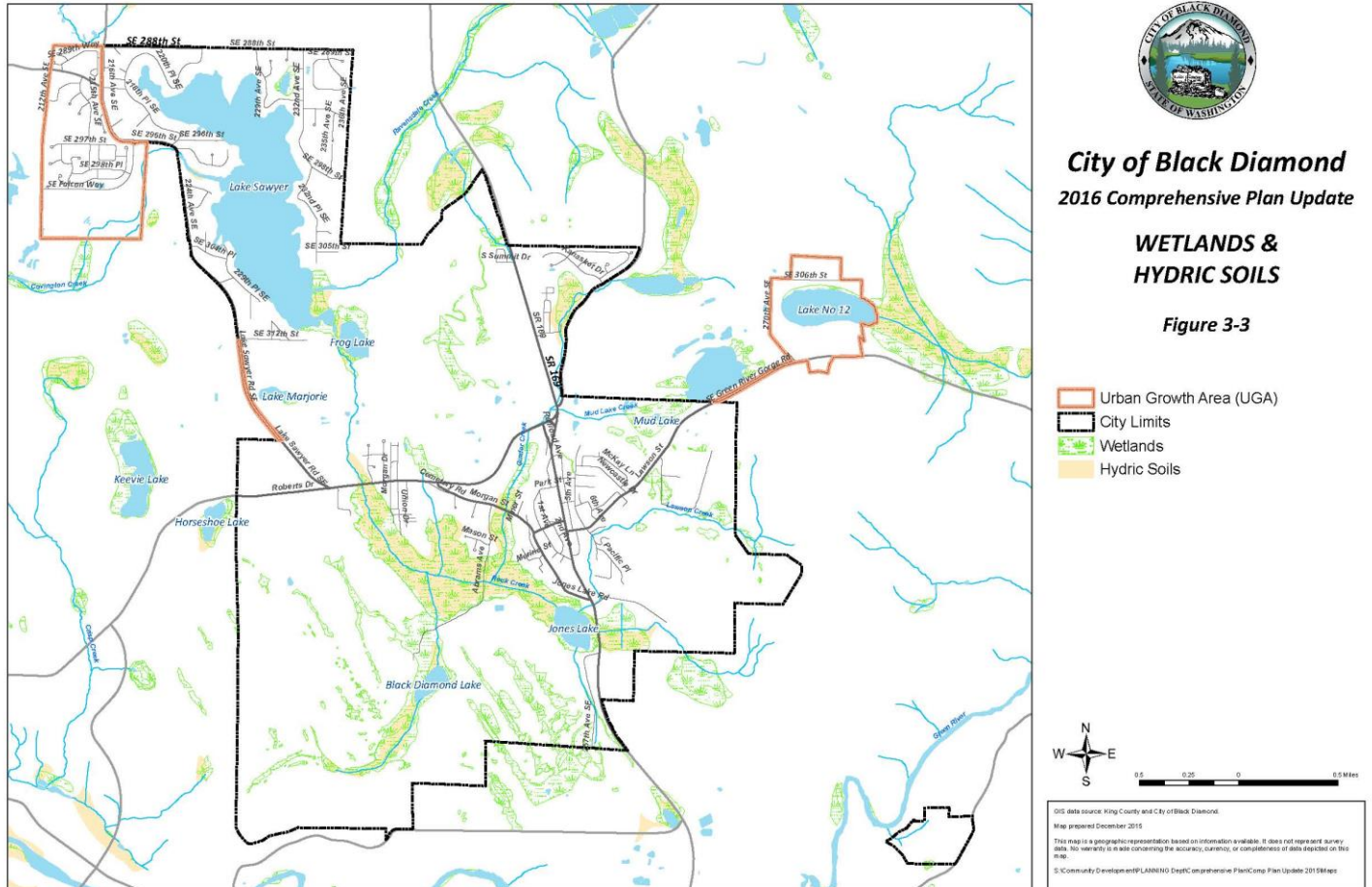
Development adjacent sensitive areas; wetlands, streams and fish and wildlife habitat conservation areas inside the City are regulated by Chapter 19.10 BDMC (Black Diamond Municipal Code). The sensitive areas code contains requirements for designating, rating and mapping wetlands and streams, requires the establishment of buffers, identifies activities allowed within the buffers and describes applicable performance standards, and outlines appropriate mitigation requirements.

Wetlands

The City's sensitive areas ordinance designates and rates wetlands according to the Washington State Department of Ecology (Ecology) wetland ratings system (Ecology Publication #04-06-025). The ordinance also provides additional protection for "core wetland and stream complex" areas associated with Rock Creek, Jones Lake, Jones Creek, Black Diamond Lake, Black Diamond Creek, and Ravensdale Creek and for "headwater wetlands" associated with the headwaters of Ginder Creek, Lawson Creek, and Ravensdale Creek. For project proposals, wetland classifications will be determined using the definitions, criteria, and procedures contained in the ordinance. During the Sensitive Areas Study, extensive wetlands were identified and classified (see figure 3-3).

Sensitive Areas Wetlands

The City conducted an extensive sensitive areas update in 2008 including best available science. The city used King County mapping data as well as data from WA DNR, Parametrix and Jones & Stokes for the updated maps.



Fish and Wildlife Habitat Conservation Areas

The GMA requires cities and counties across the state to address land use issues that directly and indirectly impact fish and wildlife habitat. Fish and wildlife habitat conservation is the management of land for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not mean that all individuals of all species must be maintained at all times, but it does mean cooperative and coordinated land use planning is critically important among counties and cities in a region. In some cases, intergovernmental cooperation and coordination may show that it is sufficient to ensure that a species will usually be found in counties and cities in a region. In some cases, the designation of fish and wildlife habitat conservation areas should include:

- Areas with which endangered, threatened, sensitive, and candidate species have a primary association,
- Habitats and species of local importance,

- Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat, and
- Waters of the state.

Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity.

State natural area preserves and natural resource conservation areas. Areas critical for habitat connectivity, which can include open space corridors designated in comprehensive plans under RCW 36.70A.160.

The “core stream and wetland complex” habitats in the City identified in the sensitive areas ordinance include the streams, lakes, ponds, and wetland complex associated with Rock Creek, Jones Lake, Black Diamond Lake, and Ravensdale Creek along with several unnamed creeks. Other fish and wildlife habitats in the City were identified during the sensitive areas update. These other fish and wildlife habitat conservation areas include the Rock Creek and Ginder Creek corridors, open water ponds, lakes, and riparian forests as areas of high-quality habitat. The sensitive areas code contains requirements for designating and mapping fish and wildlife habitat conservation areas, sets buffer requirements and performance standards for activities allowed within them and their buffers, and outlines appropriate mitigation requirements.

The general types of habitat 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 Priority Habitats and Species (PHS) program. The city reviews maps of priority habitat areas for development proposals.

Wildlife – particularly species that roam widely or have large home ranges – move freely within and among habitat types via wildlife corridors or networks. In urban areas, creeks and streams and their associated buffers function as wildlife corridors. Rock Creek, Ravensdale Creek, and their associated riparian habitat function 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) include:

- **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 creek bed 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.
- **Rock Creek.** A small portion of the planning area drains to Black Diamond Lake and the wetlands surrounding it. The Black Diamond Lake wetlands serve as partial headwaters of Rock Creek. Rock Creek is listed as supporting coho salmon, cutthroat trout, and steelhead in the WRIA 9 Fish Distribution Map.
- **Ginder Creek.** The northeast portion of the planning area drains to Ginder Creek, which drains into Rock Creek. Ginder Creek historically provided good habitat for salmonid spawning and rearing. The WRIA 9 Fish Distribution Map (2000) shows Cutthroat trout presence in Ginder Creek. Based on a 1982 sampling, Ginder Lake supports warm water fish including black crappie, largemouth bass, and pumpkinseed. An obstruction limits the passage of adult salmonids upstream as far as Ginder Lake. Electroshocking done during the 1982 survey indicated that Ginder Creek, above State Route (SR) 169 may be able to support other species of fish if passage barriers were removed. The survey generally indicated that Ginder Creek is a relatively productive tributary (John Henry Mine, SEIS).
- **Mud Lake Creek.** This stream provides some habitat for spawning and rearing of salmonids. The cascading portion over sandstone bedrock would prevent passage of salmonids. High turbidity was also identified in the 1982 sampling in Mud Creek, especially at the inlet to Mud Lake. Mud Lake Creek, however, represents an important source of water for Ginder Creek below the confluence near SR 169, at least during the winter months. Fish populations were essentially non-existent in Mud Creek (1982) and in the inlet to Mud Lake (John Henry Mine, SEIS).
- **Crisp Creek.** The eastern edge of the Crisp Creek drainage basin crosses into the City. The Crisp Creek basin drains an area approximately 5.0 square miles with the majority of the basin located upstream of the Keta Creek Hatchery. Crisp Creek and Keta Springs are the water supply for the Hatchery. Crisp Creek is also the sole water supply for the state-owned rearing ponds, located on the mainstem and upstream of the Hatchery. Coho, chum and Chinook salmon as well as steelhead have been produced at the Keta Creek Hatchery.
- **Green River.** The planning area lies within 1 mile to the north of the lower end of the Green River Gorge, between river mile (RM) 42 and RM 47. In this vicinity, the river flows through a steep-sided eroded gorge. The Green River supports significant runs of coho, Chinook,

and chum salmon as well as steelhead and sea run cutthroat trout. These salmonid runs support important sport and retail fisheries in the Puget Sound Region and the Pacific Ocean as well as within the river system.

All of these need highly effective groundwater and stormwater protection to maintain the water quality and ensure sufficient supplies of water for natural production or successful hatchery production. Stream buffers and limitations on land uses contained in the City's sensitive area ordinance help protect the functions and values of these streams as critical fish and wildlife corridors.

Geologically Hazardous Areas

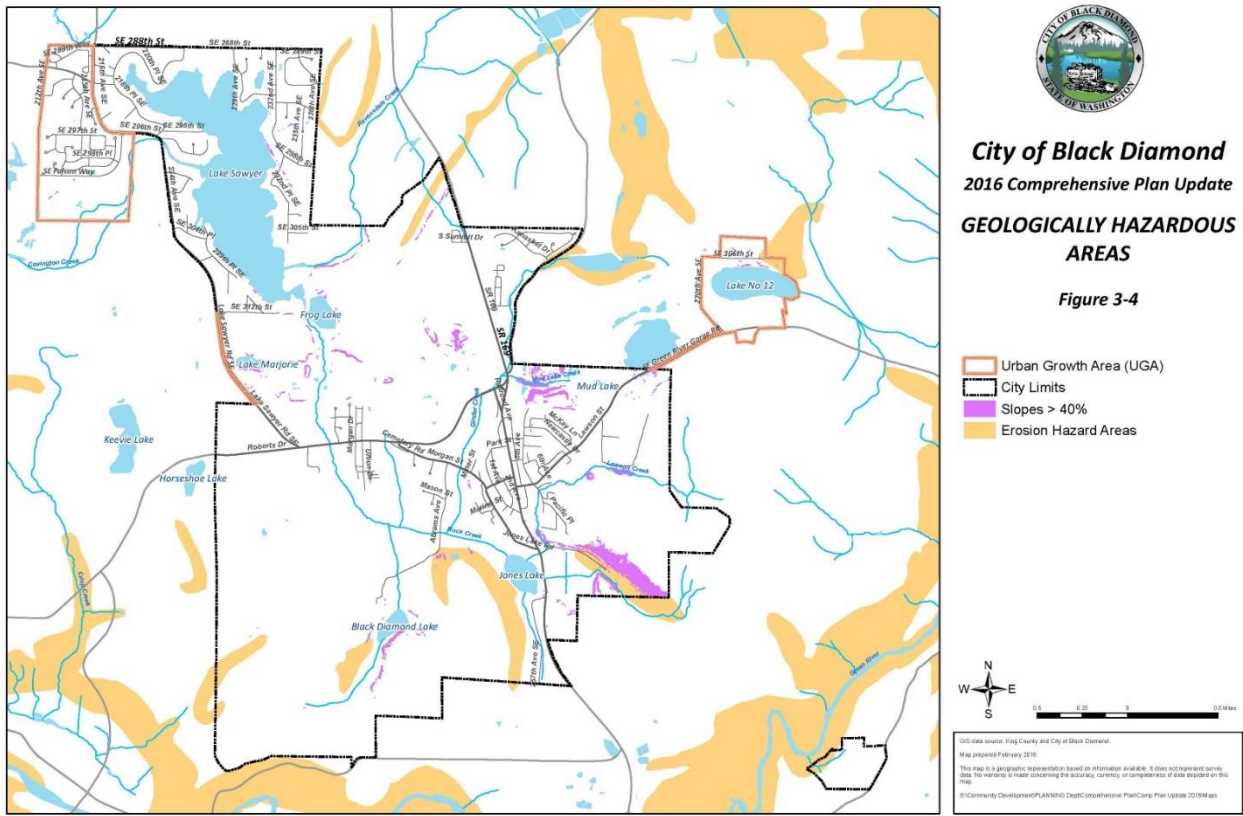
Geologically hazardous areas include erosion hazards, landslide hazards, and mine hazards. Erosion hazards areas and steep slopes are shown in Figure 3-4 and areas of abandoned coal mine workings are identified and mapped in Figure 3-5. Geologically hazardous areas are regulated by the City's Sensitive Areas regulations.

Erosion Hazard Areas are susceptible to prevailing agents of erosion, such as wind, rain, water, and other natural agents. The severity of erosion depends on factors such as the size of soil grains, soil cohesion, slope gradient, rainfall frequency and intensity, surface composition and permeability, and the type of vegetation cover. Erosion hazard areas are those areas where there is a "severe" to "very severe" rill and inter-rill erosion hazard.

The sensitive areas layer of the King County IMap indicates five small locations within the planning area, including the Ravensdale Creek corridor, as "erosion hazard." Among the Natural Resources Conservation Service soil types identified within the planning area, Alderwood/Kitsap and Alderwood gravelly sandy loam soils are identified by King County as potentially severely erosive. These erosion prone soils are constrained for development— especially in the area of Alderwood and Kitsap loam soils near Black Diamond Lake.

Landslide Hazard Areas are defined in the City's sensitive areas ordinance as 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. According to the IMap sensitive areas layer, there are no known landslide hazard areas within the planning area.

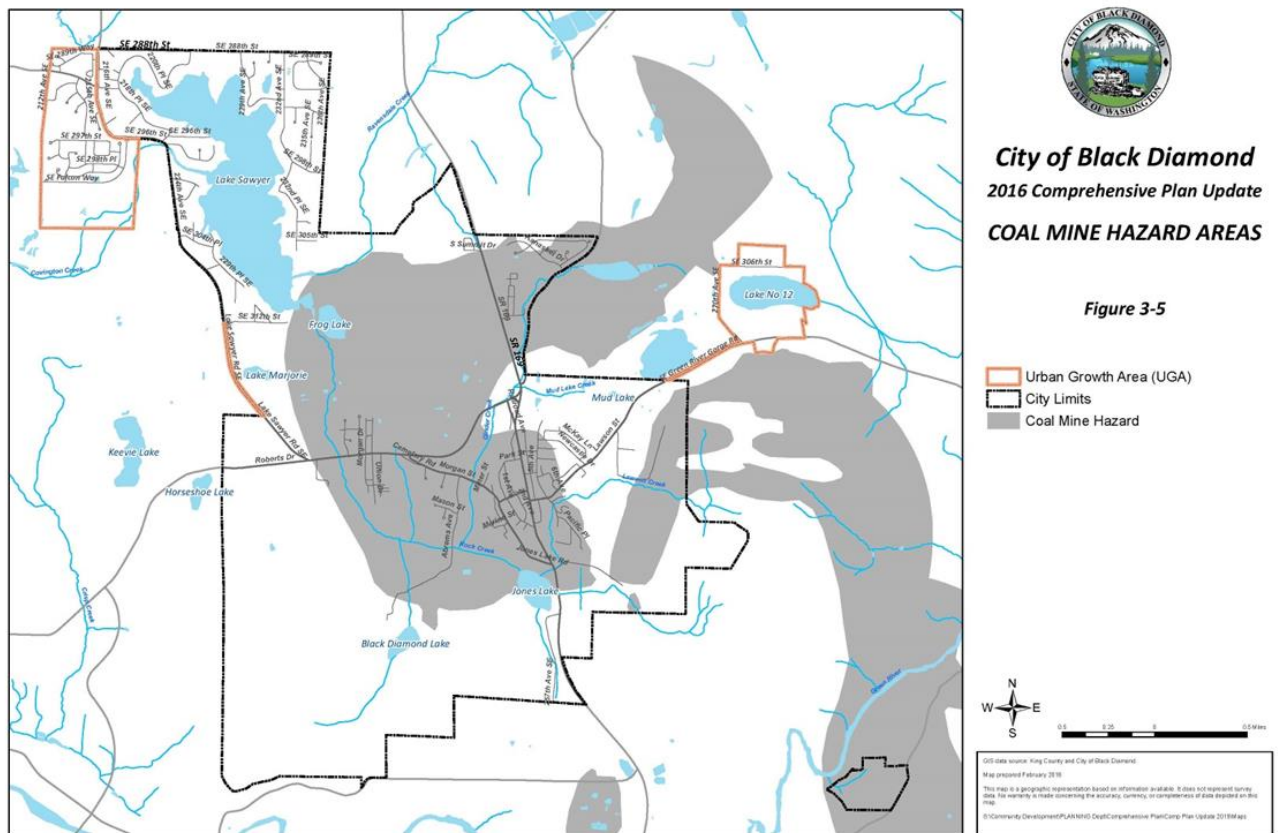
Seismic Hazard Areas are at severe risk of earthquake damage as a result of earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction. These conditions occur in areas underlain by soils of low density, usually in association with a shallow groundwater table. According to the IMap sensitive areas layer, no seismic hazard areas are identified within the planning area.



City of Black Diamond
2016 Comprehensive Plan Update
GEOLOGICALLY HAZARDOUS
AREAS
Figure 3-4

Information provided by Palmer Coking Coal indicates that much of the existing City is built over coal mine workings that are deep underground. Most underground coal mining in the Black Diamond area consisted of the “room and pillar” mining technique. “Pillars” of coal were left to support the roof above and allow 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 and stockpiles of coal tailings or mine spoil in the planning area. Mining records indicate that underground mining has occurred in sections 2, 10, 11, 12, 13, 14, 15, and 23 of the City. Most of these are areas underlain by deep underground coal workings. The coal mine hazards identified in Figure 3-5 are based on maps available at the Washington State Department of Natural Resources. Chapter 19.10.430 BDMC defines the degree of hazard as low, moderate and severe and regulates the allowed uses and activities within these categories.



Steep Slopes

Areas of steep slopes are identified in City Sensitive Areas maps and regulated by the sensitive area ordinance. The steepest slope in the City occurs along the south side of Lawson Hill (aka Franklin Hill), where isolated portions of the hillside approach 30% slope. Most of Lawson Hill contains 6% to 15% slopes with an area of 16% to 24% slopes. 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.

The City's sensitive area ordinance contains designation and mapping requirements, a description of allowed activities and performance standards, and appropriate mitigation requirements for erosion, landslide, and mine hazard areas.

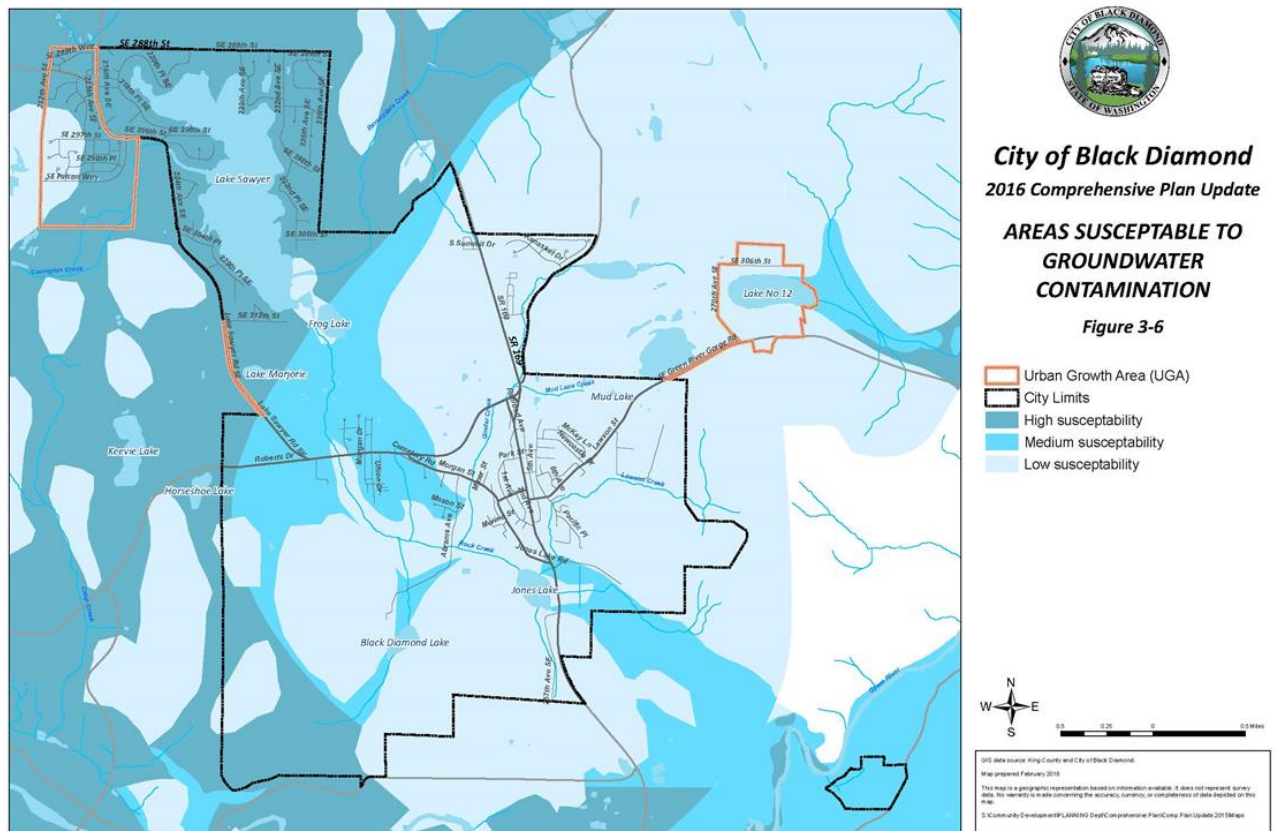
Critical aquifer Recharge Areas

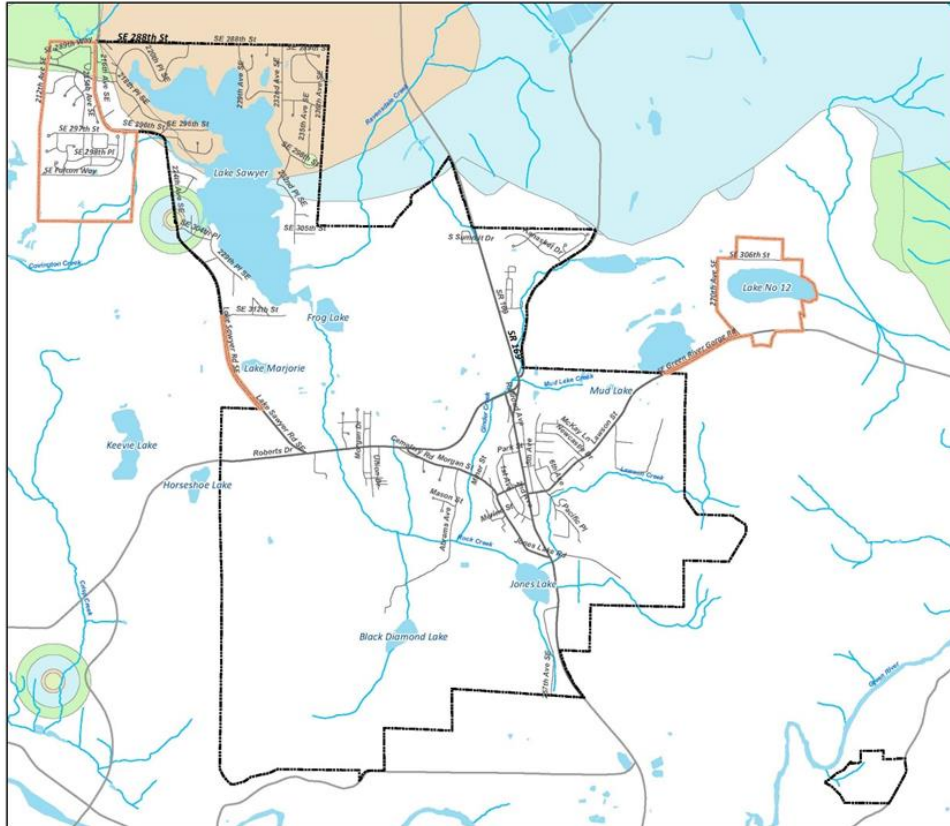
This area contains a shallow aquifer serving as a source of water to the City of Kent system and Lake Sawyer. Lake Sawyer, Ravensdale Creek, and Rock Creek are identified as being hydraulically coupled to this shallow aquifer. Figure 3-6 shows areas with high susceptibility to groundwater contamination 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 having medium susceptibility to groundwater contamination. Areas around wellheads are also protected. Figure 3-7 shows the “time of travel” that it takes contaminants to reach wellheads from surrounding areas within 6 months and 1, 5 and 10-year periods.

To protect the critical groundwater recharge areas that supply the aquifers that in turn supply our domestic and drinking water, the City requires development that is within the City limits and is served by City utilities also be served by sanitary sewers. Areas served by the 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 within aquifer recharge areas is important to protecting aquifers from pollutants. Allowing stormwater runoff to infiltrate in recharge areas renews the amount of water in the aquifer. The City’s storm drainage ordinance requires that runoff be treated before it can be discharged as surface water. The storm drainage ordinance also encourages infiltration. Using the appropriate treatment and infiltration techniques in aquifer recharge areas will help protect aquifer recharge areas and the quality and quantity of water available for drinking and domestic use.



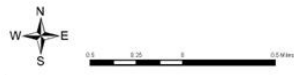


City of Black Diamond
2016 Comprehensive Plan Update

WELLHEAD PROTECTION AREAS

Figure 3-7

- Urban Growth Area (UGA)
- City Limits
- Wellhead Protection Areas**
- 6 Month
- 1 Year
- 5 Year
- 10 Year



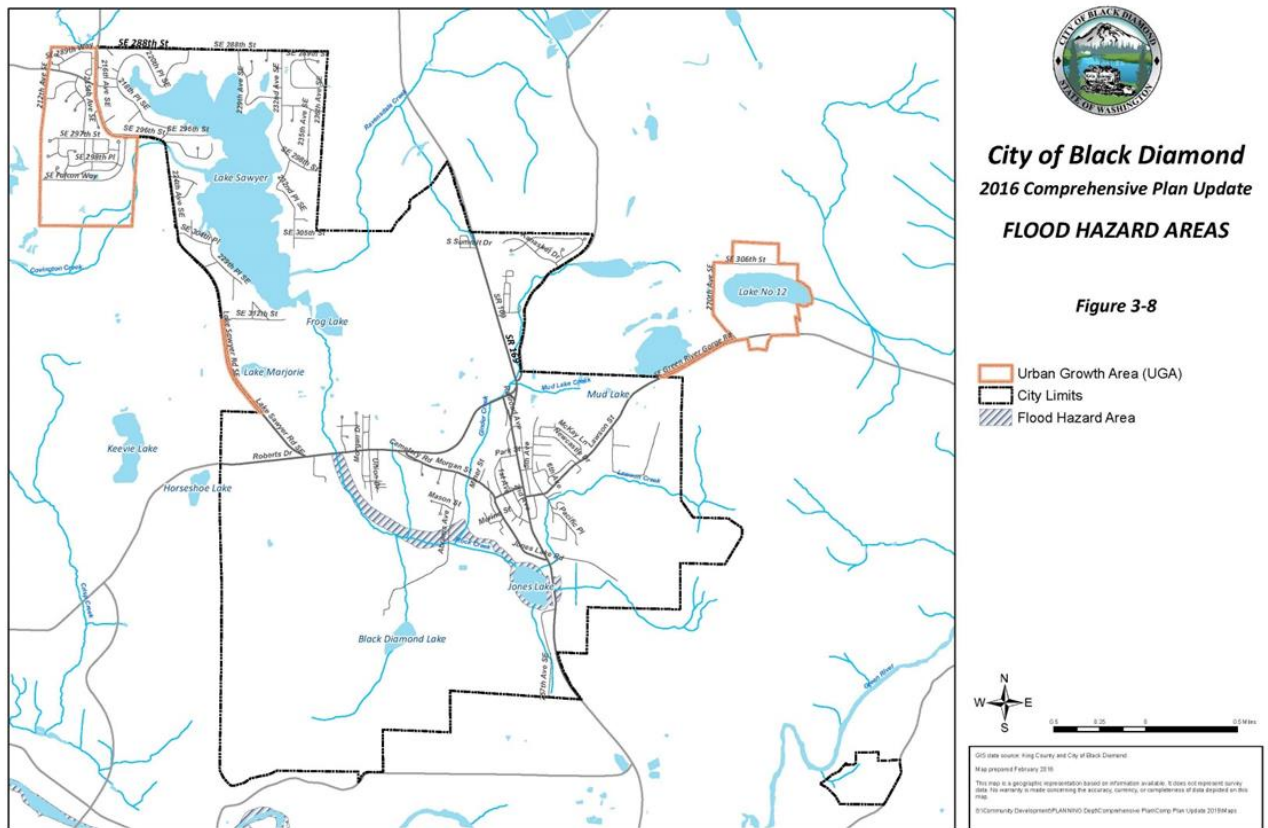
GIS data source: King County and City of Black Diamond
 Map prepared February 2016
 This map is a geographic representation based on information available. It does not represent survey data. The user is responsible for the accuracy, currency, or completeness of data displayed on this map.
 © Community Development/PLAN/NOI/DCP/Comprehensive Plan/Corp Plan Update 2016/Map

Frequently Flooded Areas

Floodplains ordinarily provide riparian habitat for fish and wildlife, connectivity to wetlands and other habitats, storage and conveyance of stormwater and floodwater, and groundwater recharge. Floodplains are also critical habitat for fish species as safe havens during flood events.

The City has classified and designated frequently flooded areas using the FEMA flood map (Figure 3-8). This map identifies the following areas as being at hazard of inundation by a 100-year flood: along Rock Creek from Morganville to Jones Lake, the southern portion of Ginder Creek, and 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 King County Interactive Map Folio Flooding Info layer shows a segment of Rock Creek and Jones Lake in the 100-year floodplain in the City.



Air Quality

The City experiences relatively higher ozone pollution concentrations than other areas in King County. This is common for much of southeast King County (the City contributes only marginally to this regional pollution). Zone monitoring is conducted at Enumclaw on a seasonal basis.

Particulate Matter (PM10) consists of very small particles, either solid or liquid, which float in the air and settle very slowly. Soot and dust are examples. PM10 stands for particulate matter that is smaller than 10 micrometers or one-hundredth of a millimeter. Most particulate comes from wood smoke, road dust, outdoor burning, and industry. In the City and surrounding area, the sources of PM10 include local mining operations, a smokehouse, and outdoor burning. Inside the City, the requirements of the Puget Sound Air Pollution Control Agency (PSAPCA) and WAC 173-425-040 prohibit outdoor burning within designated UGAs.

Geology, Soils, and Topography

Geology

The City lies in a geographic area known as the Puget Lowlands, a large land trough extending from the Fraser Valley in British Columbia, Canada, to the Willamette Valley in Oregon and from the Cascade Mountains in the east to the Olympic Mountains in the west. Geologic characteristics in the northern portion of the Puget lowlands are the result of glaciation that occurred during the Pleistocene Era (beginning about 20,000 years ago). Glaciers were once as thick as 3,000 feet during the Vashon Period of the Fraser Glaciation (roughly 15,000 years ago). They deposited till, outwash, and material mixed with volcanic ash in the Puget Lowlands on top of a thick sequence of interbedded sandstones, quartzes sandstones, siltstones, and numerous coal beds. The Black Diamond area is located on the Covington Drift Plain. Two types of deposits occur in the planning area: Vashon till which is generally an impervious mix of gravel, cobbles, and clayey, sandy silt (known as "hardpan"); and the Vashon stratified drift deposits (generally, permeable) composed of outwash gravels, rocks, and cobbles. Since the last glaciation, urbanization, rural development, logging, gravel mining activities, erosion, and sedimentation have modified the land surface. Weathering and erosion of native soils has resulted in the development of topsoil at the ground surface. The topsoil in undeveloped areas consists of a few inches of silt and sand with decayed leaves and roots. The weathered soils underlying the topsoil consist of a few inches of organic matter, silt, and sand with roots generally extending to a depth of 2 to 6 feet. Topographic depressions and low gradient stream channels and wetlands have accumulated organic silt and peat.

Vashon recessional outwash mantles the west portion of the planning area. This soil consists of sand and gravel with variable amounts of alluvial silt and cobbles deposited by rivers emanating from the melting front of the Vashon ice sheet. This soil is considered a valuable gravel resource in this area depending on its thickness and silt content. Vashon till is at the ground surface in some areas of the east portion of the planning area. Till consists of unstratified silt, sand, gravel, and cobbles that are in very dense condition due to being overridden by the glacial ice. Till is usually 20 to 40 inches thick and probably underlies the recessional outwash but may be absent where eroded during deglaciation meltwater runoff.

Pre-Vashon glacial and interglacial sediments underlie the Vashon till; generally, in the west portion of the planning area where bedrock is deep. The pre-Vashon glacial and interglacial sediments consist of interbedded and/or stratified silt, sand gravel and till. These soils are not exposed at the ground surface in the planning area but are exposed in the upper walls of the Green River gorge

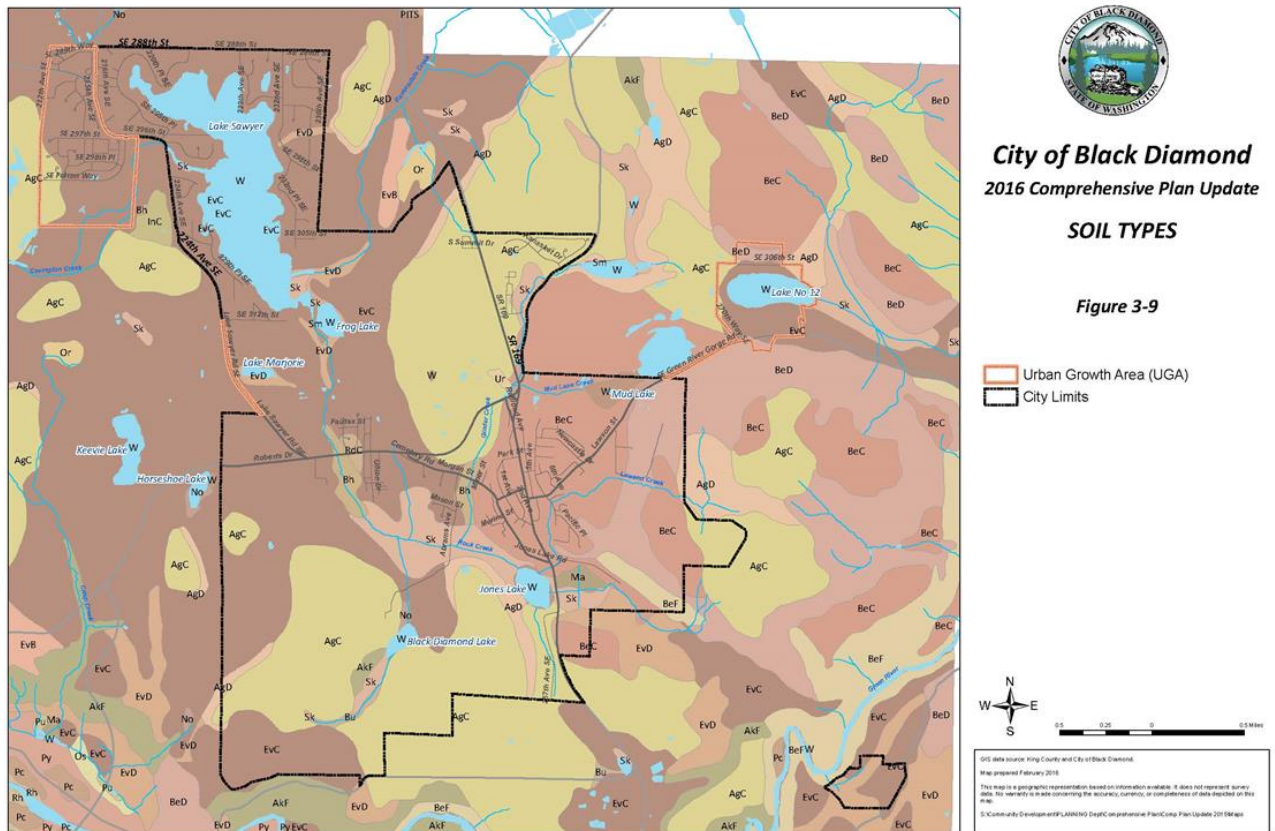
south of the planning area and are penetrated by water wells in the west portion of the planning area.

Bedrock of the Puget Group underlies the entire planning area. The bedrock is locally exposed at the surface in the east portion of the planning area and in the walls of the Green River gorge south of the planning area. The bedrock consists of sedimentary sandstone, mudstone, shale, and coal. Based on elevations of surface exposures and water well logs, bedrock underlies the land at a depth of 200 feet or more in the west portion of the planning area.

Soils

Weathered soils derived from native geologic deposits cover the ground surface in most of the planning area. The following soil information was taken from the November 1973 NRCS "Soils Survey of King County Area." Because this information is based on mapping from aerial photos and may not be totally representative it is used for comparing the general suitability of areas for different land uses. Field verification may be required for specific sites as part of specific project review.

Specific to the Black Diamond vicinity, weathered gravel, sand, and clay left in glacial till plains, terraces and outwash plains at the end of the Pleistocene Era, have formed the local soils. The NRCS characterizes soils by the mixture of clay, silt, sand and organic materials that make up the soil and the degree of slope where the soils are located. Soil types found in Black Diamond are shown in Figure 3-9.



The soil types mapped in the planning area are:

- Alderwood gravelly sandy loam, 15-30% slope (AgD);
- Alderwood gravelly sandy loam, with Kitsap Silty Loam (AgF);
- Alderwood and Kitsap soils, 25% to 70% slope (AkF);
- Beausite gravelly sandy loam, 6 - 15% slope (BeC);
- Beausite gravelly sandy loam, 14 to 30% slope (BeD);
- Bellingham silt loam, 0% slope (Bh), hydric;
- Buckley silt loam, 0% slope (Bu), hydric;
- Everett gravelly sandy loam, 0- 6% slope (EvB);
- Everett gravelly sandy loam, 6-15% slope (EvC);
- Everett gravelly sandy loam, 15- 30% slope (EvD)
- Mixed Alluvial, less than 2% slope (Ma);
- Norma sandy loam, less than 2% slope (No), hydric;
- Ragnar-Indianola association, 2-15% slope (RdC);
- Seattle muck, less than 1% slope (Sk), hydric;
- Shalcar muck, less than 1% slope (Sm), hydric, and
- Urban land filled (Ur).

Alderwood soils (principally AgC) are the most abundant soils present in the planning area. These soils were formed on till plains and roughly correspond with the Vashon till (Qvt). Alderwood surface and subsoils consist of a very gravelly sandy loam that is moderately deep, averaging approximately 30 inches. Extending downward from depths of approximately 20 to 40 inches, the soil layer has been compacted. This material is known as "hardpan". Alderwood soils have the characteristic of moderately rapid permeability above the hardpan layer and very slow permeability through it. Water has a tendency to perch on top of the hardpan layer. In winter, water moves laterally along the top of the hardpan, or it saturates surface soils in topographic low areas creating local areas of hydric soils and wetlands. These wetlands typically do not contribute to aquifer recharge because water does not percolate easily through the hardpan to the aquifer below.

A notable complex of wetlands in Section 23 occurs in topographic depressions on Alderwood soils. These wetlands are consistently oriented in a northwest to southeast direction presumably related to the direction of glacial movement in the area. According to the Site Evaluation and Land Use Concepts prepared for Plum Creek Timber Company properties (Hewitt Isley, 1991), the regional groundwater table occurs within the preglacial soils that underlie the glacial till. The regional groundwater table is below and hydrologically separate from the glacial till where the perched groundwater occurs and supports wetlands.

Alderwood soils are stony and commonly experience summer drought after seasonally high (winter), perched water tables diminish. The erosion potential on 6-15% slopes (AgC) is moderate due to the relatively unconsolidated nature of the till above the hardpan. The erosion potential on 15-30% slopes (AgD) is severe and slippage is moderate; however, only a small area lying within Section 23 exhibits this soil type. Related to agricultural purposes, Alderwood soils are used mostly for timber. If cleared, the soils are suited to grasses.

According to the NRCS, continuous vegetative cover is important to protect the soils adequately against the hazards of severe erosion and sedimentation to maintain the quality of water in streams, and to control runoff. Alderwood soils are not suited to field crops requiring annual tilling and re-seeding.

In general, glacial drift soils, other than the loose weathered colluvium/topsoil, provide excellent support for buildings and roadways and are generally suitable for development. Development limitations that exist are related to areas of seasonal high-water table and steep slopes with erosion potential. The limitations for stormwater infiltration and septic tank drainfields are severe due to the very slow permeability in the substratum (hardpan). Urban development on Alderwood soils requires sanitary sewers.

Alderwood Kitsap soils (AkF) is about 50% Alderwood gravelly sandy loam and 25% Kitsap silt loam. Slopes are 25% to 70%. The distribution of these soils varies greatly within short distances. Drainage and permeability vary. Runoff is rapid to very rapid, and erosion hazard is severe to very severe. The slippage potential is severe. Alderwood Kitsap soil is located along the west edge of the Black Diamond Lake wetland.

Beausite Gravelly Sandy Loam. The Beausite series (BeC, BeD, and BeF) consists of moderately deep, well drained soils formed in sandstone and conglomerate. These soils are on glaciated mountains and foothills at elevations of near sea level to about 1,500 feet. These soils are well drained with moderate permeability, and runoff is medium to rapid. Beausite soils occur in the area of downtown Black Diamond and east to the city limits.

Bellingham silt loam (Bh) is a poorly drained soil formed in alluvium. These soils are nearly level and are mostly in depressions on the upland glacial till. Permeability is slow. Runoff is slow and the hazard of erosion is slight. Bellingham soils occur along sections of Ginder Creek and Rock Creek.

Everett gravelly sandy loam (EvC), 5-15% slopes, is the second most abundant soil type present within the planning area. These soils were formed in glacial outwash on terraces and outwash plains and were deposited on top of older Alderwood soils described above. Everett soils roughly correspond with Vashon Stratified Drift Deposits (Qvs). These gravelly sandy loam soils are very deep and somewhat excessively well drained. The surface and subsurface soils can be found to a depth of 60 inches, with a weakly cemented layer in the substratum in some areas.

Rainfall in these soils is quickly absorbed and percolates to the groundwater table. Creeks that drain into areas dominated by Everett soils typically intercept the groundwater table and receive most of their flow from groundwater discharge. Runoff is slow to medium. The erosion hazard is slight to moderate. Everett soils are used for timber, pasture, and urban development. Everett soils are also generally suitable for urban development, except in areas of steep slopes. Limitations for septic tank drainfields exist where Everett soils are present because of the potential for aquifer and stream contamination, particularly where slopes exceed 8%. Urban development on Everett soils requires sanitary sewers. Everett gravels provide sand and gravel resources for the gravel pit located in Section 10.

Mixed alluvium (Ma) consists of a variety of alluvial soils in areas too small and too closely associated to map at the scale of the NRCS survey. This land ranges from very well drained to poorly drained. The hazard of stream overflow is severe. Mixed alluvium is located east of Jones Lake and SR 169.

Ragnar-Indianola (RdC) soil is about equal parts Ragnar fine sandy loam and Indianola loamy fine sand. Permeability is moderately rapid in the upper part of this soil and rapid in the substratum. Runoff and erosion hazard is moderate. This soil is used for timber and for urban development. This soil type is located near Morganville.

Urban land (Ur) is soil that has been modified by disturbance of the natural layers with additions of fill material several feet thick to accommodate urban development. Urban land is mapped near the intersection of Roberts Road and SR 169.

Hydric Soils

The definition of a hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Notable, high value wetlands exhibiting hydric (poorly drained) soils such as Buckley silt loam, Norma sandy loam, Shalcar muck and Seattle muck include Black Diamond Lake and the Rock Creek wetland corridors.

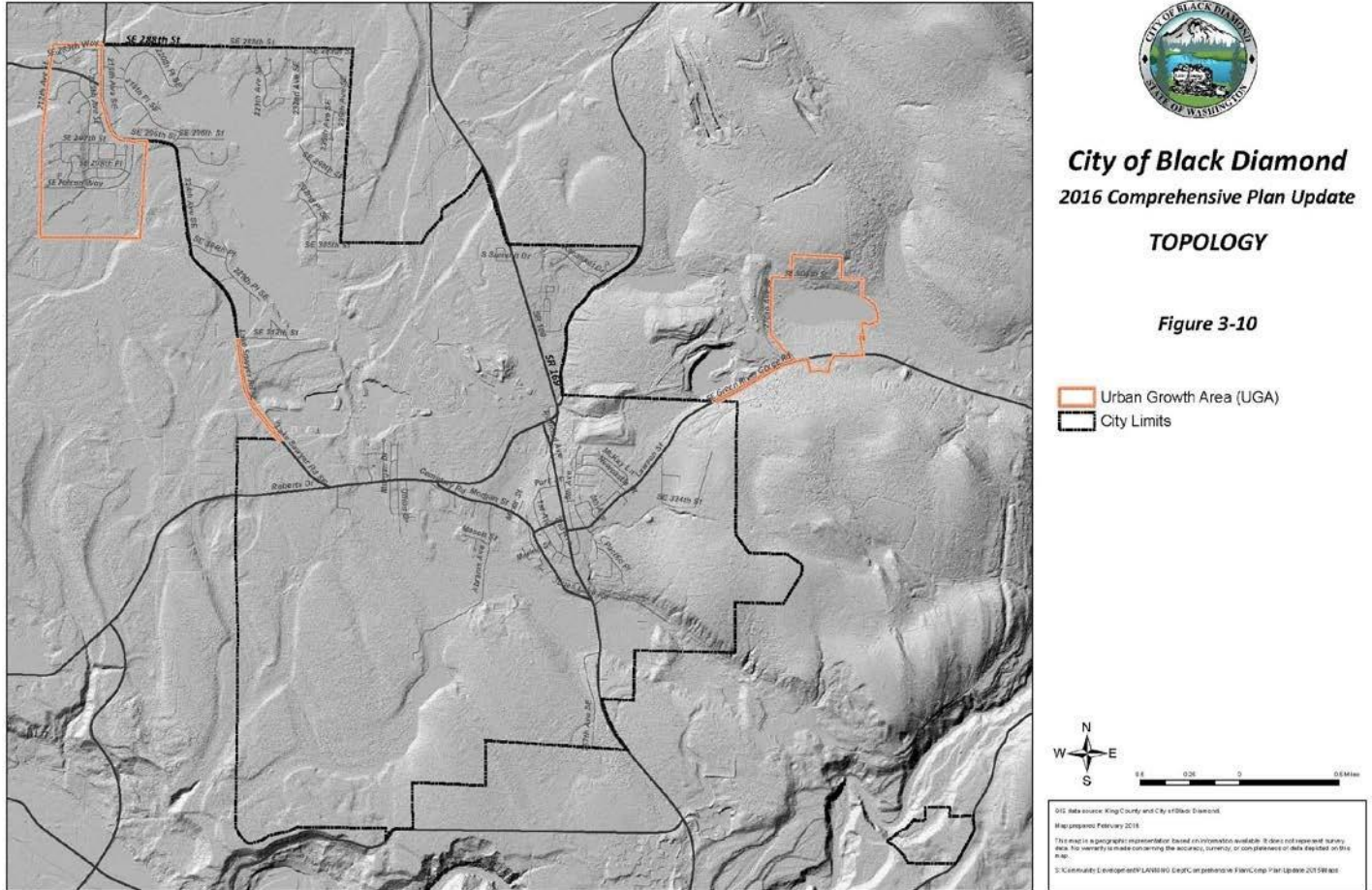
Buckley Silt Loam – Buckley silt loam (Bu) occurs in a small, isolated area in the far, southeastern portion of Section 23. Typically, a seasonally high-water table occurs at or near the surface of this hydric soil unit and these soils are typically associated with wetlands. Erosion hazard is slight and runoff is slow. The limitations for septic tank drainfields are severe due to the very slow permeability in the substratum (hardpan).

Norma Sandy Loam – A small, isolated area of Norma sandy loam (No) is located to the north of Black Diamond Lake. This hydric soil is poorly drained and is typically alluvium, in basins and along stream bottoms. Permeability is moderately rapid, and the seasonal water table is at or near the surface. Runoff is slow, and the erosion hazard is slight. This soil is used mostly for pasture and is severely limited for use with septic drainfields due the saturated condition.

Seattle Muck – Seattle Muck (Sk) soils occur in limited areas associated with wetlands adjacent to Black Diamond Lake and Rock Creek. These hydric soils are composed of peaty soils originating mostly from sedges. There is a seasonal high-water table at or near the surface, and soil permeability is moderate. Surface water “ponds,” and there is little or no erosion hazard. Like the Norma series, Seattle muck is unsuited for septic drainfields due to saturation and the presence of organic soils. The Seattle muck soil (muck peat, muck, and peat) is generally not suitable for urban development because of the seasonal high-water table and organic soils.

Shalcar Muck – Shalcar muck (Sm) is located at the connection of Rock Creek to Lake Sawyer. This hydric soil is poorly drained organic soils. They are formed in deposits of sedge peat and alluvium along stream bottoms. Slopes are 0% to 1%. Permeability is moderate in organic layers and moderate to rapid in the lower soils. There is a seasonal high-water table at or near the surface. Runoff is ponded and there is no erosion hazard. This soil is typically used for pasture and is severely limited for use with septic drainfields due to the saturated condition.

Topography



The planning area is located in a small valley on an upland plateau ranging roughly from 525 to 750 feet in elevation and includes the hillside east of the City up to an elevation of 1,180 feet. The plateau is approximately 300 feet above the Green River Gorge. Much of the planning area is characterized by rolling terrain with wetlands and drainage courses located in topographically low areas. Figures 3-10 shows the topography of the city.

Appendix 4. LAND USE

This appendix contains information and analysis that was used to create and supports Chapter 5 “Land Use” of the comprehensive plan.

Land Use History

The City has served as a rural center in southeast King County since its founding in the 1880s. Over its 120-year history, the City has evolved from one of the earliest and largest towns and employment centers outside Seattle to a local center for resource activities (primarily mineral extraction); then to its current character as a somewhat economically dormant, rural residential center and bedroom community for emerging nearby employment centers; and now to a city poised to experience substantial growth over the next several decades as southeast King County continues to urbanize, and as opportunities for development of large parcels of land within the City materialize.

The City, originally a “company town,” was the center of a large Pacific Coast Coal Company land holding that included other small communities such as Franklin, Newcastle, and Burnett. The local ownership covered portions of the area lying generally between the existing northerly City limits (including Lake 12) and the present SE Green Valley Road (excluding Northern Pacific Railroad land) and between a line extending southerly from the west shore of Lake Sawyer and the Green River Gorge and included a large area south of the Green River around Isabel Lake, Deep Lake, and Fish Lake. Between the late 1930s and early 1950s, coal mining declined and the Pacific Coast Coal lands were sold to local residents, Palmer Coking Coal Company, and other large landholders. After a period of being part of unincorporated King County, the residents of the City voted to incorporate in 1959. The 1959 City boundaries encompassed the original Black Diamond townsite and Morganville Addition, as well as adjacent lands owned by Palmer Coking Coal Company, Burlington Northern Railroad, the Banchemo family, and a variety of other small and medium size ownership interests.

The City prepared its first comprehensive plan in 1980. This plan proposed future annexation of additional Palmer Coking Coal Company lands to the northwest and east, as well as a small parcel to the southwest. Subsequent annexations completed by 1985 added Palmer Coking Coal Company land to the northwest and southwest. In 1994, the City also annexed 783 acres at the southwest edge of the City. The land was owned by Black Diamond Associates, Plum Creek Timber (successor to Burlington Northern Railroad land), Palmer Coking Coal Company, and the Berklid family. The City completed its first Growth Management Act (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.³ In December 2005, the City completed annexation of its West Annexation Areas totaling approximately 345 acres.⁴ In 2009, the City annexed the South Annexation Area (233.6 acres), and the East Annexation Area (50 acres). As of 2016, the remaining land within the City's PAA includes:

- Lake 12 Annexation Area: Approximately 160 acres northeast of City limits including a section of the Green River Gorge Road connecting the Lake 12 Annexation Area to the City limits.
- West Lake Sawyer Annexation Area: Approximately 230 acres adjacent to City limits, located west of Lake Sawyer along the Covington-Sawyer road and including Kentlake High School.

Planning Area Land Use

The Land Use Element addresses the existing City limits 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 provide capacity for future growth through annexation during and beyond the 20-year planning period. The City's present land use pattern primarily reflects development of the original company town within the Black Diamond townsite and Morganville settlements. Other residential and commercial growth has been more linear, generally following the major road corridors. The exceptions are a large mobile-home park on the north edge of town and the Lake Sawyer neighborhood, which reflects a more recent development pattern centered on the lake. Existing residences are not concentrated in a single area of the City but are loosely grouped in four general areas. Similarly, commercial development is dispersed into three areas, rather than concentrated into one "central business district."

The rolling topography and variety of open pastures and meadows, lakes, wetlands and forested areas in the City reinforce the dispersed spatial pattern of development. The City is surrounded, or "framed," by large blocks of second and third growth forest stands in various stages of growth. The mixture of clustered development areas that are integrated with large undeveloped areas and open space gives the City its rural character. The variety of land uses in the City include public facilities, commercial, services, mining activities, and several residential neighborhoods.

A large part of land in the City is either undeveloped or underdeveloped, i.e., not developed at the full potential allowed by existing zoning. Significant forested areas, creeks and lakes occur in the City, some of which are identified and regulated as environmentally sensitive areas.

Historically, the presence of large parcels and concentrated ownership patterns has impacted the pace of development in the City. However, recent ownership changes and more favorable

³ Washington State Office of Financial Management. Annexations Approved by OFM 1/1/1990 through 12/31/1999.

⁴ Washington State Office of Financial Management. Annexations Approved by OFM 1/1/2000 through 8/31/2006.

economic conditions suggest that the rate of development is likely to increase significantly over the next 20 years.

Community Design and Character

In the process of developing the comprehensive plan, the community has expressed its strong desire that the City should preserve trees and open spaces, views of Mt. Rainier, historical buildings, and its strong sense of community and small-town character.

In the Black Diamond area, the natural setting is not just an accent, but is intended to be integrated with the built environment. The City is committed to protecting its sensitive areas as the basis of the open space network. Open space occurs in many forms, from wetlands to open meadows, forests, stream corridors, parks, school yards and even cemeteries. The retention of open space forms the skeletal framework that helps to define the City's neighborhoods. Retention of sensitive areas and other existing open spaces will be the key to ensuring sufficient open space in the future.

Small towns have distinguishing features and landmarks. Some of these features are shared by other small towns, while others are unique to the town and often become landmarks. Individual characteristics result from the geography of the place; the industries and origins of its residents, and many other factors. Landmarks are more specific; they are either places or things that help a community become oriented in location and time.

The City's distinguishing characteristics include its history as a coal mining town and traditions associated with that history; views of Mount Rainier; and the geography of natural features that define the southern and western edges of the original townsite.

Compact Form and Incremental Development

Similar to many other rural towns, the Black Diamond initially developed as a compact community. The Pacific Coast Coal Company built few buildings other than a church. The company allowed the miners to build their own modest houses at the center of town, on land not expected to be used for mining operations. Those businesses locating in town were able to do so because they did not need large amounts of land. Since travel was difficult before the automobile, businesses and residences were conveniently located near each other to facilitate errands and business. As with other older towns, new development often filled in undeveloped parcels or extended the existing pattern.

Black Diamond contains a variety of uses within its corporate limits. Several small commercial enterprises exist along SR 169. Another cluster of commercial uses can be found along Railroad Avenue. Civic facilities are scattered among several locations. The plan provides an opportunity to take advantage of Old Town and Morganville, with their historical significance and cultural potential, and to further enhance civic and commercial uses there.

Pedestrian Scale and Orientation

Walking was the dominant mode of travel in rural towns. Even if one arrived by horse, carriage, or train, in town, one could walk amongst various destinations. Both the networks of streets and scale of buildings reflect this pedestrian orientation. Commercial structures were located close to the street to attract walk-in customers. Typically, downtown commercial districts featured amenities including benches and small parks for pedestrians. Portions of Black Diamond have a relatively fine network of streets that function as a pedestrian system, but lack sidewalks, benches and other pedestrian oriented amenities. The newer commercial areas north of Old Town do not function well as pedestrian areas. Improvements to the pedestrian network are necessary to maintain the City's sense of community and small-town character.

Casual Meeting and Socializing

As the City grows, it will be a significant challenge to maintain a sense of community. An identifiable town center for social interaction and pedestrian activity will enable continued familiarity among residents. Black Diamond's sense of community is supported by the City's parks, trails, clubs, community center, and civic engagement. Lake Sawyer and the City's regional park provide high quality recreational amenities that provide unique opportunities to integrate the City's existing and future large-scale development areas by an integrated trail system.

Development Concepts**Overall Development Concept**

The City should develop as a balanced community using the principles and guidelines for community design and character. This includes providing for a variety of housing types, goods and services and local and regional employment opportunities. Significant population and employment growth are anticipated and new development will be consistent with the City's commitment to integrate open spaces with the built environment in a manner that protects Black Diamond's natural assets. The City's Transfer of Development Rights (TDR) Program and Treasured Places designation are essential tools for the preserving open space network.

To achieve a balance between jobs and housing and maintain community character, the City will strive to develop and implement an economic development strategy to retain existing business and attract new employment opportunities. As the City grows, it will be important to provide new residential and light industrial/business park development areas that are interspersed with open space areas. While recognizing the importance of the automobile and efficient circulation, vehicular traffic and associated parking will not become the dominant visual feature as found in many suburban settings

Black Diamond has a strong visual identity with clear edges and gateways defined by its natural setting. The City should preserve and enhance this asset by adhering to the concept of protecting

views along the City's northern SR 169 gateway as set forth in the Black Diamond Open Space Agreement (BDAOSPA) in 2005.

The principal elements of the natural system (lakes, creeks, forested hillsides, open meadows, and views of Mount Rainier) will be incorporated into a permanent open space system that separates individual neighborhoods, preserves critical natural functions and provides a visual reminder of the natural landscape. Important community design elements should be retained and/or enhanced.

The small-town atmosphere will be maintained by controlling the scale and character of new development, creating pedestrian linkages between the different neighborhoods, building on the City's rich history and encouraging participation in City government and special community events. New development should be designed to encourage residents to become part of the City's community.

New development must be designed to allow for the efficient provision of public services and utilities. To improve and maintain the economic viability of City government, development must also pay for its share of the new infrastructure it requires. Development should proceed only when the necessary public services and facilities are available to serve it, and where it contributes positively to the fiscal health of the community.

Open Space Concept

Existing open spaces provide the City with many benefits. The City is "framed" by large blocks of second-growth forests in various stages of regrowth. The separation provided by the open space and views of the natural rolling topography, forests, open pastures/meadows, lakes, and stream corridors gives the City much of its character. The numerous open spaces also provide significant natural functions. Black Diamond will continue to develop and employ mechanisms to encourage open space preservation and require the protection of environmentally sensitive areas.

The City's parks and open spaces are not the same. Active recreational areas with facilities are needed as well as natural open spaces to enjoy as passive areas. The active and passive open space system will be integrated. These areas will be based on existing stream corridors, lakes, and retention of buffers comprised of mature trees in certain areas. The Rock Creek, Ravensdale Creek, Ginder Creek, Mud Lake Creek, and Lawson Creek are the linear components of the system within the City. These areas lie in proximity to the developed areas of the City; they form the village and neighborhood open space network.

Black Diamond Lake and the tributary to Rock Creek and Ravensdale Creek are the major pristine natural resources that are part of undeveloped areas. They form the wildlife and habitat corridor within the open space network. Open space buffers are another important part of the City's open space network. Buffer dimensions are guided by comprehensive plan policies and regulated by sensitive area regulations. The BDAOSPA (2005) serves as an example of how the City uses buffers to protect open space.

The goal to preserve open space must be balanced with private property rights. This is achieved by using the City's Transfer of Development Rights (TDR) program as an incentive to preserve open space. Additionally, the City requires open space dedication and retention as part of its MPD ordinance. Black Diamond will continue to develop and implement tools such as density bonuses to support its open space goals.

In-City Forest Concept

In the past, the area surrounding Black Diamond, including limited areas near the former Palmer Coking Coal Company and Plum Creek ownerships within the City limits, were considered suitable for commercial timber production. Forested lands in and around the City now provide significant open space which provides many passive values such as scenic views, open space, wildlife habitat, and separation from adjacent developments. These lands are part of a large network that comprises an open space system for the City and the region. The 1996 BDUGAA identified about 50-acres of "In-City Forest" land along Old Lawson Road for the Black Diamond to purchase and preserve as open space.

The benefits of forested areas are not only passive. In-City forests help to reduce water and air pollution, stormwater runoff, and mitigate for climate change. The City is preserving its In-City Forest Land by using its TDR program to transfer all development rights off the land and placing a permanent conservation easement on the property. The City's Tree Preservation Ordinance helps to ensure the protection of significant trees.

Historic Preservation Concept

Black Diamond's historical settlement pattern has resulted in a unique, small town rural landscape with significant historical value which gives the City a character that is distinct from that of the more recently urbanized areas in east King County. To maintain this distinct character, while at the same time permitting infill development, important historical elements must be retained as the community grows.

Historical elements are resources that contribute substantially to a sense of community, quality of life, and source of pride. They are also assets that can invigorate the local economy by sparking new business, generating additional tax revenue, and creating new jobs. Black Diamond's historical assets will be broadly interpreted to include structures, landmarks, sites, and views.

New infill development will identify and preserve, wherever possible, existing structures, vegetation or views that are visually important to the community character. Incentives for doing so will be included in development regulations such as zoning, subdivision, and building codes.

Residential Development Concept

The existing pattern of distinct residential neighborhoods should be continued and expanded. While existing neighborhoods may experience some infill, much of the City's new residential growth

will occur on larger tracts, physically separated from the existing neighborhoods. Whether infill or new development, residential units should be clustered in neighborhoods separated by elements of the open space system. Clustering guarantees permanent open space and helps to preserve environmental amenities such as creeks, wetlands, and significant stands of trees that give the City part of its character. Within developed areas, a more diverse housing stock will be encouraged to provide housing for a more diverse population, including various types and densities of attached and detached units. Opportunities for attached units, such as duplexes and townhouses, should be available within single-family areas. Multifamily residential units should be developed at a character and scale consistent with the existing character of the City, shaped by design guidelines. New multifamily development may occur in the form of duplexes, triplexes, fourplexes, townhomes (row houses), and units above commercial structures (in mixed-use areas). Review of multifamily and commercial development proposals should include design review. Higher density multi-unit structures should be encouraged to locate close to retail and service uses, in mixed use areas or as components of MPDs. Consistent with state law, manufactured housing is treated the same as site-built housing.

The City has taken a number of steps to implement its vision for residential development. These steps include adoption of a TDR program; adoption of an MPD ordinance, design guidelines; and a clustering ordinance. Additional residential development tools that may be considered include: Allowance for smaller lots and attached units such as duplexes and townhouses in single-family zones, consistent with applicable zoned densities, and contiguous to open space. Incentives to encourage clustering and provision of open space and parks. Allowance for attached and detached accessory units.

Overall Commercial and Mixed-Use Development Concept

In mixed-use areas, commercial and business activities may be combined with residential uses, and possibly some very limited light industrial activities, in a complementary land use pattern. For example, personal and professional services may serve adjacent businesses and residences. Mixed-use areas should have convenient pedestrian connections and close proximity to encourage walking between activities (generally less than one half mile).

Industrial, Light Industrial/Business Park Development Concept

Industrial and Light Industrial/Business Park development is an important part of the community. The opportunity for local employment and an increased tax base can improve the quality of life for residents. The City will seek to attract new light industrial, manufacturing, office and other businesses to the City as a means to achieve its vision for growth and prosperity.

Light Industrial/Business Park areas are targeted to have distribution, assembly, storage, repair, and warehousing uses. Limited retail uses and services intended to serve employees of the area may also locate within the Light Industrial/Business Park areas. Special attention should be given to: critical areas protection, landscaping to enhance the building or site, circulation and transit access,

service access design, screening of loading docks and mechanical equipment, connection to arterial streets, pedestrian and bicycle linkages, architectural control, parking, and utility needs.

Industrial and Light Industrial/Business Park uses may be proximate to but should be separated from commercial uses, to avoid land use conflicts. Circulation plans for adjacent industrial and commercial areas should separate truck traffic from shopping traffic. Certain areas along new principal arterials are suitable for Industrial and Light Industrial/Business Park uses. The existing industrial area is also well situated, but if this area does not develop over the long-term, and a demand for other employment areas can be documented, the City should consider changes to land use.

Mineral Extraction Concept

The City has historically been oriented to resource extraction activities. Coal mining was the initial resource base, but sand and gravel mining and forestry have also played roles.

Currently, approximately 363 acres of land in the City have permits to extract minerals (primarily gravel). The two areas are: 1) north of Morganville to the northern City limits and surrounding Oak Lake; and 2) at Mud Lake and west to SR 169. Gravel is currently being extracted directly north of Morganville and east to the south side of Oak Lake. Based on estimates of the gravel resources, permitted mining is expected to continue until approximately 2025. Black Diamond acknowledges the presence of existing mining operations and mineral resources in areas for potential future mining and intends to maintain the ability of property owners to access these valuable resources. The City will use its development regulations and a conditional use process to review applications for mineral extraction consistent with the protection of the environment and the goals and policies of the Comprehensive Plan.

Proposed Building Intensities and Population Densities

Future Building Intensities

Table 4-1 shows the permitted densities and building intensities for each of the City's land use designations.

Table 4-1. Future Land Use Designations, Densities, and Acreage

Land Use Category	Zoning District	Max Residential Densities (units/acre)	Building Intensities
TDR (Overlay)			
MPD (Overlay)	MPD (Zone)	4-18 w/TDR	Per DA
PAA			
LDR	R4 & R6	4/ac & 6/ac	30%
MDR	MDR8	8/ac; 12/ac w/TDR	50%
TC	TC	Limited by development standards	FAR 1.0; FAR 2.0 w/residential
CC	CC	Limited by development standards	FAR 1.0; FAR 2.0 w/residential
NC	NC	12/acre in exclusive residential building that is part of mixed-use development	FAR 1.0; FAR 2.0 w/residential
B/IP	B/IP	---	FAR 1.0
PUB	PUB	---	---

Source: City of Black Diamond 2009 Comprehensive Plan and Zoning Ordinance.

Population Density

Table 4-2 shows historic, existing, and future projected City population totals and densities.

Table 4-2. Black Diamond Historical, Current, and Estimated Future Population Densities - 2000, 2010, 2015, and 2035

	2000	2010	2015	2035
Total Population	3,970	4,153	4,200	19,262
City Size (Sq. Miles)	6.24	7.24	7.24	7.87
Population Density (Persons Per Square Mile)	636	574	580	2,448

Source: Population and land area totals for 2000, 2010, and 2015 are from Washington OFM. 2035 population from estimated by PSRC; 2035 land area assumed to be 2015 city area plus 400 acres of land not yet annexed in Lake No. 12 and West Sawyer Lake annexation areas.

Land Capacity

Chapter 2 of the comprehensive plan discusses land available for future growth in Black Diamond. Using the 2014 King County Buildable Lands Report (BLR), Chapter 2 concludes that Black Diamond has sufficient land capacity to accommodate housing and employment targets allocated to it by King County under GMA. In fact, excess capacity exists to accommodate 2,027 more housing units and 3,533 more jobs than have been targeted for the City in 2035 by the County based on assumptions used in the 2014 BLR.

As part of this periodic comprehensive plan update, the City and its consultants, in coordination with the PSRC, completed population and employment forecasts and the land capacity analysis discussed in Chapter 2. The forecasts and capacity analysis used the approved Lawson Hills and The Villages MPD number of units and commercial space to forecast population and jobs in Black Diamond in 2035. Given that these MPDs are governed by an approved Development Agreement and vested Permits, the City believes it is reasonable to anticipate the 2035 projections as valid estimates for future population growth and densities.

Appendix 5. HOUSING

Introduction

This technical appendix was prepared to support the goals and policies in Chapter 6 “Housing” of the Comprehensive Plan. It summarizes the existing conditions, analyzes and describes the City’s projected housing needs for the 20-year planning period.

Existing Conditions of Households

Documenting existing housing conditions such as type and structure, age of the housing unit, vacancy rates, home values, occupancy, tenure, persons per household, and land capacity provides a baseline picture of housing supply conditions in Black Diamond.

Types of Housing and Structure

Black Diamond’s housing supply is predominantly composed of single-family residential structures. Based on the data from the US Census American Consumer Survey (ACS) 5-year estimate from 2010 to 2014, approximately 89.6% of the City’s housing supply is from single family structures compared to King County’s 73.3% and the State’s 67%. The Census data also shows a slight increase in the median number of rooms in the City’s housing units from 5.8 rooms in 2000, 6.4 in 2010 and 6.6 in 2012.

Table 5-1 compares the number of housing types between 2010 and 2015.

	Total Housing Units	Single-Family	Multi-Family	Manufactured
2010	1,686	1,439	46	201
2015	1,698	1,456	47	195

Source: OFM

Age of Homes

Structure age is one indicator of the quality and condition of a community’s housing stock. Although older housing units can contribute to the character of a community, they tend to be of lower quality because of wear and outmoded building materials and construction practices. The ages of existing structures also demonstrate the pattern of development in a community. Higher numbers of homes built in shorter periods demonstrate rapid rates of development. Structure age also allows a comparison of housing conditions in Black Diamond with those of the county and state.

Table 5.2 Ages of Homes in Black Diamond

Year Built	# Housing Units	Percent
Since 2000	142	8%
1970 – 1999	1142	67%
1940 – 1969	159	9%
1939 and earlier	256	15%
Total	1699	100%

Source: ACS DP04: Selected Housing Characteristics 2009-2013 and OFM Postcensal Estimates of Housing Units, April 1, 2010 to April 1, 2015

Reviewing data on the ages of Black Diamond’s houses in Table 5.2, it is apparent that the community experienced rapid growth in 1939 and earlier and in the period from 1970 to 1999. Houses constructed prior to 1939 in downtown and Morganville help define the historic character that Black Diamond seeks to preserve. The 1970 to 1999 construction boom was throughout the State. Approximately half of the State’s housing stock was built during that time.

However, since the year 2000, home construction in the State and throughout King County has occurred at a faster rate than in the City. While approximately 8 percent of Black Diamond’s housing stock was constructed between 2000 and 2015, 18 percent of the housing stock in the County and nearly 16 percent statewide was constructed during that period. The slower trend of recent housing construction may have been due to a development moratoria in Black Diamond from 1999 to 2009.

Housing Characteristics

The 2010 Census reports 4,151 households in Black Diamond compared to 3,970 in 2000 for an annual average increase of 18 new households. Consistent with the State’s trend, the number of people living in these households is declining. Even so, at 2.68 people per household, the average household size in the City is greater than County and state.

Table 5.3 Ages of Homes in Black Diamond

Year Built	# Housing Units	Percent
Since 2000	142	8%
1970 – 1999	1142	67%
1940 – 1969	159	9%
1939 and earlier	256	15%
Total	1699	100%

Source: ACS DP04: Selected Housing Characteristics 2009-2013 and OFM Postcensal Estimates of Housing Units, April 1, 2010 to April 1, 2015

Housing Tenure and Vacancy Rates

Vacancy rates are driven by the supply and demand of housing in a given market. Supply and demand are most affected by the cost of the housing and the income of prospective owners and tenants. Tenure (own vs. rent) is another indicator of supply and demand. For example, if the area has a greater level of vacancies in owner- and/or renter-occupied units and the vacancy rates

remain elevated for a prolonged period, the area may contain an oversupply of housing units as compared with local demand.

Black Diamond, the County, and Washington State have a higher proportion of owners than renters. In 2014, 88.8% of the City's population lived in owner-occupied homes compared to 57.5% in the County and 62.7% in the state. In comparing the proportion of renters, Black Diamond has a significantly lower percentage than the County and State. However, there is an overall decrease in the percentage of homeowners and an increase in persons renting homes. Table 5-4 shows the breakdown of housing tenure between 2010 and 2014.

Table 5-4 Housing Tenure

	2010		2014	
	Owner Occupied	Renter-Occupied	Owner -Occupied	Renter-Occupied
Black Diamond	92.8%	7.2%	88.8%	11.2%
King County	59.9%	42.5%	57.5%	40.1%
Washington State	64.8%	37.3%	62.7%	35.2%

Source: ACS 2010-2014 5-year est. DP04

Homeownership rates in Black Diamond appear to generally follow trends at the County and state levels toward a greater percentage of renters. However, the reason for increasing homeowner vacancy rates in Black Diamond is unclear.

Housing Values

According to the US Census ACS, median home values have decreased in Black Diamond since the year 2010. Home values reached their peak in 2010 during the 2008–2011 recession. This may be due to the 5-year estimates of the U.S. Census collecting some data prior to the economic collapse while home values were still at their peak or to a slower recovery of home values in Black Diamond as compared with the state and County. Median home values in King County and the state also declined from 2010 to 2013.

Table 5-5 Home Values

	2010		2013	
	Total #	Percentage	Total #	Percentage
Owner-occupied units	1,369		1,448	
Less than \$199,999	102	7%	298	21%
\$200,000 to \$299,999	520	38%	445	31%
\$300,000 to \$499,999	415	30%	395	27%
\$500,000 to \$999,999	287	21%	269	19%
\$1,000,000 or more	45	3%	41	3%
Median (dollars)	319,700		295,900	

Source: ACS DP04: Selected Housing Characteristics 2009-2013

The median home value in Black Diamond in 2013 was \$295,900 which represents a drop of 7% from 2010 to 2013. For comparison, King County's median home value in 2013 was \$262,000 and the largest portion of homes fell in the \$300,000 to \$499,999 value category.

The 2008–2011 recession resulted in decreased median home values nationally and throughout the state, the counties and cities. Median home values followed the national trends downward. Despite the recent decreases in housing prices, Black Diamond, the County, and the state are all expected to see increasing housing values over the 20-year planning period until 2035.

Housing Needs Assessment

Comprehensive plans are required to assess housing needs for different economic sectors and for different housing types (affordable housing, group homes, foster care facilities, multi-family housing, etc.). Policy H-3 of the County's countywide planning policies (CPPs) requires that jurisdictions conduct an analysis "of existing and projected housing needs of all economic and demographic segments of the population."⁵ CPP H-1 sets the targets in Table 6-6 for affordable housing that each jurisdiction in the County must meet.

Table 5-6 Affordable Housing Targets

Income Level	Percent of Area Median Income	Target Percentage of Total Supply
Moderate income	50 to 80%	16%
Low income target	30 to 50%	12%
Very low income	30 % and below	12%

Source: 2012 King County Countywide Planning Policy H-1

Housing Targets, Forecasts, and Capacity

The King County Growth Management Planning Council (GMPC) is comprised of elected officials from King County and the jurisdictions within it. The GMPC sets a 20-year target for the number of households that must be accommodated within each jurisdiction based on growth management

⁵ King County, 2012 King County Countywide Planning Policies, November 2012, Amended December 3, 2012, policy H-3.

population projections. In addition, the Puget Sound Regional Council (PSRC) uses growth management population projections to forecast the region's housing and employment needs.

PSRS uses modeling tools to analyze the region's capacity to support future population growth and development. PSRC projects significant housing growth for Black Diamond and forecasts that there will be 7,674 households in the City by 2035. PSRC's forecast is also a housing capacity analysis. This forecast uses the approved MPD plans for Lawson Hills and to project the numbers of units that will be built to estimate build-out capacity.

The City is required to assess whether it has capacity to accommodate growth consistent with the GMPC targets using the PSRC forecasts. Since the County has targeted Black Diamond to accommodate 2,204 housing units by 2035, the forecasted capacity of 7,674 units exceeds the King County targeted number of units. Therefore, Black Diamond has sufficient land to accommodate the targeted and projected number of housing units for the year 2035. Of the homes anticipated to be constructed over the next 20 years, approximately 6,050 will be a direct result of the two approved MPDs.

Table 5-7 King County Housing Unit Growth Target and PSRC Household Projection and Capacity for 2035

	Projected Units/Households	Housing
GMPC Targets	2,204	
PSRC Forecasted Households and Capacity	7,674	
Excess Capacity (Units or households)	5,470	

Source: King County Technical Memo on Growth Targets Extension 2013 and PSRC Forecast, 2014

Housing Affordability

Although the total housing supply is expected to meet the demand of future employment and residents, as mentioned above, housing affordability is an essential part of the planning policies of both King County and PSRC and of GMA. These policies require that housing of all types be available to residents of all income levels. According to an action plan developed in 2015 by the King County Urban Consortium, the County is anticipated to receive \$29.9 million in funding from the Community Development Block Grant, HOME, and Emergency Shelter Grant programs to meet affordable housing needs. The Consortium will provide 68.3 percent of the remaining funds to the south sub-region where Black Diamond is located. This funding is intended to provide affordable housing, combat homelessness, and assist community development in South King County. The following sections discuss affordable housing needs.

Income and Housing Costs

GMA requires that cities make adequate provisions for existing and projected housing needs for all economic segments of the community. The following looks at the housing needs for very low, low, and moderate-income earners in Black Diamond. Policy H-1 of the 2012 King County countywide planning policies requires cities to address the countywide need for housing affordable to households with moderate, low, and very low incomes, including those with special needs." The

County distinguishes these levels of household income according to the following percentages of area median income (AMI):

- **High Income Earners:** Earn 121 percent or higher of AMI annually
- **Middle Income Earners:** Earn 81-120 percent of AMI annually
- **Moderate Income Earners:** Earn 51 to 80 percent of AMI annually
- **Low Income Earners:** Earn 31 to 50 percent of AMI annually
- **Very Low-Income Earners:** Earn 30 percent and below of AMI annually

The U.S. Census defines a household as “all the people who occupy a housing unit and a housing unit as a house, apartment, mobile home, group of homes, or single room that is occupied. Black Diamond contains a greater percentages of low (31 to 50 percent AMI), moderate (51 to 80 percent AMI), and high income (120+ percent AMI) earning households than the Seattle-Tacoma-Bellevue metropolitan area and a lower proportion of very low-income earners (0 to 30 percent AMI).

Table 5-8 shows the number of households and housing units by income category in the Seattle metropolitan statistical area (MSA) and in Black Diamond. The Seattle MSA has a shortage of housing units in the very low (13 percent gap between units and households) and low AMI categories (8 percent gap between units and households). In contrast, Black Diamond has an ample supply of units in the very low AMI category, but a gap of 8 percent between households and units in the low-income AMI category.

Black Diamond housing units available in the very low-income category may also be available to those in the 31 to 50 percent AMI category. In the future, Black Diamond should target strategies to increase the supply of homes in the very low and low-income housing supply categories to both meet demand and comply with County affordable housing targets; these strategies could include planning for attached units, townhomes, apartments, and condominiums that would be available to this income category.

Table 5-8. Seattle MSA and Black Diamond Households and Housing Units by Area Median Income Category

AMI Category	Seattle MSA Households	Black Diamond Households	Seattle MSA Housing Units	Black Diamond Housing Units
120% +	28%	31%	33%	30%
81-120%	19%	19%	29%	28%
51-80%	20%	23%	25%	24%
31-50%	15%	19%	8%	7%
0-30%	18%	8%	5%	11%

Source: BergerABAM using U.S. Census Financial Characteristics (ID # S2503): ACS 5-year Estimates 2009–2013 and HUD AMI of \$89,500 for the Seattle-Bellevue MSA

Cost Burden

The percentage of income paid by moderate, low, and very low-income earners toward their monthly housing expenses is a measure of housing affordability. According to HUD, “families who pay more than 30 percent of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation, and medical care.”⁸ The housing chapter of the King County countywide planning policies states that housing affordability for “very-low income households, those earning less than 30% of AMI [cost burdened], is the most challenging problem and one faced by all communities in the County.”

HUD categorizes cost-burdened households into “moderate” (those paying 30 to 50 percent of income for housing) and “severe” (those paying more than 50 percent of income for housing). HUD data divides cost burden by owner and renter households. Table 6-9 shows the number of households paying more than 30 percent of their income (cost burdened) for housing in AMI categories. Although Black Diamond has higher percentages per capita of moderate to high income earners than the Seattle MSA, 47 percent of households pay more than 30 percent toward rent or mortgages and 97 percent of these residents own their homes (see Table 5-4). In both locations (City and County), 37 percent of households are moderately cost burdened. The city contains six percent less severely cost burdened residents than the county. 53 percent of households in Black Diamond have no cost burden versus 47 percent in the County.

Appendix 6. Capital Facilities and Utilities

This appendix provides the technical detail to supplement the Capital Facilities and Utilities Element of this Comprehensive Plan. As required under the GMA, it includes the following:

Inventories and existing conditions of the City's public facilities and utilities

Forecasts of future needs for the City's public facilities and utilities

Proposed capacities of expanded or new capital facilities and utilities

Various funding sources that may be appropriate for funding capital facilities and utilities projects

The City's parks, recreation, trails and open space system and transportation system are covered separately.

UTILITIES

The Utilities section of this Appendix addresses:

Potable Water

Sanitary Sewer

Stormwater

Telecommunications

Natural Gas

Solid Waste

Potable Water

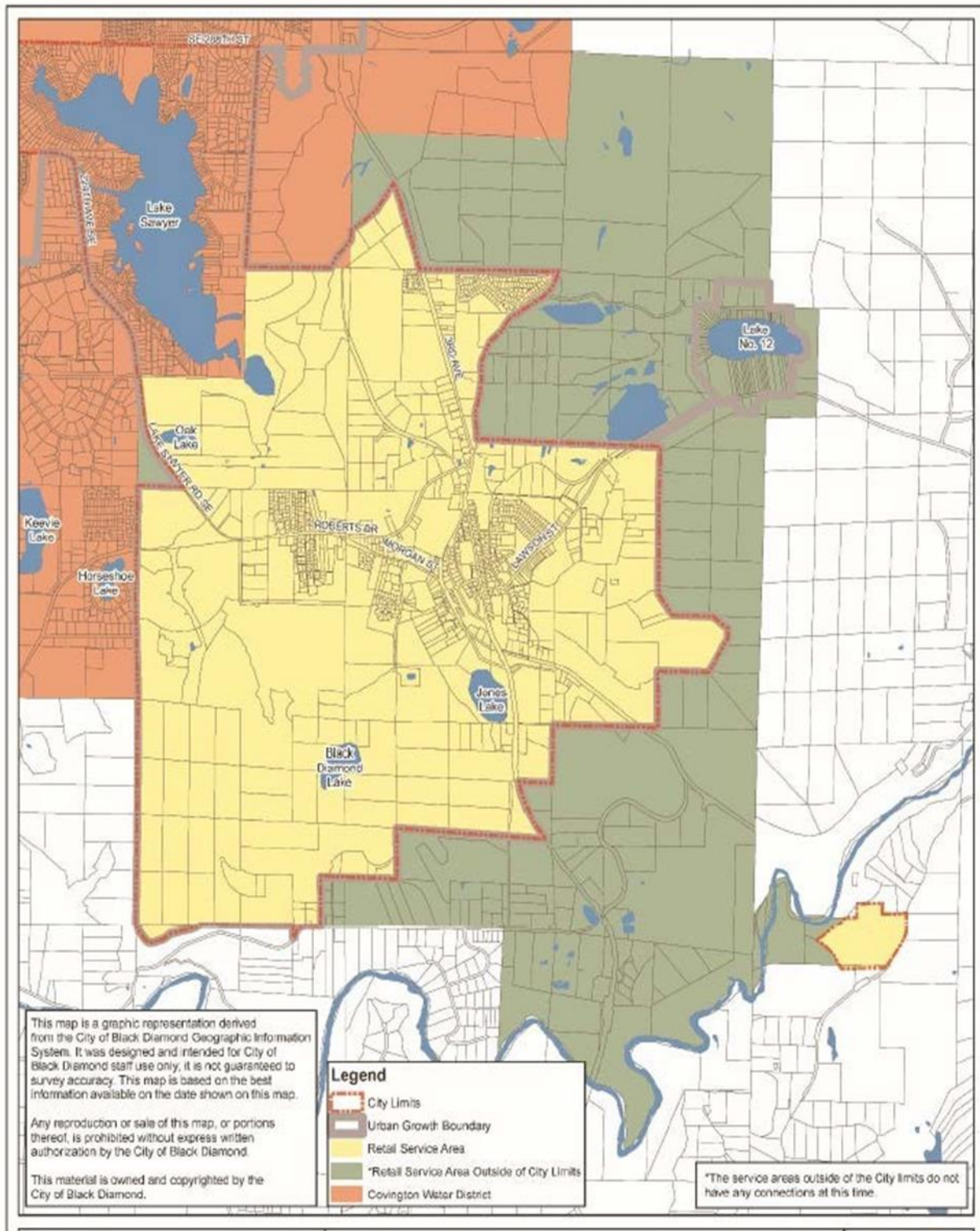
The Black Diamond Water System Plan provides long-term planning for the City's water system.

The following system descriptions, conditions, and analysis of the City's water system is summarized from the Water System Plan.

System Overview

The Black Diamond Water System is operated and maintained by the City of Black Diamond's Public Works Department. The City's Water Service Area (WSA) lies within the Duwamish/Green River drainage basin and the City provides water both inside and outside of City limits. The Lake Sawyer area is served by the Covington Water District and is not included in Black Diamond's WSA. The South King County Water Utilities Coordinating Committee (SKCWUCC) and participating utilities prepare and agree to water service area agreements. The City's WSA boundaries are shown below in Figure 6-1, Black Diamond Water Service Area. The City's population in 2016 was 4,200 of which, 2,700 were served City water for a total of 841 metered connections.

Figure 6-1. Black Diamond Retail Water Service Area



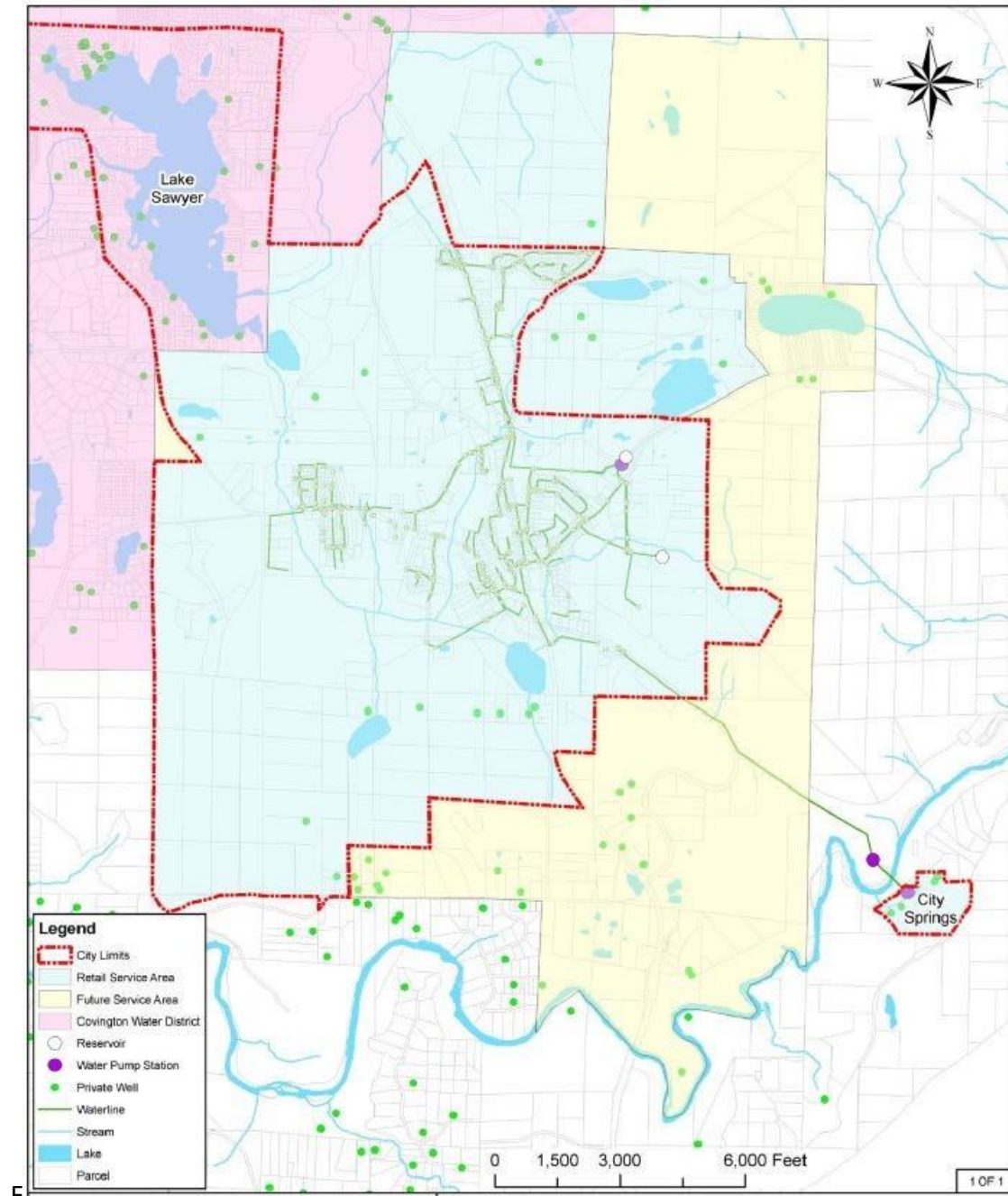
Source of Supply

The City's primary water source is the Black Diamond Spring Field, located approximately 2 miles southeast of Black Diamond on a 58-acre City-owned parcel. These natural springs are fed from the Cumberland Aquifer located southeast of the Green River. Most of the recharge area for the springs is currently undeveloped forest lands. However, there is development occurring in the Town of Cumberland and the Hyde Lake Area which are outside of the City's jurisdiction. The area has been officially designated as a spring field and the City has installed fencing with a locked access gate to limit unauthorized entry to the 58-acre parcel. However, the City must also develop and maintain management strategies provided by the King County Groundwater Protection Program to protect its drinking water supply, including designating a wellhead protection area, identifying and tracking potential sources of contamination in the around recharge areas, and notifying agricultural and forestry operations, commercial businesses, hazardous waste generators, and septic system owners of the wellhead protection area. In addition, the City will need to consider the impacts of climate change on its drinking water supplies.

There are four major collection areas associated with the Black Diamond Spring Field. Water from two of the four collection areas is currently used for the City's drinking water system. One of the collection areas has been placed out of service due to water quality concerns and the fourth collection area is considered a future of supply for the City. The average total combined discharge from the two online collections is approximately 20 cubic feet per second (cfs) or 12.9 million-gallons per day (MGD). Discharge flow from the fourth (future) collection area is estimated at approximately 10 cfs or 6.45 MGD. Black Diamond withdraws approximately 179.5 MG per year from the Springs to serve its current customer base.

The Black Diamond Spring Field has adequate supply to meet the City's current demand. However, there are some concerns as to the long-term viability of the area. Accessibility to the Springs is limited and difficult due to steep, narrow roadways that cannot be accessed by larger vehicles at certain times of the year. Steep slopes and erosion have the potential to threaten reliability and water quality. The City is working on upgrading the springs while also considering options to develop an alternative groundwater resource area to mitigate these concerns. See Figure 6-2.

Figure 6-2. Black Diamond Springs Location



Water Rights

The City has two water right certificates currently on file with the Washington State Department of Ecology (DOE). The source for both certificates is the Black Diamond Springs Field. Certificate of Water Right No. 3580 authorizes diversion of 2.93 cfs continuously for production of power to operate a hydro pump. Certificate of Water Right No. S1-00506C authorizes maximum instantaneous diversion of 8.0 cfs with an annual limit of 551 acre-feet. If the City decides to develop a new groundwater source, it will need to secure a water right certificate for that source from DOE.

City of Tacoma Intertie

An additional source of water for Black Diamond is its intertie connection with the City of Tacoma Second Supply Pipeline (SSPL). Water system interties are physical connections between two adjacent water systems that are normally separated by a closed isolation valve or control valve. Intertie agreements can be for emergency situations only or they can be negotiated to provide an ongoing water supply. Black Diamond negotiated an agreement with Tacoma in 2003 whereby Tacoma agreed to supply wholesale water to the City. A 2007 amendment included purchase of additional water. Under the Agreement, the maximum production capacity of the wholesale Intertie is 807.4 MG per year. The City is responsible for System Development Charges (SDCs) associated with the connection to the City of Tacoma to be repaid over a 10-year period.

Storage

The City currently has two reservoirs serving it WSA. The 0.5 million-gallon (MG) reservoir is located on a City owned parcel that is approximately 1,200 feet easterly up a gravel road from the intersection of Botts Drive SE and SE Mountain View Drive. This reservoir was constructed in 1986 and has a capacity of 0.5 MG, an approximate elevation of 930 feet, and an overflow elevation of approximately 965 feet. Water from the Black Diamond is pumped across the Green River to the second reservoir located just west of the intersection of Lawson Road and Botts Drive SE on a City owned parcel. This reservoir was constructed in 2006 and has a capacity of 4.3 MG. The 4.3 MG reservoir is at an approximate elevation of 770 feet, with an overflow elevation of approximately 850 feet.

Pumping Facilities

City operates and maintains two active pump stations from its source supply to its two reservoirs. The first pumping facility is located on the north bank of the Green River and is referred to as the North Bank Pump Station. It is fed by gravity from the springs, treated with chlorine and pumped to the 4.3 MG Reservoir. The North Bank Pump station was constructed in 1997 has maximum capacity of approximately 450 gallons per minute (gpm). It operates with two electric pumps and a standby generator system. A waterline varying from 8-inch diameter asbestos pipe to 12-inch diameter ductile iron runs from the North Bank Pump Station to the 4.3 MG Reservoir.

The second pumping facility is located at the 4.3 MG Reservoir site, it is known as the 4.3 Reservoir Pump Station. Constructed in 2006, this facility also operates two electric pumps with a standby generator. An 8-inch diameter waterline runs from the 4.3 MG Reservoir Pump Station to the City's 0.5 MG Reservoir.

Transmission and Distribution

The City's water distribution system currently operates with 3 pressure zones, an upper pressure zone at pressure head of approximately 965 feet, middle pressure zone at pressure head of approximately 850 feet and lower pressure zone at a pressure head of approximately 750 feet. Since the system operates with high pressures, there are individual pressure-reducing valves (PRVs) on service connections throughout WSA. There are also several valves throughout system to isolate segments of waterline for repair and replacement.

The system currently has approximately 109,755 lineal feet of pipe ranging from less than 2-inches to 20-inches in diameter serving around 841 connections. Of which, over 92% are single family residences. Table 6-1, Black Diamond Water System Pipe Inventory shows a summary of the various pipe sizes and materials. Upgrades to the City's water piping is an ongoing effort most often funded through regulations for development.

Table 6-1: Black Diamond Water System Pipe Inventory

Diameter	Length (in feet)	Percent of Total
4-inch or smaller	11,605	11%
6-inch	14,150	13%
8-inch	63,120	58%
12-inch	16,205	15%
20-inch	3,710	3%
Total	109,755	100%
Material	Length (in feet)	Percent of Total
Asbestos Cement	25,760	23%
Cast Iron	715	1%
Ductile Iron	69,760	64%
Galvanized Iron	2,240	2%
PVC	11,280	10%
Total	109,755	100%

Source: City of Black Diamond Public Works

Telemetry and Control System

The City uses a telemetry and supervisory control system to optimize facility operations. The telemetry system provides alarm notification in the event of equipment failure, reservoir overflow or other emergency situations. It was put into operation in 2006 and is controlled via a radio read at the 4.3 MG Reservoir treatment building. The system computer and software was upgraded in 2015.

Treatment Facilities

The City's water system is currently disinfected via a hypochloride chlorination system at the North Bank Pump Station. This chlorine system will be updated in 2016. Corrosion treatment is provided at the pump station located at the 4.3 MG Reservoir site.

Existing Water Demand

The 2015 population within the City is 4,200 per the Washington State Office of Financial Management (OFM). Approximately 1,500 people live in the Lake Sawyer area and are not within the City's WSA. The City currently has 841 active service connections. Of which, approximately 92 percent are for single-family residences. Water consumption is the amount of water used by all customers of the system., as measured by collecting data from customers' meters. Water supply, or production is the total amount of water supplied to the system. Production measures how much water is put into the system while consumption looks at how much water is taken out of the system. There are other factors involved when calculating water demand such as non-metered water use and water loss, or distribution water system leakage. In 2015, the total billed consumption for all customers was 67.2 MG and the annual production for that same year was 71.9 MG.

Future Water Need

The City's WSP calculates future demand on the City's water system using future land use and population projections for the WSA. Average customer demand is expressed as an Equivalent Residential Unit to normalize demand from the different types or "classes" of customers, such as single and multi-family residential, commercial, and government. The WSP uses an average customer demand of 194 gpd per ERU.

Population projections were estimated for the WSA population and ERU projections which include the additional demand from the MPDs. Table 6-2 and 6-3, Black Diamond Projected Water Demands summarizes future water needs for the City as it grows and develops.

Table 6-2. Black Diamond Projected Water Demands

Year	Population	ERU	ADD (gpd) ¹	MDD (gpd) ²
2015	4,200	1,022	198,472	496,181
2021	14,065	4,671	751,748	1,879,371
2025	18,499	6,305	1,069,071	2,672,678
2035	21,013	7,194	1,397,075	3,492,687
¹ Average Daily Demand				
² Maximum Daily Demand				

Source: City of Black Diamond Public Works

Table 6-3. Black Diamond Projected Supply Capacity

Year	Supply Capacity (gallons per year)	Annual Demand (gallons per year)	Surplus or (Deficit)
2015	986,911,700	72,442,426	914,469,274
2021	986,911,700	274,388,093	712,523,607
2025	986,911,700	390,210,915	596,700,785
2035	986,911,700	509,932,302	476,979,398

Source: City of Black Diamond Public Works

This analysis shows that even with substantial growth from the MPDs, the City's existing water rights, production capacity from the Springs, with the available capacity under the City's Intertie Agreement with Tacoma is sufficient to support growth projections for the 6-year, 10-year and 20-year planning periods.

System Improvements

There are existing deficiencies in the system to meet fire flow requirements which need to be eliminated through upsizing water lines and looping the water system. As was previously mentioned, there are concerns with the vulnerability of the springs with respect to the collection area and transmission main due to bank erosion, landslides, flooding, trees uprooting, leaking, and human and/or animal vandalism. The WSP recommends upsizing the lines from the Spring Field to the 4.3 MG Reservoir. It is also anticipated that two additional storage reservoirs will be required during the 20-year planning period and there are distribution and transmission system deficiencies.

In its existing condition, the water system will be unable to serve the projected growth that the City is anticipating. A large number of required improvement projects are needed. These are mainly development related projects and will be required based on the actual rate at which development occurs. The City's Capital Improvement Plan provides specifics on proposed improvement projects.

Currently the system has storage capacity and water supply capacity to provide for approximately another 10,500 residential connections. Two additional storage reservoirs will be required during the 20-year planning period to serve projected growth. Final build out at the MPDs will require the construction of an additional 0.85 MG reservoir and pump station to serve Lawson Hills MPD and a 1.3 MG Reservoir in southern portion of the WSA to serve the Villages MPD for drinking water and fire suppression.

Additionally, the City is planning to reconstruct the Springs water supply fields to address vulnerabilities. These include the age of transmission lines, location on steep slopes and the manner in which they are attached to a suspension bridge crossing the Green River. These lines need to be upsized and reconstructed in ductile iron materials. Additionally, the City is working toward system looping improvements as shown in Figure 6-3.

Additional Systems

There are several private wells and small public water systems served by wells located within the City as shown on Table 6-4. The City desires to discontinue the use of such systems.

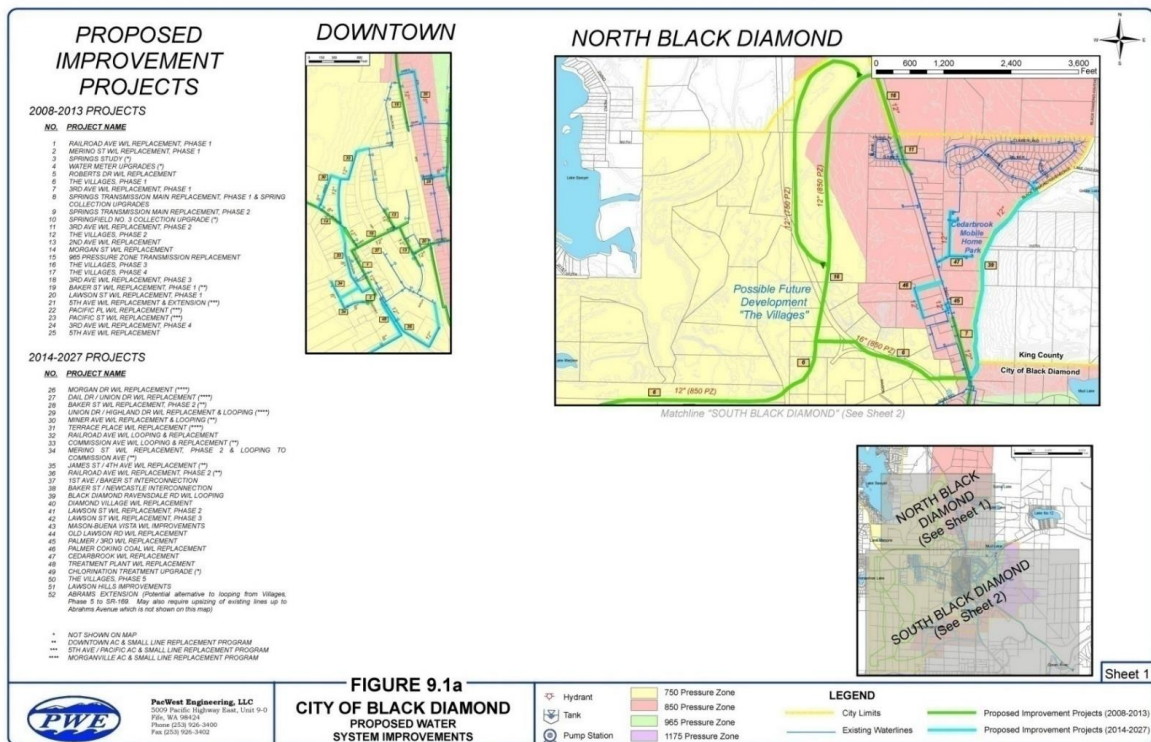
Table 6-4 Black Diamond Private Water Systems

Water System Name	Type of Source	Number of Connections
Sawyerwood Estates Water	well	22
Sawyerwood Water System	well	11
Goldsberry, P	well	2
Hoffman	well	2
Johnson, J	Well	2
Morris Bros.	Well	5
Williams, C	Well	4

Adjacent Purveyors

Water systems adjacent to the City of Black Diamond Water System include the Covington Water District.

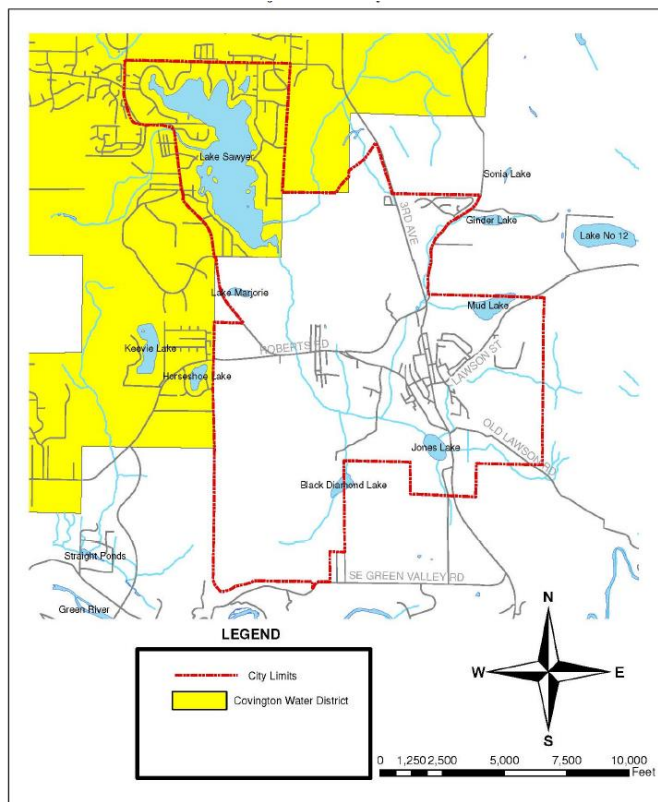
Figure 6-3. Proposed Improvement Projects



Covington Water District (CWD) is the purveyor for the area around Lake Sawyer within the City limits. CWD has a service area of approximately 53 square miles and provides water to the cities of Covington, Maple Valley, and Black Diamond, as well as unincorporated areas of King County. The district is a member

of the Cascade Water Alliance and its primary water supply comes from nine production wells located at two well-field sites. The district has 18 million gallons (MG) of storage in ground-level steel tanks at five sites, and 210 miles of pipeline. Figure 6-5 illustrates the CWD service area around the City.

Figure 6-5. CWD Service Areas Adjacent to Black Diamond



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.

Power, Telecommunication, Natural Gas, and Solid Waste

Electricity

Electricity is provided by Puget Sound Energy (PSE). Various facilities are located throughout the City and King County, including one substation and one overhead transmission line within existing City limits. The Bonneville Power Administration has a 500-kV transmission easement and line that lies about one mile north of the City limits.

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.

Telecommunications

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.

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.

Solid Waste and Recycling

The Washington Solid Waste Recycling and Recovery Act RCW 70.95 requires King County, in association with its cities and towns, to adopt and regularly update a 20-year comprehensive solid waste management plan. The County is currently updating this Plan with the City as its partner. Black Diamond signed the original Solid Waste Interlocal Agreement (ILA) in 1988 and has signed the Amended and Restated Solid Waste Interlocal Agreement with terminates in December 2040. Most of the City's garbage and recycling collection is provided through private companies operating under certificates issued by the Washington Utilities and Trade Commission (WUTC).

Wastewater

The City adopted a General Facility Plan in December 2012 in accordance with the Washington State Department of Ecology requirements as outlined in WAC 173-240-050. Pursuant to RCW 36.94.030. The Sewerage plan is adopted as an element of the comprehensive plan. This Plan provides a long-term planning document for the City's sewer system.

Currently all sewage generated in Black Diamond is collected to one point and discharged to King County maintained regional facilities at Jones Lake Pump Station. The City's Sewer Service Area contains four basins totaling approximately 693- acres of area currently sewered with in the City and its UGA. The area around Lake Sawyer is served by Soos Creek Water and Sewer District.

There are currently approximately 13 individual septic tanks effluent pumps that pump into a small diameter pressure sewer force main before discharging into the City's sanitary sewer system. These are located in areas served by the City that are too low in elevation or too remote to be connected to the City's gravity collection system. The City is responsible for maintaining these pumps and septic tanks.

The City has an active agreement with the King County Waste Water Treatment Division to provide for regional conveyance and treatment of all sewage from Black Diamond. In this agreement, the city owned Jones Lake pump station which was designed to be a regional facility is operated and maintained by King County. This agreement runs until July 2036.

The City sewer system currently consists of approximately 22.1 miles of gravity mains and 2.5 miles of force mains. The City has four operating pump stations that vary in size. These sewage pump stations pump the sewage from the low areas to a gravity sewer collection system that all drains to the King County maintained regional Jones Lake Pump Stations. Sewage is then pumped from there by a force main to a gravity sewer transmission main in Lake Sawyer Road which drains to the Soos Creek system and then onto King County sewer facilities.

The city sewer system currently serves a population of about 932 residences plus commercial. It is currently experiencing stormwater inflow and groundwater infiltration (I&I) into the sewer system at or just above the EPA threshold level. The City is proposing improvements to keep the I&I under control. Figure 6-4 illustrates the service areas for sewerage for Black Diamond.

Collection System

The City's existing sanitary sewer system consists of approximately 16 miles of gravity and pressurized piping systems. The minimum LOS for the City's sanitary sewer system (both existing and future) shall be provided in compliance with those minimum standards and guidelines identified in the *Criteria for Sewage Works Design*, as published by Ecology (1998) and the Development Guidelines and Public Works Standards adopted by the City (1995) by City ordinance No. 533.

Generally, conventional gravity type service will be required. Individual private pressure sewer systems and/or septic systems will only be considered on a case-by-case basis and permitted or approved due to the City's evaluation of extenuating circumstances.

New stations will be sized to serve the "regional" area to eliminate the need for redundant stations. At a minimum, the design of these new facilities shall comply with the minimum design criteria for pumping stations as outlined in the aforementioned Ecology design standards and City standards. The City will also require that emergency auxiliary power be provided at any future lift station(s).

Table 6-5 itemizes the piping systems and pump station capacities in the existing sanitary system. The service Area Boundaries are illustrated in Figure 6-6.

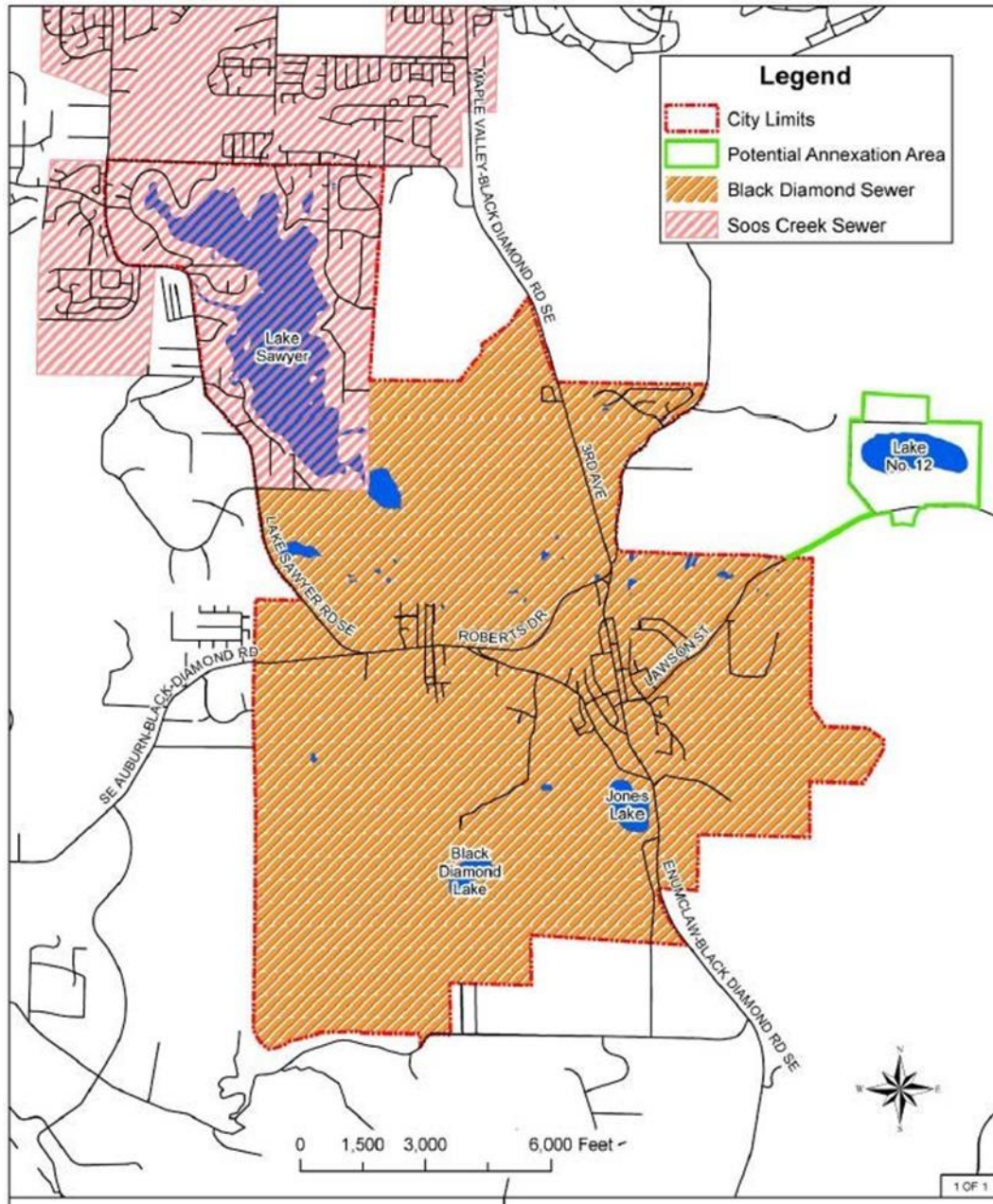
Table 6-5 Black Diamond Sanitary Sewer System Inventory as of 2000

Facility	Size	
Gravity Main Piping: Size & Type	Total Length (Approximate lineal footage)	
6" PVC & Conc.	1,350 LF	
8" PVC	61,750 LF	
10" PVC	4,750 LF	
15" PVC	1,650 LF	
18" RCP	2,700 LF	
Total	72,200 LF	
Force Main Piping: Size & Type	Total Length (Approximate lineal footage)	
2 & 2-1/2"*	400 LF	
4"*	350 LF	
6"*	3,200 LF	
10"*	8,750 LF	
Total	12,700 LF	
Sanitary Sewer Lift Stations (Name)	Pump Size	Existing Capacity
City of Black Diamond	50 HP-2 Each	1,060 gpm
Morganville	20 HP-2 Each	313 gpm
Ridge	1.5 HP-2 Each	105 gpm
Diamond Glen	1.5 HP-2 Each	94 gpm

*All Pipe is PVC or HDPE

Source: 1996 Comprehensive Plan updated with 2000 Sewer Plan information

Figure 6-6 Sewer Service Area Boundaries



Treatment and Disposal System

The City currently has no sanitary sewer treatment system in operation. The City conveys sewage from the pump station at Jones lake through a 7-mile city owned trunk line to Covington pump station in Soos Creek water and sewer district and then through Soos Creek district facilities to King County in Kent where it is pumped to King Count’s South Treatment Plant in Renton. The pump

station at Jones Lake has an approximate capacity limit of 1.7 mgd. King County is currently exploring local water reclamation plants in the south county area to accommodate future sewage treatment needs, provide for local water uses, and provide water for the environment.

Future Needs

The two MPDs will result in substantial growth. To accommodate this, the system will need to be enlarged to serve projected future sewer flows. Required improvements to serve the MPDs has been addressed in the Development Agreements (DAs) between the City and developer. The DAs require the developer to provide all of the capacity adding projects required to serve new MPD development. Hydraulic modeling of the existing sewer system found that routing new flows to the western portion of the City to meet growth will provide the system with adequate capacity to meet the needs of infill within areas currently served by sewer.

The City currently collects Capital Facility charges (connection charges) to fund system improvements. These are one-time charges that are collected at the time of building permitting. Funds are deposited directly into the Capital Improvement Fund and used for capacity adding projects for infill or new development outside of the MPDs. Fee calculation uses a minimum fee plus lot area or square footage and number of bathrooms in commercial buildings to formulate the connection charge. The City's adopted General Facilities Plan recommends setting a minimum per ERU charge in place of the current method used for fee calculation. The General Facilities Plan also recommends the City dedicate a percent of the City's Operating Budget to the Capital Fund every year for repair and replacement projects and to set a minimum reserve amount in the Capital Fund. The City is considering the fiscal impact of implementing these recommendations.

Project Improvements

Capacity is limited in Regional sewer system because of Jones Lake pump station and gravity trunk line to Soos Creek Water and Sewer. King County is planning improvements to address this including a proposed sewage storage facility around the Jones Lake Pump station to reduce peak flow discharges.

The City is also planning for system rehabilitation projects and ongoing maintenance and repair. These include implementing a program to improve the collection system to reduce I&I and provide additional capacity. The City also adopted a water conservation plan to help future capacity within the system. Figures 6-7 and 6-8 shows the sewer system and planned improvements.

Figure 6-7. Sewer System and Planned Improvements

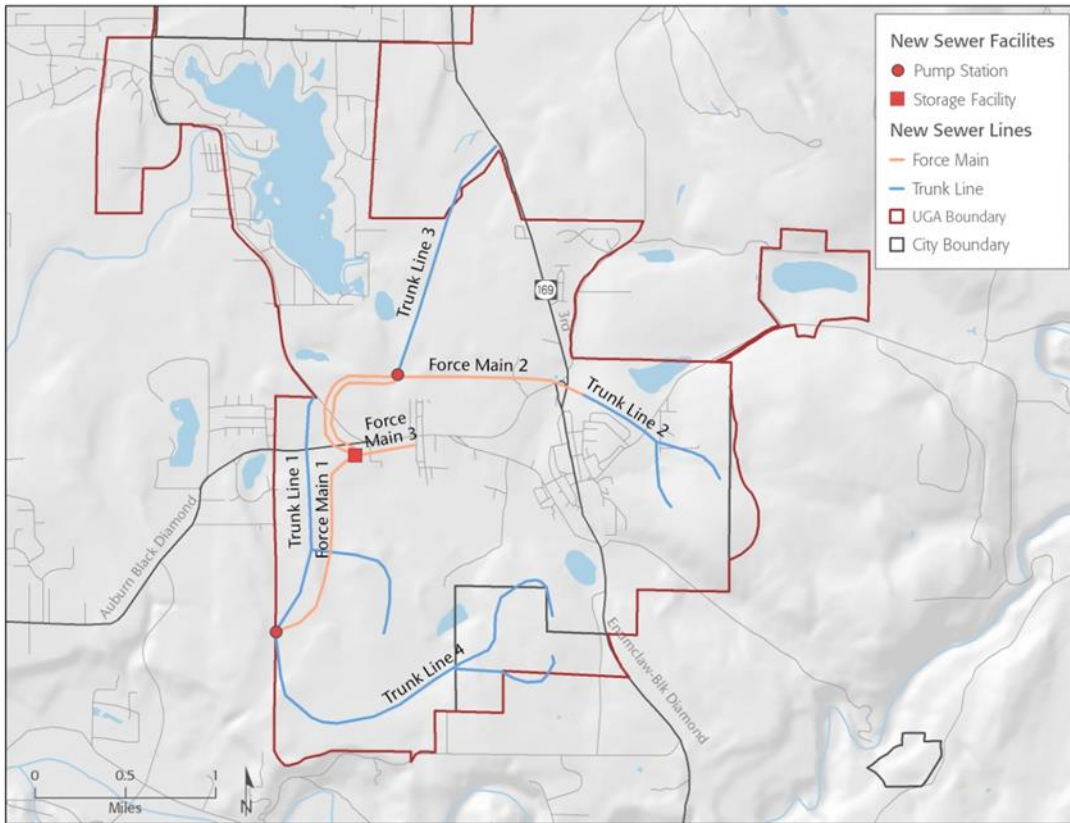
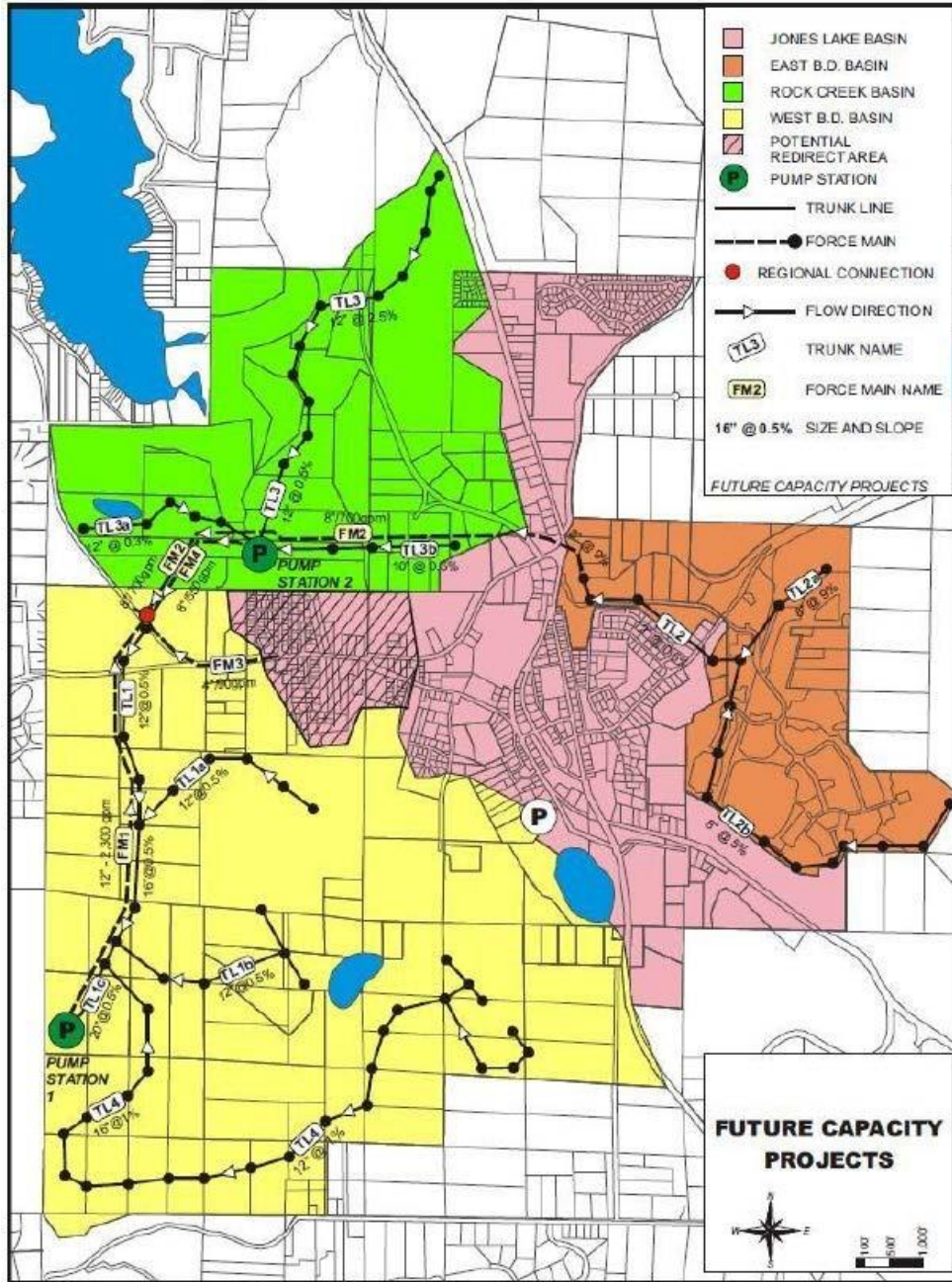


Figure 6-8. Future Sewer Projects



Soos Creek Water and Sewer District

Sewer service for Black Diamond residents is also provided by the Soos Creek Water and Sewer District. The system includes 30 pump stations and conveys wastewater to the King County facilities in Kent and ultimately to the King County Wastewater Treatment Plant in Renton for treatment and disposal. The City entered into interagency agreement with Soos Creek Water and Sewer District in 1990 to relay Black Diamond sewage through the Soos Creek System to King County for treatment. This agreement entitles the City to capacity in the Soos Creek system to serve up to 3,600 people or 990,000 gallons per day (gpd). The District will have the capacity to provide for the City's sewage needs as growth occurs.

Stormwater

Conveyance System

The City's stormwater conveyance system is a combination of piped and open channel drainage systems and sheet flow, with outfalls to Ginder Creek, Rock Creek, or Jones Lake. The overall City and natural drainage systems are shown in Table 6-6. The City reports no known major flooding problems; however, minor ponding does occur at some locations during larger storm events and/or during extended wet weather conditions.

The City's existing stormwater conveyance system consists of approximately 50,000 LF (9.4 miles) of gravity pipe, and 18,000 LF (3.4 miles) of open ditch. The pipe system is composed mainly of concrete culverts, corrugated metal pipe, and PVC pipe. Approximately 30% of the piped system is located in housing developments. Table 6-6 itemizes the piping systems and open ditch systems. There are few stormwater ponds in the City. One of the more significant stormwater pond systems is the Greenbrier detention ponds located near Lake Sawyer.

Table 6-6. Black Diamond Stormwater Conveyance System Inventory

Piped Storm Water System Size (Inches/Diameter)	Total Length Linear Feet (Approximate)
6	250
8	450
10	550
12	27,250
15	2,150
18	3,950
24	950
36	1,250
48	150
54	150
TOTAL	50,000
Open Ditch Size	

Piped Storm Water System Size (Inches/Diameter)	Total Length Linear Feet (Approximate)
Variable	18,000

Source: City of Black Diamond Comprehensive Plan (1996)

Stormwater Runoff Treatment

Stormwater flow from the majority of the currently developed portions of the City does not receive treatment, other than some limited biofiltration. Stormwater detention ponds are located in the Lawson Hills and Morgan Creek developments and a 20-lot development in the Morganville area. There are additional stormwater detention ponds associated with the Greenbrier development near Lake Sawyer. These facilities may, and likely do, provide some minimum level of treatment of stormwater runoff from these developments. The City has recently adopted LID standards which provide for green infrastructure solutions for treating stormwater that will be used in conjunction with the City's design and construction standards for stormwater management.

Stormwater Planning

The City established a stormwater utility in 2008 and began imposing rate charges in 2009 as a means to ensure the storm system is able to accommodate growth. The City has adopted the February 2005 Edition of the Department of Ecology's Stormwater Management Manual for Western Washington and recently updated its Stormwater Management Plan (SWMP) to comply with the conditions of its Phase II Municipal Stormwater Permit. Implementation of this Plan addresses the following:

- Comprehensive Stormwater Management and Programs
- Detailed mapping and inventory of the stormwater systems
- Capital Project Planning will propose stormwater project concepts to minimize the environmental impacts of stormwater, minimize maintenance, and protect public and private property from storm runoff.

Municipal Facilities

The City's facilities include the former City Hall on Lawson Street, which houses the police department, the City Council chambers and the Black Diamond Municipal Court; the Black Diamond Cemetery at Morganville; and the City shop across from former City Hall, which consists of one garage, storage room, and yard. City administrative offices are currently located within leased modular buildings and leased office space at 24301 Roberts Drive. The City also owns the Black Diamond Museum property on Railroad Avenue and leases the facility to the Black Diamond Historical Society. The City also has also acquired the old 3,740 square foot elementary school gymnasium and relocated it to a site between City Hall and the City shops.

A General Government Facilities Plan, authored by Makers Architecture and Urban Design, dated March 26, 2014 identified a need for the City to plan for larger governmental facilities. As the City grows, the existing areas are too small to accommodate City governmental functions.

Other Facilities

A Community Center and a King County Library System branch are also located in the City. The Community Center, located on Highway 169 near the Roberts Drive intersection, contains

approximately 12,000 square feet on two floors. The center, which opened in October 1990, now offers programs for seniors and youth and classes and meeting space for community groups. The center is owned and operated as a nonprofit entity, the Black Diamond Community Center Association, with its own Board of Directors.

The Black Diamond branch of the King County Library System is located on Roberts Drive. The library is open 59 hours a week. In addition to the collection of books, the library maintains collections of magazines, videos, and compact discs (CDs). The library computer system allows the public to order any book in the King County system and have it mailed directly to their home.

Fire Protection Facilities

Mountain View Fire and Rescue is a combination department consisting of both career and volunteer personnel. The department's responsibilities include providing a minimum of two personnel on duty 24 hours a day, seven days a week in Black Diamond to provide fire protection.

In 2006, City entered into agreement with Mountain View Fire and Rescue to provide emergency services to the City operating and operating the District and City Fire Departments as one Department (merged). Currently an Interlocal Agreement contract for services. for fire and emergency services.

An Ad Hoc Fire Committee is a Joint Committee of the City Council and King County Fire District No. 44. Known as Fire Protection Joint Ad Hoc Committee. It was established by City under Resolution 13-883. Established and formalized in August 2013. The Committee is made up of City Council members and Mountain View Fire and Rescue Board members, and District 44 Fire chief and deputy. This Committee is charged with exploring alternative models for fire and emergency medical services for the City.

Existing Facilities

The City owns two fire stations, three fire engines, one brush truck, one aid car, and two staff vehicles. Station 98 is located on SE 296th Street, near Lake Sawyer. It is staffed half-time. Station 99 is located in the City Center, and it is not staffed. Several of the fire apparatus are older models that do not meet current standards.

The City contracts with Mountain View Fire and Rescue, King County Fire Protection District 44, to provide fire protection, fire prevention, rescue, emergency medical services, and other services that protect life or property. The current contract between the City and the District is the 2006 inter-local agreement (ILA).

Mountain View Fire and Rescue

Mountain View Fire and Rescue is a "fire district" that provides Emergency Services to a 70 square mile area of southeast King County. The District operates out of eight Fire Stations, utilizing 11 Fire Engines, 4 Medical Aid Cars, 2 Rescue Vehicles and a combination of smaller support vehicles.

MVFR provides services to Black Diamond by means of an interlocal Agreement. In the Agreement, the City provides funds to the District.

Mountain View Fire and Rescue is a combination department, consisting of both career and volunteer personnel, and has 28 career staff and approximately 100 volunteers, 23 of which are assigned to the City. The District services a combined area of approximately 70 square miles encompassing an estimated population of 27,000. Approximately 4,200 of those people live in the City.

The district operates out of eight stations, including two located in the City. District equipment includes 12 structure fire apparatus, including three water tenders (2,000 gallons each), three brush trucks, one medium rescue vehicle, one light rescue vehicle, five aid vehicles, a special operations support vehicle, a 14-person transport van, various four-wheel drive command vehicles, and a training/safety officer vehicle.

Pursuant to the April 2006 ILA between the City and District 44, one career lieutenant and one career firefighter/EMT are on duty at the Lake Sawyer station between 0600 hours and 1800 hours each day. Staffing at night is provided by two volunteer firefighters/EMTs. Station 99 is staffed only by volunteers responding from home. The staff assigned in the City is supported by a cadre of volunteers and career staff assigned throughout the District. 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. Additionally, Station 92 has a staff of two career firefighters on duty 24 hours each day.

Emergency calls per dwelling and per square foot of non-residential space can be used to forecast future call loads. The average emergency calls per year in two comparable fire protection providers⁶ is 0.116 calls per dwelling unit and 0.1489 calls per 1,000 square feet of non-residential space. Applying these call rates to the 6,050 new dwellings and 1,165,000 square feet of non-residential space in the proposed MPDs would predict 875 emergency calls per year. Adding these calls to the current 170 calls per year produces a total of 1,045 calls per year. If future fire stations handle double the current call load of Station 98, Black Diamond would need a total of 3.1 stations when the MPDs are built out.

Basis of Need	Stations Needed
Comparable cities	2.3
Emergency call load	3.1
NFPA response standards	3.0
Population growth	1.8
Average	2.5

⁶ North Whatcom Fire & Rescue, Eastside Fire & Rescue

As noted above, Black Diamond currently has the equivalent of 0.5 staffed fire stations, therefore new development in Black Diamond creates the need for two additional fire stations (with apparatus)⁷.

Current level of Service (Standard of Cover)

Comprehensive Plan sets policy that there should be a fire station within 1.5-mile radius for 6 minutes travel time from developed properties in City.

Under current conditions, the City applies the NFPA 1720 as the standard while acknowledging the change will be required by imminent growth. NFPA is used primarily for volunteer departments. It provides guidance for staffing and time benchmarks for volunteer response based on zone type and population which are useful benchmarks against which to measure fire agency performance.

The City applies the “suburban” classification under the NFPA which is defined by having 5001000 people per square mile. For this classification, staffing and deployment requires a minimum of 10 firefighters arrive at a “low hazard occupancy” fire (typically a 2,000 sq. ft residential home), in no less than 10 minutes 80% of the time.

The NFPA Standard allows for “Mutual Aid” personnel to be counted toward achieving the response goal of 10 personnel in 10 minutes. Additional mutual aid units could be added from Kent Fire and/or Enumclaw Fire depending on nature and size of fire. Under interlocal agreement, Mountain View Fire automatically provides additional coverage as if the city and Mt. View are “one” department.

Fire station 99 is the only fire station located in Black Diamond, it is owned by the City. Fire Station 98 is owned by City but not physically located inside of City boundaries. Fire District is primarily a garage, constructed over 60 years ago, houses one fire apparatus, one District owned rescue vehicle, a brush truck and District owned rescue boat. It is not considered a viable response facility.

Projected Needs

Black Diamond is expected to grow from its current population of 4,200 to approximately 19,200. Emergency calls per dwelling and per square foot of non-residential space can be used to forecast future call loads. The average emergency calls per year in comparable fire protection providers is 0.116 calls per dwelling unit and 0.1489 calls per 1,000 square feet of non-residential space. Applying these call rates to the 6,050 new dwellings and 1,165,000 square feet of non-residential space in the proposed MPDs would predict 875 emergency calls per year.

Adding these calls to the current 170 calls per year produces a total of 1,045 calls per year. If future fire stations handle double the current call load of Station 98, Black Diamond would need a total of 3.1 stations when the MPDs are built out. The standards of the NFPA indicate the number of firefighters to respond to a structure fire. Specific response standards vary according to the type of emergency, the type of fire protection agency, and the density of development. It is assumed that approximately 12 firefighters are needed to respond to a fire emergency in Black Diamond. Typical

fire station staffing in communities like Black Diamond is 4 crew members per station. This NFPA standard indicates a need for 3 fire stations for Black Diamond when fully developed.

As noted above, Black Diamond is expected to grow from its current population of 4,200 to approximately 19,200. The growth of 15,000 people is 3.58 times the current population. If the City's current half-time staffed station is considered the equivalent of 0.5 stations, then 3.58 times 0.5 indicates that the future need for population (excluding commercial development) is at least 1.8 stations. Black Diamond currently has the equivalent of 0.5 staffed fire stations, therefore new development in Black Diamond creates the need for two additional fire stations (with apparatus).

The City's policy for emergency response times will not be met in the west development area for the MPDs without capital improvements. The expected new population from the MPD building will require an additional fire department and more on duty career firefighters. The DAs for the MPDs address funding to provide for them. These planned improvements from the City's Capital Improvement Plan include the following:

- Replace reserve engine #981
- Replace primary fire engine #98
- Replace aid car #98
- Construction of an 8,000 sq ft (+/-) fire station in Lawson Hills area.

Fire Impact Fees

City established a fire capital facilities fund in 1995. The purpose of this fund is to collect capital facility fees from new development to use for land acquisition and improvements to provide for fire protection and emergency services. Impact fees are collected for residential and nonresidential development based on a formula adopted in the City's Code.

Police Facilities

Inventory of Department Staff, Facilities, and Programs

The Black Diamond Police Department is a full-service law enforcement agency serving the citizens and business population of the City. The police department currently is staffed by 12 commissioned police officers, one reserve officer, one records manager, and one part-time support position. Core services include responding to calls for service, proactive patrol, special operations, traffic enforcement, marine services, records, evidence, crime prevention, and narcotics and criminal investigation.

The police fleet currently consists of 11 patrol cars, two administrative vehicles, one undercover vehicle, one off-road Jeep, one marine boat, and one marine Jet Ski™.

The police department responds to calls 24 hours per day, 7 days per week, through requests for service via contracted dispatch with Valley Communications. The department is housed in approximately 1,600 square feet of space in a building shared with the Municipal Court, City Council Chambers, and the Emergency Operations Center.

The department is committed to active involvement and participation with the community. Community policing is a partnership of community and police working together to promote a feeling of safety and security among members of the community. These efforts are accomplished by:

- Home and business security checks,
- extra patrols upon request,
- extra traffic control upon request,
- referrals to domestic violence counseling,
- Drug Abuse Resistance Education (D.A.R.E.) and early childhood education programs,
- supervision of and participation in block watch programs,
- instruction of traffic school program,
- marine safety courses,
- court security,
- the McGruff housing program,
- National Night Out Against Crime and other community activities participation, and
- the Narcotic K-9 handler program.

Current Demand

The Black Diamond Police Department received 2,511 calls for service in 2007; these calls do not include officer-initiated traffic stops. Matters investigated include property crimes, traffic issues, and violent crimes. The City has seen a sharp rise in violent crimes in recent years with a continuing street level drug problem and a sharp rise in methamphetamine related problems in recent years.

The department also provides a marine patrol presence on Lake Sawyer during the summer months, which serves a large recreational user population. This enforcement effort was implemented after the annexation of Lake Sawyer into the City. The average response time in high priority calls is between 3 and 4 minutes; lower priority calls average 4 to 8 minutes.

The department is also an active member of the Coalition of Small Police Agencies (CSPA) of King County, which has proven to be an extremely effective group to consolidate training and other cooperative efforts to bring citizens the most value for their tax dollars. The Major Crimes Task Force and Special Operations Team are just two of CSPA's programs that have proven to be highly utilized.

Projected Needs

As the City's population grows, demand for police department services will continue to rise. Areas of concern for accommodating increased demand for services includes the size of the existing police facilities and staffing levels. Currently, the most pressing need for the police department is additional office space. The department has studied adequate space requirements, and a 4,500 to 5,500-square-foot facility is currently needed to meet immediate needs as well as anticipated growth over the next 5 to 10 years. Also, the growth in population for the City will require

additional officers and capital facilities, which will include vehicles, administrative office space, and equipment.

As county jail costs continue to rise, particularly in light of King County's funding issues, additional resources will be necessary. The City contracts for jail services with the cities of Enumclaw, Buckley and Issaquah.

Schools

City of Black Diamond served by four school districts; Auburn, Enumclaw, Tahoma, and Kent. The City adopts each of the Districts Capital Facility Plans by reference.

Enumclaw School District

The original Black Diamond School District was merged with the Enumclaw School District in 1975, to provide education and programs equivalent to the Enumclaw Schools. Most of the City now lies within the Enumclaw School District No. 216, except for a portion of the area surrounding Lake Sawyer. The majority of new residential development within the City is anticipated to occur within the Enumclaw District. The lake and areas to the west are served by the Kent School District, and the area immediately to the east of Lake Sawyer is part of the Tahoma School District. A very small area along the Green Valley Road is within the Auburn School District.

The Enumclaw School District encompasses a 440 square mile area, the northwestern portion of which contains the City. The district service area is centered in the City of Enumclaw where the district offices, high school, junior high, and several elementary schools are located. The district has five elementary schools, one of which is located in the City. Enrollment within the district has recently declined by about 100 students per year. Based on population projections, growth is anticipated beginning in the next 2 years within both the cities of Enumclaw and Black Diamond.

Black Diamond Elementary School had a January 2009 enrollment of 284 students. According to the district's program capacity, the maximum population for the school without portables is 226 students. With the seven portables it is using, the school is operating over its capacity. A multi-purpose addition was constructed in 1990. No other room for expansion exists, although some space conversion (to classroom space) could occur. Students from the City currently attend Thunder Mountain Middle School and Enumclaw High School.

Kent School District

In 1998, the City annexed Lake Sawyer and the surrounding neighborhoods. Areas on the western side of the lake were already served by the Kent School District, and children from these households continue to attend Kent schools. The Kent School District is the fourth largest in the State of Washington, with an enrollment of nearly 27,000, and operates 40 schools, including four high schools, seven middle schools, 28 elementary schools, and one academy. Students living in the

portion of the City served by the Kent School District attend Sawyer Woods Elementary located just west of the City limits, Cedar Heights Middle School in Covington, and Kentlake High School located west of Lake Sawyer.

Tahoma School District

A small portion of the City immediately to the east of Lake Sawyer is served by the Tahoma School District. The Tahoma School District operates 10 schools with a combined enrollment of approximately 7,000. Tahoma School District students from the City attend Glacier Park Elementary, Tahoma Middle School, and Tahoma Senior High School.

Auburn School District

A very small area along the Green Valley Road is within the Auburn School District.

Appendix 7 TRANSPORTATION APPENDIX

Introduction

This Technical Appendix summarizes the data analysis completed to support the update of the City of Black Diamond's (City's) Transportation Element (Chapter 7) and includes information pertaining to:

- Transportation level of service, including definitions, relationship to concurrency, standards, and methodology;
- The City's existing transportation system, including operating conditions, availability of other modes of transportation, and the functional classification system;
- State, regional, and local transportation plans and improvements;
- Actions needed to meet the level of service standard;
- Travel forecasts used to estimate future traffic volumes based on future growth identified in the City's Land Use Element; and
- Existing and future roadway conditions and recommended transportation improvements.

Level of Service

A level of service (LOS) standard measures the performance of an existing transportation system and the adequacy of the planned future improvements. Additionally, LOS standards establish the basis for the concurrency requirements in the GMA. Agencies are required to "adopt and enforce ordinances which prohibit development approval if the development causes the LOS on a transportation facility to decline below the standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with development." (RCW 36.70A.070 (6)(b)). Therefore, setting the LOS standard is an essential component of regulating development.

Definitions

Conflict Point: Location within intersection or roadway where two or more road users may share the same space at the same time resulting in potential collision. Collisions may involve any mode or road user or users including vehicles, bicycles and pedestrians.

LOS is both a qualitative and quantitative measure of roadway operations. LOS, as established by the *Highway Capacity Manual* uses an "A" to "F" scale to define the operation of roadways and intersections for motor vehicles as follows:

LOS A. Primarily free flow traffic operations at desired travel speeds. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delays at signalized intersections are minimal.

LOS B. Reasonably unimpeded traffic flow operations at average travel speeds. The ability to maneuver within the traffic stream is only slightly restricted and control delays at signalized intersections are not significant.

LOS C. Stable traffic flow operations. However, ability to maneuver and change lanes may be more restricted than in LOS B, and longer queues, adverse signal coordination, or both may contribute to lower than average travel speeds.

LOS D. Small increases in traffic flow may cause substantial increases in approach delays and, hence decreases in speed. This may be due to adverse signal progression, inappropriate signal timing, high volumes or some combination of these factors.

LOS E. Significant delays in traffic flow operations and lower operating speeds. Conditions are caused by some combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.

LOS F. Traffic flow operations at extremely low speeds. Intersection congestion is likely at critical signalized intersections, with high delays, high volumes, and extensive queuing.

Level of Service and Concurrency

The concurrency provisions of the GMA require that local governments permit development only if adequate public facilities are or can be guaranteed to be available within six years to support the new development.

The GMA requires each local jurisdiction to identify future facility and service needs based on its LOS standards. To ensure that future development will not cause the City's transportation system performance to fall below the adopted LOS standard, the jurisdiction must do one or a combination of the following: modifying the land use element, limiting or "phasing" development, requiring appropriate mitigation, or changing the adopted standard.

Level of Service Methodology

The City has established specific methods to calculate the LOS for evaluating the performance of the roadway intersections and transit service and facilities. This section describes those methods.

Intersection Level of Service

For signalized and unsignalized intersections, and roundabouts, the LOS is calculated using the procedures described in the latest edition of the *Highway Capacity Manual* (2010 edition). At signalized and all-way stop-controlled intersections, and roundabouts, the LOS is based on the weighted average delays for all movements, whereas the LOS for two-way stop-controlled intersections is defined by the weighted average delay for the worst movement.

State Highway Level of Service

1998 amendments to the GMA require local jurisdictions to address state-owned transportation facilities, as well as local transportation system needs in their comprehensive plans. Highways of statewide significance (HSS) are designated by the Washington State Department of Transportation (WSDOT) for interstate and principal arterials that are essential to connectivity between major communities.

WSDOT adopted LOS standards for HSS facilities is LOS D for urban areas (RCW 47.06.140). The LOS target is established for comprehensive plans and for reviewing developer impacts along urban HSS facilities.

WSDOT also analyzes “screen lines” for deficiencies along state routes using a standard of 70% of the posted speed. This screen line analysis allows WSDOT to identify the “most congested” locations along its HSS facilities. A speed of approximately 70% of the posted speed equates to conditions where a highway achieves the maximum throughput of vehicles.

In 2007, the WSDOT added SR 169 to the list of HSS facilities. The State’s *2007- 2026 Highway System Plan* indicates that SR 169 is expected to operate below the 70% speed threshold (termed ‘operating less than efficiently’) during peak hours in 2030.

Transit Level of Service

The GMA (RCW 36.70A) requires communities to also adopt LOS standards for transit routes. The City has established guidelines to address the performance of the transit system as follows:

- Encourage King County Metro to expand transit service as the demand dictates;
- Work with King County Metro to determine if additional transit facilities and routes are needed or if existing headways should be decreased (or frequency increased);

Trail Level of Service

The City’s 2008 Parks, Recreation and Open Space Plan established guidelines to measure the performance of the trail system. The level of service standard is to have 75% of the Black Diamond population within 0.5 miles of a trail facility.

Level of Service Standards

Based on the City Council’s recommendations, this plan identifies a LOS standard of LOS D for intersections along State Route (SR) 169 consistent with WSDOT’s standard for urban HSS facilities and LOS C for all other arterials and collectors throughout the city. Setting different LOS standards for specific areas is a common practice that accounts for the function and use of the roadways into the acceptable operating conditions.

The City also recognizes how intersection control (i.e., traffic signals, roundabouts, and stop signs) defines LOS. For two-way and one-way stop-controlled intersections, the LOS is defined by the amount of time vehicles are waiting at the stop sign.

Although a substantial volume of traffic can proceed through the intersection without any delays, a small volume at the stop sign can incur delays that would exceed LOS C or LOS D. To avoid mitigation that would only serve a small volume of traffic, the City allows two-way and one-way stop-controlled intersections to operate worse than the adopted LOS standard (see Table 0-1).

Signalized Intersections	Level of Service
Baker St & SR-169	D
Lawson St & SR-169	D
Ravensdale Road & SR-169	D
Roberts Drive & SR-169	D
Morgan St & Roberts Drive	C
216 th Ave SE & SE 288 th St	C
Jones Lake Road & SR-169	D

However, the City requires that these instances be thoroughly analyzed from the operational and safety perspectives and the City will individually evaluate these situations to determine when mitigation is appropriate.

These LOS standards are higher than other cities in the area. For example, the Cities of Maple Valley and Covington have adopted a standard of LOS D. The higher LOS standards adopted within Black Diamond for non-HSS facilities indicate the City's desire to minimize congestion and the willingness to identify and fund future transportation improvements. The higher LOS standards adopted within Black Diamond for non-HSS facilities also will increase the size of intersections and may become an unaffordable standard to maintain.

Existing Transportation System

The City forms the southeastern edge of King County's urban area. The traffic circulation system within the city is basically the intersection of east west county roads with SR169 through the city, reflective of the original settlement pattern, natural barriers (Lake Sawyer and the Rock Creek Wetland), and lack of substantial growth up to the present. The area's road system consists of a state highway (SR 169), the City's arterials, collectors, and local access roads. Because the grid system is incomplete, many local access roadways are, in effect, long cul-de-sacs. Local access roads are also often narrow by current standards. Although the narrow widths and lack of locations for vehicles to turn-around are a problem for emergency services, the smaller area devoted to roads contributes significantly to the existing rural character of the community and reduces storm water impacts.

The city is bisected by SR 169, a north-south highway of statewide significance, providing both regional access from Renton to Enumclaw, cities in northeast Pierce County, and local access. With the limited arterial network in the surrounding area, SR 169 serves as the primary conduit connecting communities to the larger state roadway network, including major facilities such as SR 18 and I-405. As a result, SR 169 is the main roadway for drivers from cities to the south, including Bonney Lake, Buckley, and Enumclaw, to access major job centers to the north, experiencing high traffic volumes during the morning and evening peak periods. These volumes contribute to existing transportation deficiencies at SR 169 intersections in Black Diamond. The City is legally obligated to address these deficiencies in order to maintain the adopted LOS standard for the roadway; however, no permanent mechanisms are in place to secure funding from private developments outside the City. SR 169 is also known as 3rd Avenue within Black Diamond.

Along the city's northern boundary, SE 288th Street is an east-west arterial that becomes a City of Maple Valley Street east of Black Diamond. The Roberts Drive arterial provides local east-west access west of SR 169 as well as a link from Black Diamond to the City of Auburn and the Green River Valley employment centers to the west. The Lawson Street/Green River Gorge Road is an east-west arterial providing local access east of SR 169 as well as access to the rural areas and communities to the east.

The Black Diamond/Ravensdale Road is a north-south arterial linking Black Diamond and Ravensdale and providing a secondary link to SR 516 (Kent-Kangley Road) and a link to Issaquah and SR 18 bypassing Maple Valley. The SE Lake Sawyer Road is a north-south arterial that forms the City's western boundary and also provides a connection to SR 516.

Existing Roadway and Intersection Characteristics

SR 169, within the planning area, is a two-lane principal arterial that generally divides the city into east and west sections. SR 169 serves an area extending between the cities of Renton and Enumclaw, providing both regional connections (to SR 18, SR 516 and Interstate 405, SR 410 and local access.

Posted speed limits along SR 169 vary depending on the amount of development adjacent to the highway. Areas immediately outside the city limits are posted at 50 miles per hour (mph). Within the city limits, legal speeds are reduced to 35 mph from the north City limits to 1st Ave, except for a school zone with a reduced speed of 20 mph between Baker St to Lawson St. The speed limit returns to 50 mph from 1st Ave to the southern city limits. All cross-streets intersecting with SR 169 are controlled by stop signs.

SE 288th Street is a two-lane road that runs east-west. The road is a minor arterial that changes to SE 291st Street as it approaches SR 169. The road serves City residents north of Lake Sawyer and also serves as the only access for Maple Valley residents living north of SE 288th Street and south of the Burlington Northern Railroad line. SE 288th (turns into 291st) Street is stop sign controlled at SR 169 and 216th Avenue SE on the west end. At all other intersections, the cross-street traffic is stop sign-controlled. The posted speed is 35 mph.

Roberts Drive(Auburn-Black Diamond Road west of city limits) provides access to the City of Auburn and is a two-lane minor arterial. The roadway branches into two facilities near Covington Creek allowing access to the City of Kent (Kent-Black Diamond Road) and Auburn (Auburn Black Diamond Road).

All cross-streets intersecting Roberts Drive are stop sign-controlled. Roberts Drive is controlled by a stop sign at its intersection with SR 169. Posted speeds are generally 40 mph outside the city limits and 25 to 35 mph once inside the city.

Green Valley Road is a two-lane minor arterial that connects SR 169 and Auburn. This street is classified by King County as a collector. The roadway is posted for a maximum speed of 40 mph, but operating speed is constrained to 10 to 15 mph in certain areas due to its curvilinear horizontal alignment with steep grades. Green Valley Road is stop-controlled at SR 169. It should be noted that the annexation of property adjacent to Green Valley Road in 1995 included a condition that direct transportation access would not occur from the annexed area onto Green Valley Road.

Lake Sawyer Road/224th Avenue SE/216th Avenue SE is a two-lane generally north/south minor arterial that provides access to a predominantly residential area west of Lake Sawyer. The street generally parallels SR 169 between Roberts Drive and SR 516. There are traffic signals at the intersections of 216th Avenue SE/SR 516, 216th Avenue SE/Covington-Sawyer Road, and SE 296th Street/219th Avenue SE. All other cross-street traffic intersections along Lake Sawyer/216th Avenue SE are stop sign-controlled. Posted speeds vary between 35 mph and 45 mph.

Covington-Sawyer Road is a two-lane minor arterial that connects with 216th Avenue SE on the western border of the city. It provides access to the City of Covington, SR 18 and SR 516.

Morgan Street is a two-lane east west collector from Roberts Drive to Railroad Avenue/ Jones Road. Railroad Avenue extends Morgan Street as a two-lane collector from Morgan Street southeasterly to SR 169.

Functionally, Morgan Street and Railroad Avenue provide alternative connections between Roberts Drive and SR 169, through the downtown area by either Baker Street or Rail Road Ave. and Jones Lake Road. The intersection of Morgan Street and Roberts Drive is stop sign-controlled on the minor approach (Morgan Street). Jones Lake Road is controlled by stop sign at its intersection with SR 169. The posted speed limit on Morgan Street is 25 mph.

Lawson Street is an east/west minor arterial with its western terminus at SR 169 and continuing east and northeast out of the city. Near the outskirts of the city, the roadway changes to Green River Gorge Road. The arterial provides access between SR 169 and residential developments in the city and rural areas east of the city. The posted speed limit along this route is 25 mph within the city limits. Near Mud Lake, the speed limit increases to 45 mph. Lawson Street is stop controlled at its intersection with 3rd Avenue (SR 169).

Black Diamond-Ravensdale Road is a two-lane minor arterial linking Black Diamond and Ravensdale and serves as a secondary connection between Kent-Kangley Road SR 169 and provides a connection to the Issaquah/ Hobart Road. The posted speed limit along this road is 45 mph within the city limits. Cross-street traffic along Black Diamond-Ravensdale Road is stop controlled.

Baker Street (between SR 169 and Railroad Avenue/Morgan Street) is a two-lane arterial collector located in the downtown area of the city that also provides connection to all points west. The roadway provides access to the post office and school; it has a posted speed limit of 25 mph. It is stop sign controlled at SR 169 and Railroad Avenue/ Morgan Street.

All remaining roadways in the city are local roads with two-lane cross-sections. Most local roadways have posted 25 mph speed limits.

Existing Roadway Volumes and Travel Conditions

Figure 7-1 depicts the City's road network and associated 2015 traffic volumes, which are based on PM peak period turning movement counts collected at each of the 10 intersections within the city and included in the City's concurrency program. These traffic counts were supplemented with available traffic data for SR 169 provided by WSDOT. These PM peak hour volumes were used to evaluate the existing LOS for each intersection, which is summarized in Table 0-2.

Table 0-1. Existing Level of Service (2015)

Signalized Intersections	Level of Service	Delay (seconds)
SE 296th St/216th Ave SE/SE Covington-Sawyer Rd	B	16
219th Ave SE/SE 296th St/Lake Sawyer Rd SE	B	13
Unsignalized Intersections	Level of Service	Delay (seconds)
216th Ave/SE 288th St	D	25
SE Auburn-Black Diamond Rd/Lake Sawyer Rd SE	B	13
SR 169/SE Black Diamond-Ravensdale Rd	F	75
SR 169/Roberts Drive	E	43
Morgan St/SE Auburn-Black Diamond Rd	B	11
SR 169/Baker St	C	20
SR 169/Lawson Rd	C	16
SR 169/Jones Lake Rd	B	13

Note: intersections shown in bold do not meet LOS standards

Consistent with the City's adopted LOS standards established in this plan, intersections must operate at LOS D or better along SR 169 or LOS C or better for all other locations. The majority of intersections within the city operate at an acceptable LOS; however, three intersections currently operate below their respective standards: 216th Avenue/SE 288th Street, SE Black Diamond Ravensdale Road/SR 169 Roberts Drive/SR 169, and Roberts Drive/SR 169. For Black Diamond Ravensdale Road/SR 169, the

primary contributor to the delay is the westbound left movements from the minor street, while for Roberts Drive/SR 169 the primary contributor is the eastbound left movements.

Other Modes

Rail Service

Presently, there are no railroads located within the city limits. Rail lines that historically provided service from Seattle through Renton to the city have been decommissioned. The last coal trains left Black Diamond in 1969. The old rail line passed through town in a north-south direction paralleling Railroad Avenue.

Public Transportation Service

The City currently has a low population density and is distant from major Puget Sound urban employment centers. Public transportation service is available but is limited. Current transit service in the City is provided by King County Metro routes 143 and 907. Route 143 provides Monday-Friday peak-period fixed-route connections along SR 169 between Black Diamond and downtown Seattle through Maple Valley and Renton,. Metro's Demand Area Response Transit (DART) route 907 provides hourly all-day connection to Renton Monday to Friday, with service connections available at the Renton Transit Center. DART uses smaller transit vehicles with the flexibility to perform a limited number of off-route deviations upon request within the area south of Roberts Drive, east of Morgan Street, north of Baker Street, and west of 3rd Avenue. Dart also travels to Enumclaw between Black Diamond and Enumclaw.

Table 0-3 summarizes existing transit services in the city. Route 143 provides 15 to 20-minute service during commute hours with service to and from Black Diamond to downtown Seattle in the morning and from downtown Seattle to Black Diamond in the evening. DART Route 907 provides 60 -minute service during off-peak hours.

Table 0-2. Summary of Existing Transit Service

Route	Beginning Location	Ending Location	Headway Range (minutes)	Start	End	Trips
143	Downtown Seattle	Black Diamond** (via Renton)	15-20	3:59 PM	7:07 PM	6
143	Black Diamond**	Downtown Seattle (via Renton)	15-20	5:20 AM	8:34 PM	6
DART 907	Renton TC	Black Diamond*	60	8:45 AM	4:30 PM	8
DART 907	Black Diamond*	Renton TC	60	7:50 AM	5:33 PM	10

*Service to Black Diamond at 3rd Avenue & Baker Street.

**First and last run to/from Black Diamond starts and ends at Renton Transit Center (TC) and does not serve downtown Seattle (Departs Renton at 6:11AM and departs Black Diamond at 7:08PM).

A park and ride lot located at the Masonic Lodge at 3rd Avenue/Baker Street provides 30 parking spaces for weekday parking for transit users. There are two other facilities in Maple Valley; the Maple Valley Park and Ride is located at SE 231st Street/SR 169 approximately 6.6 miles to the north of the Black Diamond Park and Ride and provides 122 spaces and the Maple Valley Town Square Park and Ride is located 4.1 miles north and provides 97 spaces.

The existing transit service meets the City's defined LOS criteria. However, in the future, additional service as well as provisions for bus pullouts, bus stops, and park and ride lots will become necessary, as the population increases.

Metro has an active Community Connections (formerly alternative service) project in Black Diamond - the Black Diamond-Enumclaw Community Ride (part of the SEKC Community Connections project). The project is currently in a two-year performance measurement phase, approaching the end of year one and Metro is currently examining the service for potential service modifications.

Surface Freight Transportation

There are no freight terminal facilities located in the city. However, truck operations related to mineral extraction, logging and landfill commonly use the road network, primarily on SR 169.

Pedestrian Facilities

There are somewhat limited sidewalk facilities along the arterial and collector road network within the city. While adopted City road construction standards now require sidewalks on all new roads, many of the roads in areas of town that were developed prior to the 1980s were constructed to rural standards with gravel shoulders or no shoulder at all. Existing pedestrian facilities are illustrated on Several subdivisions developed in the last 20 years were developed with sidewalks including: King County Housing Project (Rainier View), Ridge at Black Diamond, Diamond Glen, Morgan Creek, Eagle Creek, Lawson Hills Estates.

Bicycle Facilities

No formal bicycle network exists within the city. Bicyclists currently use the existing roadways as informal routes, although there are no markings or signs to support the street usage for bicycles. City residents have voiced a desire to include bicycle facilities within the transportation environment. Recently the City has widened the westbound lane of Roberts Drive to provide for a 14-foot-wide shared bike lane on Roberts Drive from Bruckners Way to just past the library.

Trail Facilities

The city has an adopted 2011 Trails Plan that outlines strategies to expand the local trail system. There are currently two multipurpose King County trails that are in the planning and engineering phases to provide combined hike, bike and horse trail opportunities in the area. The Cedar to Green River Trail is a 3.7-mile multipurpose trail following an abandoned railroad corridor north of Maple Valley to SE Kent-Kangley Road. The next two phases of the Cedar Green trail will extend

through Black Diamond along Ravensdale Creek, through the City's Lake Sawyer Regional Park and then south along the western city limits to the top of the Green River Gorge where it will connect with 218th Ave SE as access to the Green River, ending at the Flaming Geyser Park. The Cedar River Trail is a paved 17.3-mile multipurpose trail following an abandoned railroad corridor from Lake Washington in downtown Renton to Landburg Park on Summit Landsburg Road.

Shoreline/Water Transportation

There are no navigable waterways for freight or passenger transportation in the Black Diamond area. The region's primary river, Green River, is mainly used for recreational purposes.

Aviation Transportation

The nearest major airport facility is SeaTac International Airport located approximately 22 miles to the west. The City does not have a local airport; however, a privately-owned field with a runway length of 1,500 feet is located along Roberts Drive west of SR 169.

Nearby public-use airports include Kent's Crest Airpark (6 miles), the Auburn Municipal Airport (14 miles) and the Renton Municipal Airport (18 miles). Seaplanes land and take off from lake Sawyer, one resident moors a private seaplane during high water in summer months.

Parking Facilities

On-street parking is presently provided informally throughout the city in conjunction with the local street network. Parking is restricted on SR 169. Additional public parking is currently needed, particularly in Old Town, and near the SR 169 corridor for weekend bicyclists driving to the city to ride, and for weekday commuters who wish to use transit.

Functional Classification System

Roadway classifications define the character of service that a street is intended to provide. The City has classified its roadway system and adopted roadway design standards based on the roadway's functional and physical characteristics. The functional classification system is a hierarchical system providing for the gradation of traffic flow from an access function to a movement function. The functional classification system for the City is described in **Table 0-4** and the accompanying roadway design standards are summarized in **Table 0-5**.

The following list provides the planned classifications by roadway.

Principal Arterials

- SR 169

Minor Arterials

- SE 288th Street
- Roberts Drive
- North Connector*
- North-South Connector*/Abrams Road
- Black Diamond-Ravensdale Road
- Lake Sawyer Road

- Pipeline Road*
- Lawson Connector*

Collectors

- Annexation Road*
- Southeast Loop Connector*
- Morgan Street
- Baker Street (west of SR 169)
- South Connector*
- Railroad Avenue (Jones Lake Road)
- Lake Sawyer Extension*

Local Access

All remaining roadways within the city are shown on Figure 7-1 and Table 0-4. These tables serve as only a general guide for the different classifications and the City's Road Design Standards should be reference for further clarification.

Table 0-3. Functional Classification System Definition of Roadway Functions

Classification	Function	Continuity	Spacing (miles)	Direct Land Access	Minimum Intersection Spacing	Speed Limit (mph)	Parking	Comments
Principal Arterial	Primary – Intercommunity and intrametro area traffic movement Secondary – land access	Required	1/2 in CD; 1 in urban residential; 1-5 in suburban and fringe	Limited – major generators only	1/2 mile	35-45*	Prohibited	
Minor Arterial	Primary – Intercommunity and intrametro area traffic movement Secondary – land access	Required	1/8 – 1/2 in CBD; 1/2 – 1 in urban; 1-3 in suburban and urban fringe	Restricted – some movements may be prohibited; number and spacing of driveways controlled	1/4 mile	30-35	Generally Prohibited	Backbone of the street system
Collector	Primary – Collect/distribute traffic between local roads and arterial system; Secondary – land access; Tertiary – interneighborhood traffic movement	Desirable	Not less than 1/4 mile from higher classified arterials	Safety controls; limited regulation	300 feet	25-30	Limited	Through traffic should be discouraged
Local	Land Access	None	As needed	Safety controls only	300 feet	25	Permitted	Through traffic should be discouraged

*Speed limit in fully developed areas

Table 0-4. Road Classifications and Development Standards

Classification	Minimum Right-of-Way (feet)	Minimum Paved Width (feet)	Additional Design Standards
Principal Arterial	60-100	38-62	Sidewalk, extra lane width for bicycles, planting strip
Minor Arterial	54 (2 lane) 66 (3 lane)	30 (2 lane) 40 (3 lane)	Sidewalk, extra lane width for bicycles, planting strip
Collector Road	60-72	28 (2 lane) 40 (3 lane)	Sidewalk, extra lane width for bicycles, planting strip
Local Access (Industrial)	50	28	Sidewalk, planting strip
Local Access (Commercial)	60-68	36	Sidewalk
Local Access (Residential)	48-60	22-32	Sidewalk, planting strip

Source: 2009 City of Black Diamond Engineering and Design Standards

Current Transportation Plans and Improvements

The City is working to identify the near-term improvements that address transportation needs for its community.

Planned Roadway Improvements

The current planned roadway improvements consist of projects programmed by WSDOT, King County, and the City.

WSDOT & SR169

SR 169 is a designated Highway of Statewide Significance (HSS) which functions as a major rural and suburban route for the metropolitan area.

WSDOT has jurisdiction over SR 169 through the city and establishes the LOS standard for the roadway. Concern over congestion and safety issues along the corridor have spurred several studies, one of which was a route development plan that considered widening the highway. However, WSDOT did not complete this plan and therefore transportation demand modeling and the state's Regional Transportation Plan (RTP) do not assume widening of SR 169. Even so, the City is taking a proactive approach by seeking additional right of way through dedication upon major development or redevelopment where right of way width along SR 169 is less than 100 feet. The City is also working on access management along SR 169 to plan for necessary transportation improvements that would be funded by new development along the corridor to alleviate congestion and safety issues.

The City has recognized the potential impacts to SR 169 associated with forecast growth and has entered into agreements with major developers to ensure these impacts, as well as some existing deficiencies, are properly mitigated to maintain consistency with concurrency requirements.

King County

King County has identified two future improvements in the North Enumclaw/ Ravensdale Planning Area, which includes Black Diamond (detail is in the County's *2016 Transportation Needs Report*). The County's list of improvements in or around the city is shown in **Table 0-5**.

Table 0-5. King County Identified Black Diamond Area Facility Improvement Needs

Project #	Project Action	Location	Priority	Cost
NM-5051	Provide non-motorized facility	Black Diamond-Ravensdale Rd SE: from SR 169 to 276th Ave SE	High	\$2,480,000
RC-142	Reconstruction of existing 1.3-mile roadway segment	SE Green Valley Rd from 243 rd Ave SE to SR 169	High	\$2,140,000

Source: 2016 King County Transportation Needs Report

City of Black Diamond

Table 0-7 identifies the critical future road network to fill in the street grid and provide alternative east west as well as north south corridors. Lake Sawyer, Ravensdale Creek, and the Rock Creek Wetland prevent other connections and extensions of a grid system. The City has identified several road improvements shown in Figure 7-5.

The City maintains a Six-year Transportation Improvement Program (TIP). The Six-year program proposes improvements to existing substandard roads and includes repairing and overlaying existing roadways, paving gravel roadways, constructing sidewalks, and widening roadways. At the time that the Six-year Transportation Improvement Program was adopted only the capacity adding projects that the City was going to be participating in were included. In addition to the projects identified in the 6-year TIP there are capacity adding projects that are planned for the Master Planned Developer to construct as identified in Table 0-8. In needed, the projects included in the TIP could be reprioritized to address those on SR 169 first, as the City cannot modify the adopted LOS standard as a mechanism to maintain concurrency.

Table 0-6. Black Diamond Six-Year Transportation Improvement Program (2016 – 2021)

Rank	Year	Improvement	From	To	Type of Improvement	Length in Miles	Estimated Cost	Funding
1	2017	General Street Improvement (CIP Project T1)	N/A	N/A	Use for opportunities to leverage private funds, short overlays, chip Sealing, crack sealing, patch work, addressing minor safety problems	N/A	\$30,000/year; \$180,000 total	Local City Funds
2	2017	Roberts Drive Rehabilitation, phase 1 (CIP Project T2)	Bruckners Way	City Hall	Leveling, overlay, sidewalks, pedestrian lighting, widening	0.28	\$100,000	Grant /TIB, Developer Mitigation, Local City Funds
3	2017	232 nd Ave. SE Overlay or Chip Seal (CIP Project T9)	SE 288 th St.	End of road	Chip seal, excluding portion from SE 293 rd to back of Pond @ Greenbrier	0.77	\$100,000	Grant/TIB, Local City Funds
4	2017	New Arterial “Annexation Rd” (CIP Project T3)	Lk Sawyer Rd	Across Roberts Drive south to A2	New Street Grid Capacity	0.7	\$2,900,000	Developer Funded
5	2017	Lake Sawyer Road Extension (CIP Project T4)	Roberts Drive	Annexation Rd.	New Street Grid Capacity	0.5	\$1,800,000	Developer Funded
6	2018	Roberts Drive Rehabilitation, phase 2 (CIP Project T8)	City Hall	King County Library	Grind, patch, replace panels, crack sealing, shoulder reinforcement	0.23	\$200,000	Pavement Preservation Grant, Local City Funds
7	2018	Lawson Connector (CIP Project &16)	SR 169	Lawson Street	New Street Grid Capacity	0.6	\$3,200,000	Developer Funded

8	2016	King County Housing ADA Improvements (1 st Ave.)	Baker St.	Approx. 250' south of Baker St.	Remove existing sidewalk, install new sidewalk and curb ramps	0.10	\$155,000	CDBG Grant
9	2016	Grant Matching Fund	N/A	N/A	Matching funds for grants	N/A	\$40,000/year; \$240,000 total	Local City Funds
10	2019	Lawson Street Sidewalk, Ph. II (CIP Project T14)	6 th Ave.	Newcastle Dr.	5-foot sidewalk on the north side of Lawson Street	0.19	\$356,000	Grant/Safe Routes to School, Developer Mitigation
11	2019	Roberts Drive/SR 169 Intersection Improvements (CIP Project T7)	N/A	N/A	Two lane Roundabout or Signalize Intersection	N/A	\$7,777,000	Developer Mitigation and Grant
12	2017	Jones Lake Road	SR 169	Railroad Ave.	Patching and overlay	0.29	\$122,000	Grant/TIB, Local City Funds
13	2017	228 th /224 th /216 th Chip Seal	SE 312 th St.	Covington-Sawyer Road	Patching and chip sealing (excluding in front of Kentlake Highlands & Fire Station)	1.46	\$129,000	Grant/TIB, Local City Funds
14	2019	Ravensdale / 169 interim intersection improvements (CIP Project T17)	N/A	N/A	Roundabout or Signalized intersection	N/A	\$700,000	Developer Funded and Possible Grant
15	2020	Roberts Drive Rehabilitation, phase 3	King County Library	SR 169	Widen and overlay, sidewalk, street lighting and stormwater improvements	0.56	\$1,700,000	Grant / TIB, Local City Funds

16	2017	Commission Sidewalk	Railroad Ave. at Museum	Commission St. behind Museum	Install decorative sidewalk and concrete sidewalk, ADA improvements	0.04	\$150,000	Grant/Pedestrian, Museum In-Kind Contribution, Local City Funds
17	2021	Sidewalk Extensions & Bike Lanes	N/A	N/A	Sidewalk extensions and roadway widening to add bike lanes	N/A	\$400,000	Grant Funds
18	2020	North Connector (CIP Project T18)	169	South to new commercial and multi-family housing	New minor arterial connection to SR 169 with signal	0.25	\$1,000,000	Developer Funded
19	2020	Intersection Roberts Drive & Lake Sawyer Extension (CIP Project T19)	N/A	N/A	New Roundabout	N/A	\$1,000,000	Developer Funded
20	2021	Ravensdale / 169 intersection (CIP Project T20)	N/A	N/A	Intersection realignment & signal or roundabout	N/A	\$8,000,000	Developer Funded & Grant
21	2021	Intersection Roberts Drive & Annexation Road (CIP Project T21)	N/A	N/A	New roundabout	N/A	\$1,000,000	Developer Funded
22	2019	Morgan Creek Neighborhood Roads Preservation	N/A	N/A	Seal Coat	1.19	\$97,000	Local City Funds
23	2022	Intersection 216 th Ave SE & SE 288 th Street (CIP Project T22)	N/A	N/A	Signalization or Roundabout	N/A	\$1,400,000	Developer Funded
Total							\$32,706,000	

Actions Needed to Meet Level of Service Standard

Two intersections operate below their respective LOS standards under existing conditions: SE Black Diamond-Ravensdale Road/SR 169 and Roberts Drive/SR 169. Intersection control (e.g., a roundabout or traffic signal), additional turn lanes and roadway widening improvements would be needed at these locations to meet acceptable LOS standards. These actions are included in the 2015-2021 improvements as shown on Figure 7-5. The design and permitting of these intersections is already underway required to be constructed by the City's Development agreement with the Master Planned Developer in the City.

Travel Forecasts

The City of Black Diamond's existing travel demand models were updated to reflect the current and future level of development to be in place by the year 2035 both within the City and the Puget Sound Regional Council (PSRC) planning area. The land use data was obtained from PSRC and refined with city staff input to account for the approved Master Plan Developments (Lawson Hills and The Villages) and other development potential. The travel forecasts were based on the following land use projections:

- year 2014 - 4,361 population, 1,627 households and 561 jobs
- year 2035 – 19,262 population, 7,674 households and 3,709 jobs

The existing travel demand models were also updated to reflect the current and future transportation investments programed to be in place by the year 2035 both within the City and the Puget Sound Regional Council (PSRC) planning area.

Future Land Use and Transportation Concepts

The City intends for the Black Diamond Comprehensive Plan Transportation and Land Use Elements to work together for a safe and interconnected system to support housing, economic development, and recreational opportunities while minimizing environmental and social impacts consistent with Puget Sound Regional Council's forecasts and vision.

Regional traffic growth on SR 169 will likely continue as long as vehicular capacity is available on that route. Similar conditions would be expected on other arterials that facilitate regional traffic. The need for planned transportation improvements will depend on the location, density and timing of the area where development occurs but could also be influenced by development outside the City that adds volume to SR 169. The construction of the needed and planned capacity adding transportation improvement projects will occur as required by the City's Development Agreement with the Master Planned Developer and periodic traffic monitoring and modeling dictates. Black Diamond may also explore options to coordinate with other SR 169 cities to identify corridor-wide solutions and the implementation of plans and programs that reduce reliance on single occupancy vehicle travel.

At the expiration of the Developer Agreement in 10 to 15 years the implementation of transportation capacity projects may shift to a City funded transportation capacity program with traffic impact fees and may vary depending on market forces, availability of utilities and actions taken by the jurisdiction.

Forecast Horizons

The TIP is linked to the City's planned land uses and the anticipated traffic volumes. There are two forecast horizons presented in the comprehensive transportation plan:

- Short-Term: 2015 to 2021
- Long-Term: 2022 to 2035

The short-term forecast coincides with the City's TIP and represents current growth trends and expected short term development within the city. Future levels and timing of land development were based on conversations with City staff, local land owners, and development firms. Changes to development patterns and priorities may vary the need for and the completion order of the transportation improvements. The long-term traffic forecast represents the future growth in housing, employment and background traffic that will produce the expected 2035 traffic projections. The City's Development Agreement with the Master Planned Development (MPD) Developer requires updates at the beginning and middles of the three phases of development so as to program the timing of transportation capacity adding projects to come on line as needed.

Transportation Improvement Recommendations

This section of the transportation plan establishes intersection and roadway improvement programs for the periods 2015 to 2021 and 2022 to 2035.

Arterial and Collector Roadway Improvements

A conceptual configuration for the future roadway system in 2035 is shown in Figure 7-4. New arterial and collector roads include: Pipeline Road, Annexation Road, Lake Sawyer Extension, Lawson Connector, South Connector, Southeast Loop Connector, and North Connector.

The proposed roadways are to show the general route and connections of future roadways and are not specific to design level locations. Alternative roads and alignments may be considered. The intent is to show a basic route, connections and concept and the exact locations will be determined after engineering and environmental review. These new roads will distribute future traffic growth throughout the City that would otherwise have been concentrated on the few existing major arterials.

The Pipeline Road will provide an east / west alternative to Roberts Drive and will enhance the circulation and access for industrial development. The North Connector will provide a north / south alternative to SR 169 in the middle of the City. The Annexation Road would provide north-south and east-west circulation through the southwestern portion of the City's Expansion Area. Other new facilities are proposed to improve general circulation.

Agency Coordination

Improvements on SR 169 will require coordination with WSDOT. The City has adopted a Gateway Overlay District from the North City boundary to Roberts Drive regulating how development will occur along the roadway including separated meandering sidewalks within the front setbacks of the properties. The Comprehensive Plan should include a vision for SR 169 through the city. The City could use the vision to begin discussions with WSDOT to coordinate the future design of the road. Then as development occurs along the highway, improvements (such as lanes, sidewalks, bike lanes, median planting, turn pockets, driveways, and signals) could be implemented consistent with the overall design. The City will

continue to participate in the implementation of or future updates to the SR 169 Route Development Plan (WSDOT, 2007) and as well as any other regional transportation planning efforts.

Intersection Control Requirements

Although the construction of new collector roads and connecting arterials will help distribute traffic, key intersections will warrant traffic control and intersection improvements to meet the City's LOS standards in the future. The City identified roundabout-controlled intersection improvement as the preferred solution to address the increasing turning movements at intersections. Where it is shown that the traffic movements cannot be handled and or the site conditions will not allow for a roundabout, signalization of the intersection can be considered. The necessity for and location of intersection improvements would be established at the time development occurs. The City will look to avoid locating signals in its historic downtown area.

Many intersection control improvements are expected and warranted during the 20-year planning period. The improvement for roads and intersections will be implemented incrementally with developments as traffic volumes increase.

7.7.2 Roadway Conditions – 2021

This plan anticipates future conditions for the year 2021 to derive the Six-year TIP. The analysis includes the roadway projects identified in the Six-Year 2015-2021 TIP (dependent on growth-driven traffic demand) plus additional improvements identified in the Master Plan Development needed to ensure that the roadway system meets the City's adopted LOS standards.

2015 to 2021 Recommendations

Development and increasing traffic from neighboring jurisdictions will increase traffic volumes throughout the city. Figure 7-5 and Table 0-9 list the 2015 to 2021 recommended actions. The transportation improvements recommended are expected to meet the projected travel needs throughout the city.

Table 0-7. Transportation Capacity Adding Projects (2015-2021)

Project References		Project Description	General Timing	Funding Source
Project Number & Name from 2009 comp plan (new projects in <i>italics</i>)	AKA			
A1, Annexation Road,	The Villages MPD Community Connector	Minor arterial from Lake Sawyer Road SE across Roberts Drive to south end of Phase 1A, Villages MPD; individual phases described below.	Expected within 6 years	MPD Developer
A2, Lake Sawyer Extension Road	Ring Road	A road with a single lane in each direction with bike lanes, rain gardens/landscaping, and a sidewalk on each side.	Expected within 6 years	MPD Developer
<i>Reconstruction of Roberts Drive from west City limits to 236th Ave SE</i>	Frontage Improvements on SE Auburn -Black Diamond Road (Roberts Drive)	Overlay and widening with sidewalks, bike lanes, street lights, landscaping, storm water infiltration	Expected within 6 years. Partially completed in 2017	MPD Developer
SE Auburn Black Diamond Road (Roberts Drive) / Annexation Road	Intersection of Community Connector and SE Auburn Black Diamond Road	Single lane roundabout.	Expected Fall 2018.	MPD Developer
SE Auburn Black Diamond Road/ Lake Sawyer Road / Lake Sawyer Extension	Intersection Improvement at SE Auburn Black Diamond Road and Ring Road	Single lane roundabout	COMPLETE in 2017	MPD Developer
SR 169 / Roberts Drive / Lawson Connector	Intersection improvement at SR 169 / Roberts Drive / Lawson Connector (or Parkway)	Roundabout improvement with pedestrian improvements	Expected within 6 years	MPD Developer and City grant funds
SR 169 / SE Black Diamond – Ravensdale Road	Intersection Improvement a@ SR 169 / Pipeline Road / Black Diamond Ravensdale Road	Roundabout improvement with pedestrian improvements	Expected within 6 years	MPD and City grant funds
SE 288 th Street / 216 th Avenue SE		Re-channelize south leg of intersection to provide refuge/merge area for westbound left-turning vehicles	1 COMPLETED	MPD Developer

<i>Roberts Drive Improvements from 236th Ave SE to Bruckners Way</i>		Road widening for shared bike lane, sidewalks and street lights extending pedestrian facilities across Black Diamond and linkage to the r	Expected within 6 years	MPD, grant and City funds
<i>SR 169 from BD Ravensdale Road to James Street</i>	Sidewalk link from Old Town to north commercial	Provide sidewalks and bike lane facilities from BD Ravensdale Road to James Street	Expected within 6 years	Grant and City funds
<i>Ginder Creek Trail linking Roberts Drive to Morgan Street</i>		Construct a gravel surface trail for access to City open space and shorter access to the library.	Expected within 6 years	Grant and City Funds
Later phase of A1 above.	Extend The Villages MPD Community Connector	New road with bike lanes and meandering paths/walkways . Constructed in phases as necessary to provide access to each Phase 2 plat that takes access from the Community Connector.	Expected within 6 years	MPD Developer
A3, Lawson Connector	Lawson Parkway	New road linking Lawson Hills MPD to State Route 169 with pedestrian facilities, bike lanes and street lights.	Expected within 6 years	MPD Developer
Lawson Street Sidewalks Phase 2	Frontage Improvements along Lawson Street	Sidewalks on Lawson Street 6 th Ave to Botts Drive	Expected within 6 years	MPD, grant and City funds
Intersection Improvement at Lawson Parkway/Lawson Street/ Botts Drive		Stop control will be provided when intersection is constructed. Additional improvements may be needed in the future.	Expected within 6 years	MPD developer
A5, North Connector, phase 1		Minor arterial serving north commercial area with roundabout access to SR 169.	Expected within 6 years	MPD Developer

Note: The projects above identify needed facilities within the City if the project growth takes place during the 13-year period. New capacity adding projects will be the responsibility of the project's developer to design and construct to meet the demands of the new growth within the City according to the Development Agreement with the City or through the City's SEPA process. The City's role is monitoring, review and collecting a proportionate share of mitigation fees from infill development for affected intersections. New development will also be responsible for providing on-site roads, trails, sidewalks and circulation, which is not identified in the TIP.

Roadway Conditions - 2035

The traffic volumes anticipated for the year 2035 are depicted in Figure 7-7. The City expects that additional arterial roads will be needed in the planning area. SR 169 and Roberts Drive will continue to carry the largest volumes of traffic. The Morgan Street and the Railroad Avenue connection between Roberts Drive and SR 169 would serve as a prominent collector road.

2022 to 2035 Recommendations

Future transportation recommendations for the 2022 to 2035-time horizon (dependent on growth-driven traffic demand) are shown in Table 0-8 and Figure 7-6. The program improves existing facilities, provides connections to “fill-in” the existing system, and constructs new facilities to meet the projected travel needs throughout the city.

Table 0-8. Transportation Capacity Adding Projects (2022-2035)

Project References		Project Description	General Timing	Costs & Funding Source
Project Number & Name from 2009 comp plan (new projects in <i>italics</i>)	AKA			
Intersection Improvement at Roberts Drive / Morgan Street and maybe future North Connector		Roundabout	Within 7 to 20 years	\$11,600,000 MPD Developer
Intersection Improvement at SE 288 th St/ 216 th Ave SE		Roundabout or signal	Within 7 to 20 years	MPD Developer
A6, Pipeline Road		Construct New City minor arterial roadway from Lake Sawyer Road. SE to SR 169 with roundabout improvement on Lake Sawyer Road SE.	Within 7 to 20 years	MPD Developer
Intersection Improvement at Covington Sawyer Rd. and 216 th Ave SE		New signal and re-channel adding turn lanes and possibly through lanes or roundabout	Within 7 to 20 years	MPD Developer
A5: North Connector phase 2		Connect new city minor arterial , North connector to the pipe line road.	Within 7 to 20 years	MPD Developer
A5, North Connector phase 3		Extend North Connector from the pipeline road to Roberts Drive.	Within 7 to 20 years	Future Developers
SR 169 Roundabout improvements at Roberts Drive / Lawson Parkway		Roundabout improvements which could include slip lanes or upgrade to a two-lane roundabout	Within 7 to 20 years	Future Developers
Intersection Improvement at Roberts Drive / Morgan Street and maybe future North Connector		Roundabout	Within 7 to 20 years	MPD Developer
SR 169 Roundabout improvements at BD Ravensdale Road / Pipeline Rd.		Roundabout improvements which could include slip lanes or upgrade to a two-lane roundabout	Within 7 to 20 years	Future Developers
A8, South Connector	South Connector	A new east west collector in south Black Diamond connecting SR 169 to southwest Black Diamond	Within 7 to 20 years	\$7,560,000 Future Developers potentially with City and grant funds

A9, SE Loop connector	SE Loop Connector	Construct a new collector street from Lawson Hills MPD to SR 169 for a second connection	Within 7 to 20 years	\$7,125,000 Future Developers potentially with City and grant funds
Widen SR 169 From Roberts Drive to north City limits		Widen SR 169 to 4 lanes from Roberts Drive to north City limits.	Within 7 to 20 years	Future Developers potentially with City and grant funds
SR 169 / RR Ave / SE Loop Connector	SR 169 / Jones Lake Road / SE Loop Connector	Signal or roundabout	Within 7 to 20 years	\$630,000 Future Developers potentially with City and grant funds
SE 288 th Street & 232 nd Ave SE		Channelization improvements	Within 7 to 20 years	Future Developers potentially with City and grant funds
SR 169 / South Connector		Roundabout	Within 7 to 20 years	\$630,000 Future Developers potentially with City and grant funds
North Connector & Pipeline Road		Roundabout	Within 7 to 20 years	Future Developers potentially with City and grant funds
North Connector & Roberts Drive		Roundabout or maybe a signal	Within 7 to 20 years	Future Developers potentially with City and grant funds
SR 169 / Baker Street & SR 169/ Lawson Street	Intersection improvements for Lawson Street and Baker Street with SR 169.	One roundabout or two signals. Right of Way needed.	Within 7 to 20 years	\$1,260,000
SE Auburn Black Diamond Road / Morgan Street	Roberts Drive & Morgan Street Intersection	Roundabout or maybe a Signal	Within 7 to 20 years	
SE 288th Street & 232nd Ave SE		Channelization Improvements.	Within 7 to 20 years	\$630,000
North Connector & Pipeline Road		Roundabout	Within 7 to 20 years	
North South Connector & Roberts Drive		Roundabout or maybe a signal.	Within 7 to 20 years	\$630,000
North South Connector & Morgan Street		Roundabout or signal	Within 7 to 20 years	\$630,000

Note: The projects above identify needed facilities within the City if the project growth takes place during the 13-year period. New capacity adding projects will be the responsibility of the project's developer to design and construct to meet the demands of the new growth within the City according to the Development Agreement with the City or through the City's SEPA process. The City's role is monitoring, review and collecting a proportionate share of mitigation fees from infill development for affected intersections. New development will also be responsible for providing on-site roads, trails, sidewalks and circulation, which is not identified in the TIP.

Table 0-9. Master Developer Funded Transportation Projects

The Villages MPD		Project Description	Construction Threshold	
Project Name	Alternative Name		Phase 1	Phase 2
The Villages MPD Community Connector		1 lane road connecting Black Diamond Road including bike lanes, meandering path and roundabout	Division 1A of Plat 1A	Occupancy of 726th DU in Phase 1A
Ring Road				
Frontage Improvements on SE Auburn -Black Diamond Road				
Source: Black Diamond Memorandum dated August 27, 2012 From Andy Williams, Steve Pilcher RE: Approval of Regional Facilities Implementation Schedule for Phase 1A, The Villages MPD				
Lawson Hills MPD		Project Description	Construction Threshold	
Project Name	Alternative Name		Phase 1	Phase 2
Source: Black Diamond Revision/Correction Submittal Form Dated January 1, 2014, Permit #PLN13-0027 (2C)				

Note: Funding and implementation responsibility for the projects listed are the responsibility of the Master Developer. These projects may be listed in the future TIP.

Level of Service–2035

With the listed improvements for 2021 to 2035, the City’s arterial and collector road system all roadways and intersections would operate within an acceptable LOS except for 216th Ave SE / SE Covington Sawyer Rd. Table 0-10 indicates the intersection LOS operations within the City for 2035. With the intersection improvements described in Table 0-10, two intersections would not meet the City’s LOS C standard. The 216 Avenue SE/SE Covington-Sawyer Road intersection would operate at LOS F and the 216th Avenue/SE 288th Street intersection would operate at LOS F. The traffic volume growth at these locations appears to be primarily from regional growth outside Black Diamond. It is recommended that the City coordinate with King County, City of Covington and Maple Valley to improve connectivity outside the City of Black Diamond to assist with this problem.

Table 0-10. Future Intersection Level of Service Summary (2035)

Signalized Intersections	Level of Service	Delay (seconds)
216th Ave SE/SE Covington-Sawyer Rd	F	176
219th Avenue SE/SE 296th St	A	8
Roundabouts	Level of Service	Delay (seconds)
216 th Avenue SE/SE 288 th Street	F	96
Roberts Drive/Lake Sawyer Road Extension	A	8
SR 169/SE Black Diamond-Ravensdale Road	C	16
SR 169/Roberts Drive/Lawson Connector	A	9
Roberts Drive/Morgan Street	A	8
SR 169/Baker St	A	6
SR 169/Lawson Rd	A	6
SR 169/Jones Lake Rd	A	8

7.1.3 Public Transportation

Metro is expected to continue the one existing transit route into the 2021 horizon year depending on ridership levels and available funding. Service frequency may be increased, however, depending upon demand in the City and Maple Valley and Enumclaw areas. By the 2035 forecast year, additional park-and-ride facilities and transit service may be needed along SR 169. Other transit facilities may be necessary to serve new residential and employment within the City, specifically growth in the Master Plan Developments. Subject to available funding, the likely locations would be along Roberts Drive or Lake Sawyer Road. The City MPD's Development Agreement identifies a park and ride facility within walking distance of the highest density portion of the Master Planned Development.

Pedestrian and Bicycle Facilities

Sidewalks, walkways, and bicycle paths are integral parts of road design, as they are typically located within the roadway right-of-way. Sidewalks should be located on roads providing access to downtown areas, schools, parks, shopping centers, office buildings, and along transit routes. Enhanced sidewalk design standards should be applied by the City to address areas with high pedestrian activity, to increase pedestrian comfort and to allow for street plantings.

Bicycle lanes or paths are especially useful where bicycle traffic is high; such as near parks, schools, and other bicycle traffic generators. Bicycles can sometimes be accommodated without a bicycle lane on low volume local or collector roads. The City's standard of wider shared auto and bicycle lanes on arterials and collectors in time should address the need for continuous linked facilities for bicycles.

Bicycles are not appropriate on sidewalks designed for pedestrians. In low volume areas where bicycles and pedestrians share the sidewalk, an 8 to 10-foot-wide path is needed. In areas with high bicycle traffic volumes, a separate 5-foot bicycle path is needed.

Although there is not a system of bicycle paths or lanes in Black Diamond, the City recognizes the importance of pedestrian and bicycle facilities for recreation and commuter uses. The trail system is a major component of the City's proposed non-motorized transportation system. The Black Diamond Trails Plan proposes several expansions to the local trail system with multipurpose trails, off-road hiking trails, off-road mountain biking trails and horse trails. The City's Trail Plan may need to be updated to insure adequate local connections to the major Regional Cedar to Green King County multi-purpose trail that is currently in preliminary design.

Recommendations

The City has added to the sidewalk system significantly in recent years. However, north south linkages and connections to the future regional trail will be needed. Figure 7-2 shows the current extent of the sidewalk system. The City road construction standards require sidewalks on all new roads. It is recommended that sidewalks, walkways, or trails be constructed with or along all new or reconstructed collectors, minor arterials and on most local access roads as appropriate within City limits.

The City is planning for sidewalks and trails throughout new developed areas but not through older subdivisions with narrow existing rights of ways. In the old portions of the City developed prior to the 1980s, the right of way widths are narrow and the narrow roads serve small pockets of development and carry very little traffic. The citizens in these areas walk on or along the existing roads sharing the roadways with vehicles. It is recommended that the City consider formalizing this vehicle and pedestrian shared facility practice with the assistance of a traffic engineer examining speeds, signage and road improvements and adopting standards and ordinances to establish and facilitate this reasonable accommodation for pedestrians. Reconstruction of existing local access roads are very difficult to fund, particularly if sidewalks are included. The older neighborhoods would benefit from reconstruction of the roadways within the existing right of way and roadbed as City funding would be greatly extended bringing reinvestment to these neighborhoods much quicker.

New roadways will include bike lane provisions along arterial and collector facilities in the City. It is recommended that bike lanes or widened lanes for shared use be constructed along existing arterial and collector roadways in the future when they are scheduled for rehabilitation or reconstruction. For example, the City is requiring the Lawson Hills and Villages to include a network of trails as a condition of the developer agreement. City has also added network of sidewalks through SEPA mitigation and Rock Creek pedestrian bridge will link old town and new town. A new trail is being constructed in 2018 along Morgan Drive

As stated in the transportation policies (T-9), the City encourages the development of a network of off-road facilities for non-motorized travel. The City should seek these facilities in connection with new development and should attempt to identify potential off-street bicycle routes (Class I) for cyclists wherever sufficient public demand and space can be made available.

The recommended non-motorized facilities in this plan will have a positive impact on the transportation system. The plan's support for bicycle facilities would also help encourage alternatives for shorter length trips.

Transportation Demand Management Strategies

Transportation Demand Management is a term encompassing a broad range of measures designed to promote alternatives to the single-occupant vehicle (SOV). By promoting these alternatives, mobility can be maintained without expanding the capacity of the road network.

TDM strategies such as those addressed in Policy T-8 generally include increased public transportation service and ride-sharing programs. The City's website includes links to Metro to help facilitate increased use of public transportation.

Transportation Systems Management (TSM) strategies, such as improved signal coordination and timing are related to TDM as alternative methods of improving transportation performance without building new roadways. TSM is the subject of Policy T-9.

Commute Trip Reduction

Washington State's Commute Trip Reduction Law (RCW 70.94.521) requires all employers with more than 100 full-time employees in counties with populations greater than 150,000 (including King County) to implement a commuter trip

reduction (CTR) plan. Although presently there are no employers within the City that employ more than 100 employees at a single work site, anticipated employment growth may necessitate a CTR program in the future.

As one way to support CTR goals, the City signed a franchise agreement with a high-speed internet provider (Wave. MPD) to fund WiFi at public locations including school sites, fire stations, etc.

Reducing congestion includes strategies to reduce demands on the transportation system. Some elements of a CTR plan include:

- provision of preferential parking or reduced parking charges, or both for high-occupancy vehicles (HOVs) and institution of paid parking for single occupant vehicles;
- provision of commuter ride matching services to facilitate employee ridesharing for commute trips;
- provision for subsidies for transit passes or employee use of HOVs;
- vehicles for carpooling and van pooling;
- permitting flexible work schedules to facilities employer's use of transit, car pools, and van pools;
- cooperation with transportation providers to provide additional service to the work site;
- provision for bicycle parking facilities, lockers, changing areas, showers for employees who bicycle or walk to work;
- establishment of a program to permit employees to work part or full time at home or at an alternative work site closer to their homes (telecommuting). To facilitate telecommuting, Black Diamond signed a franchise agreement with the internet provider Wave for high speed internet service. Developer agreements required Lawson Hills and the Villages to commit to bringing employment to Black Diamond and commercial development to improve the jobs housing balance and reduce the need for long distance commutes and fund high speed internet at public school sites, fire stations. Etc.;
- establishment of a program of alternative work schedules such as compressed work week (4-day work week); and
- employer-guaranteed ride home for employees who use alternative transportation modes. This program allows employees to use a company vehicle or provides a taxi reimbursement if there is a family emergency or they are required to work outside their normal work hours.

Land Use Policy

A city's ability to regulate land use is the most effective way available to manage travel demand. Land use plans and the planning and zoning sections of city codes are the principal instruments for implementing land use policy. Some examples of land use policy instruments are discussed below:

Zoning and Land Use Designation

Zoning and land use designation of individual parcels are very important in determining traffic impacts. In general, retail (particularly fast-food and convenience stores) generates the most traffic per employee or square foot of development. On the other hand, if there is inadequate commercial zoning compared to housing, residents will have to travel out of town for needed services. A balanced approach will best minimize traffic impacts. Conversely, industrial developments (such as heavy manufacturing and warehousing) generally have lower traffic impacts. Most other commercial activities (offices, medical, etc.) and residential areas fall somewhere in between these extremes.

The City of Black Diamond sits at the edge of the King County Urban Growth Area. Large housing developments are occurring on large parcels of land. The City is requiring public space and forested land to remain. Limits are being

created for on-site parking at commercial developments and the amount of on-street parking required in residential and commercial neighborhoods.

Promoting Business

Even though the City of Black Diamond is small it has funded a Business Development Director and continues to seek bringing more employers to Black Diamond so that residents will have more opportunity to live and work in Black Diamond

Standards for Transportation Facilities

City codes may also regulate the number and location of driveways, the required minimum (and in some cases, maximum) number of parking spaces, the number and convenience of bicycle parking spaces, and sidewalk requirements. These requirements can provide for good design that can maximize the efficiency of the roadway system and can promote use of single occupancy vehicle and commute alternatives.

Parking Management

The City of Black Diamond seeks to provide adequate, but not excessive on-street and off-street parking through both minimum and maximum parking allowances. The City will monitor utilization of parking over time and update appropriate codes as needed.

Funding Strategy

The Comprehensive Transportation Plan recognizes the planning and improvement programming process as ongoing and provides a basis for initiating the funding strategy. A funding analysis is included that examines the available sources to pay for the recommended improvements and new roadways. This analysis recommends those strategies which would be most beneficial for the City to pursue when identifying funding for the improvements outlined in the Six-Year TIP.

During the TIP process each year, the City confirms the construction costs of the recommended improvements and new roadways and matches the appropriate funding strategy to construct the planned improvements. The TIP review also allows the City to reevaluate the need and timing for additional improvements.

Proposed Six-Year Financing Plan

The City is required to create a 6-year financing plan for both transportation and capital facilities, however whereas the City of Black Diamond has required that the Master Planned Developer design, permit and construct all of the capacity adding projects in the City's transportation plan as needed to meet the City's adopted level of service, the city needs only to monitor the LOS and enforce the Development Agreement with each implementing plat within the Master Planned Development.

The Six-Year TIP is the result of an interactive process that balances the goals of all comprehensive plan elements. Financial planning for transportation uses the same process as the financial planning for capital facilities; however, the timing and funding for transportation is restricted by the concurrency requirement and the binding nature of LOS standards. PSRC will also be looking for reassessment strategy if the City's capital funding falls short.

In the unique situation in Black Diamond, concurrency was addressed through the review and permitting process for the Master Planned Developments, therefore if the Master Planned Developer does not keep up with the capacity adding projects in order to meet the City's adopted level of service, MPD implementation will be halted. The City's strategy to tie concurrency directly to THE major developer within the City should give the City a step ahead of most communities that struggle to keep up with maintaining concurrency requirements.

Costs

The costs associated with the city's transportation costs include the following:

- maintenance and operation of the existing and proposed system;
- costs for designing and constructing new and/or expanded facilities;
- general costs associated with administering, planning, and overhead.

Costs associated with the transportation environment in the City include the cost of maintaining the existing City transportation facilities (roads, etc.); upgrading or expanding the vehicular road network, expanding the pedestrian system; and, providing bicycle facilities, system control (signage, markings, etc.), as well as transportation system planning and design. Although the City is not fiscally responsible for the costs associated transportation improvements required by new development, the City is responsible to ensure that capacity adding projects are constructed concurrent with MPD development, and is collecting proportionate share of SEPA mitigation from non MPD projects to ensure equity to the development community

Funding Sources

A number of financial strategies are available to the City to finance the transportation improvements identified in the comprehensive transportation plan. Table 0-11 lists these strategies, their availability, and recommendations for the City to consider when implementing the improvement program. Historically, the City has relied on Real Estate Excise tax, grants and contributions from land developers to construct roadway improvements. In addition, to those previously pursued, Black Diamond will be eligible to seek funds from larger grant sources once the population exceeds 5,000, as there are sources available only to cities of that size. The grant programs available to large cities are generally greater in overall size and the typical awards for funded projects are bigger than those for small cities. This expands the City's opportunities to secure significant funding for large infrastructure projects. This is anticipated by 2021 and will be confirmed by the 2020 United States Census.

Strategies

To provide a more consistent strategy for funding roadway improvements, the City shifted the implementation responsibility of the capacity adding project to the Master Planned Developer creating a direct link between development and maintaining concurrency.

Historically, the City has relied on Real Estate Excise Tax, grants and frontage improvements from land developers to construct roadway improvements. Then in 2015 at the approval of the Villages Master Planned Development and Lawson Hill Master Planned Development, the City signed a binding development agreement that requires that the developer design, permit and construct as needed to maintain the City's level of service any and all of the planned improvements and new road connections. This puts the City in a unique position of just having to review, monitor and collect a proportionate share from other non MPD development in the City. Many other city's struggle to stay ahead because of the burden of financing existing deficiencies, pass through trips and the growth in background trips which are all unfunded.

We would recommend that the City explore a mechanism for a set mitigation/impact fee per PM peak hour trip for infill development, such as a Transportation Impact Fee (TIF). A pay-and-go proportionate share program for infill development would reduce the administrative burden, reduce the high cost of individual studies, and provide more efficiency and certainty to the development community. Should the MPD agreements not be extended once they are scheduled to expire, the TIF would be applied to remaining projects in those developments.

As required by GMA, the City also funds transportation improvements through the City's Concurrency Management System, discussed below in section 7.9.2.

Table 0-11. Summary of Possible Local Funding Sources for Transportation Improvements

Comments	Potential of Revenue Generation	Realistic Acceptance	Comments
Local Motor Vehicle Fuel Tax ⁽¹⁻⁵⁾	Good	In-place	Funds distributed on a per capita basis
Transportation Benefit District ⁽¹⁻⁵⁾	Good	In-place but could be raised	
Local option Sales Tax ⁽¹⁻⁵⁾	Good	Difficult	Requires County implementation
Impact Fees; ^(3, 5)	Good but small amount of the total growth funding needed. Would help local equity.	Good	Allows equitable funding of system improvements; some resistance by development community
Developer Contributions ^(3, 4, 5)	Good	In-place	Development may support facilities that provide direct access; not likely to fund general system needs
Local Improvement Districts ⁽⁴⁾	Good	Difficult	Good for local access assessments for specific needs (e.g. sidewalks in commercial area); not good for mitigating through volumes
Bond Financing ⁽¹⁻⁵⁾	Good	Moderate	Contrary to “pay-as-you-go” policy; may be little public acceptance if considered region wide bond measure. Limited by City’s bond rating.
State and Federal Grants ⁽²⁻⁵⁾	Good in the small City Program; Will become more competitive once over \$5000 pop.	Fair	City has had some success in obtaining funds. Once the City has their comprehensive plan approved they will also be eligible for more grants including Federal.
Capital Facilities District ^(2, 5)	Good	Difficult	Would require approval by Council

Potential use of funds:

- ¹ Operations & Maintenance
- ² Capital Projects
- ³ Capacity adding projects (traffic mitigation)
- ⁴ Road improvement
- ⁵ Safety

Plan Administration

Funding Matrix

Table 0-12 presents the recommended improvements, their estimated cost, and the timeframe in which they would be constructed, along with a suggested funding source. Future detail for each project will be developed as part of the annual TIP process. This section summarizes concurrency for the City to use in administering the comprehensive transportation plan.

Concurrency

Legislative Requirement

The GMA requires that each city and county incorporate a Concurrency Management System (CMS) into their comprehensive plan transportation element. A CMS is a policy to determine whether adequate public facilities are available to serve new developments.

“Local jurisdictions must adopt and enforce ordinances which prohibit development approval if the development causes the level of service on a transportation facility to decline below standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development.” (RCW 36.70A.070) The city of Black Diamond adopted a robust concurrency ordinance meeting these requirements on December 2015 by Ordinance 15-1070.

The term “concurrent with the development” is defined to mean that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within 6 years of development.

The City’s primary strategy to maintain traffic concurrency is: by the authority of the MPD Development Agreement, the City has placed the construction responsibility of the necessary capacity adding projects on the MPD developer and directly linked the future progress of the development maintaining the traffic LOS.

Other strategies that could be used in order to maintain compliance with concurrency include:

- Increasing roadway capacity or adopting transportation system management (TSM) strategies to accommodate the increase in demand use to development; and
- Adopting TDM strategies, such as increased transit access and rideshare programs, to offset the increase in demand.
- Often it is a combination of improvements and strategies that create the most effective CMS.

CMS Implementation

The GMA also requires cities to formalize a CMS into a process that shows measurable results. The City established a position on concurrency in a Concurrency Policy (T-19), codified in Black Diamond’s adopted Concurrency Management Ordinance, Chapter 11.11 of the Black Diamond Municipal Code. The City’s CMS program is further defined below.

LOS standards and providing adequate funding

The City recommends the following LOS standards:

- Roadway. LOS D for all intersections along SR 169 and LOS C for all other arterials and collectors within the City. The City will evaluate stop-controlled intersections and an individual basis when the LOS standard is exceeded.
- Transit. LOS standard is expressed in terms of a goal to monitor existing transit facilities and to improve transit operations as demand dictates.
- Other. LOS standard is expressed in terms of a goal to provide pedestrian and bicycle facilities throughout the City.

Table 0-12. Transportation Improvement Project – Cost Estimates													Type of Improvement	Potential Funding
From	To	Length (miles)	Total Project Cost	2016	2017	2018	2019	2020	2021	2022-2034				
New Roads														
Annexation Road	Lk Sawyer Rd	Across Roberts Drive south to A2	0.70	\$ 2,900,000		\$ 2,900,000							New street grid capacity	Development
Pipeline Road	SR-169	Lake Sawyer /Black Diamond	1.50	\$ 11,600,000						\$ 11,600,000			New roadway construction	Development
North Connector	SR-169	South to a new neighborhood	0.25	\$ 1,000,000				\$ 1,000,000					New minor arterial connection to SR-169 with signal	Development
Lake Sawyer Road Extension	Lk Sawyer Rd	Annexation Rd	0.50	\$ 1,800,000		\$ 1,800,000							New street grid capacity	Development
Lawson Connector	SR-169	Lawson Street	0.60	\$ 3,200,000			\$ 3,200,000						Construct 36' wide minor arterial roadway	Development
South Connector	Annexation Rd	SR-169	1.50	\$ 7,560,000						\$ 7,560,000			Construct 36' wide minor arterial roadway	Development
Overlays														
General Streets Improvement				\$ 30,000 / year	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000			Short overlays, chip sealing, crack sealing, patch work, addressing minor safety problems	
232nd Avenue SE	SE 288th St	End of Road	0.77	\$ 100,000		\$ 100,000							Chip seal	Grant/Local/Development
Roberts Drive Rehabilitation Phase 2	City Hall	King County Library	0.23	\$ 200,000			\$ 200,000						Grind, patch, replace panels, crack sealing, shoulder reinforcement	Grant/Local
Jones Lake Road	SR-169	Railroad Ave	0.29	\$ 122,000		\$ 122,000							Patching and overlay existing roadway	Grant/Local
288th/224th/216th Chip Seal	SE 312th St	Covington-Sawyer Road	1.46	\$ 129,000		\$ 129,000							Patching and chip sealing existing roadway	Grant/Local
Morgan Creek Neighborhood Roads Preservation			1.19	\$ 97,000				\$ 97,000					Seal coat on existing roadway	Local
Minor Road Improvements														
Roberts Drive Rehabilitation Phase 1	Bruckners Way	City Hall	0.28	\$ 100,000		\$ 100,000							Leveling, overlay, sidewalks, pedestrian lighting and roadway widening	Grant/Local/Development
Roberts Drive Rehabilitation Phase 3	King County Library	SR-169	0.56	\$ 1,700,000				\$ 1,700,000					Widen and overlay, sidewalk, street lighting and stormwater improvements	Grant/Local
Sidewalk Extensions & Bike Lanes				\$ 400,000						\$ 400,000			Sidewalk extensions and roadway widening to add bike lanes	Grant
Traffic Controls														
SR-169/Roberts Drive				\$ 7,777,000				\$ 7,777,000					Roundabout or Signal	Grant/Development
Ravensdale/SR-169 interim intersection				\$ 700,000				\$ 700,000					Roundabout or Signal	Grant/Development
Ravensdale/SR-169				\$ 8,000,000					\$ 8,000,000				Roundabout or Signal	Grant/Development
216th Ave SE/ SE 288th St				\$ 1,400,000						\$ 1,400,000			Roundabout or Signal	Grant/Development
Roberts Drive/Lake Sawyer Rd				\$ 1,000,000				\$ 1,000,000					Roundabout	Development
Roberts Drive/Annexation Rd				\$ 1,000,000					\$ 1,000,000				Roundabout	Development
Lake Sawyer Ext/Annexation Rd				\$ 205,600						\$ 205,600			Roundabout	Development
Sidewalk														

CITY OF BLACK DIAMOND COMPREHENSIVE PLAN

December 2, 2021

King County Housing ADA Improvements (1st Ave)	Baker St	Approx. 250' south of Baker St.	0.10	\$ 155,000	\$ 155,000							Install new sidewalk and curb ramps	Grant
Lawson St. Sidewalk phase 2	6th Ave.	Newcastle Dr.	0.19	\$ 356,000			\$ 76,000	\$ 280,000				Install new 5-foot sidewalk on north side	Grant/Development
Commission Sidewalk	Railroad Ave.	Commission St. behind Museum	0.04	\$ 150,000		\$ 150,000						Install sidewalk, ADA improvements	Grant/Local
Grant/Local TOTALS				\$ 51,831,600	\$ 185,000	\$ 5,331,000	\$ 3,506,000	\$ 8,884,000	\$ 3,730,000	\$ 9,430,000	\$ 20,765,600		

A TIP with a potential funding plan has been prepared regarding the comprehensive plan based on the 2016-2021 TIP. With the installation of the capacity adding projects as identified in Table 0-12 facilities meet the LOS standards based on existing, 6-, and 20-year forecasts. The potential funding plan identifies possible sources for improvements identified in the comprehensive transportation plan.

Monitoring/Analyzing Available Transportation Capacity

The City requires a Traffic Impact Analysis (TIA) for developments that impact the transportation system. A TIA is a specialized study of the impacts a development will have on the surrounding transportation system. It is specifically concerned with the generation, distribution, assignment, and accessibility of traffic to and from the development, and the impact of development traffic on the adjacent roadway system. The City's guidelines for TIAs are similar to those of other communities in western Washington regarding when a TIA is required for a development and the scope of work needed to effectively analyze the impacts of site generated traffic. Generally, if a development adds 10 or more vehicles in the PM peak hour a TIA is required. If deemed necessary by the City, the TIA may also address transit and other modes for impact assessment. The City uses the adopted LOS standards as guidelines for assessing concurrency and mitigation.

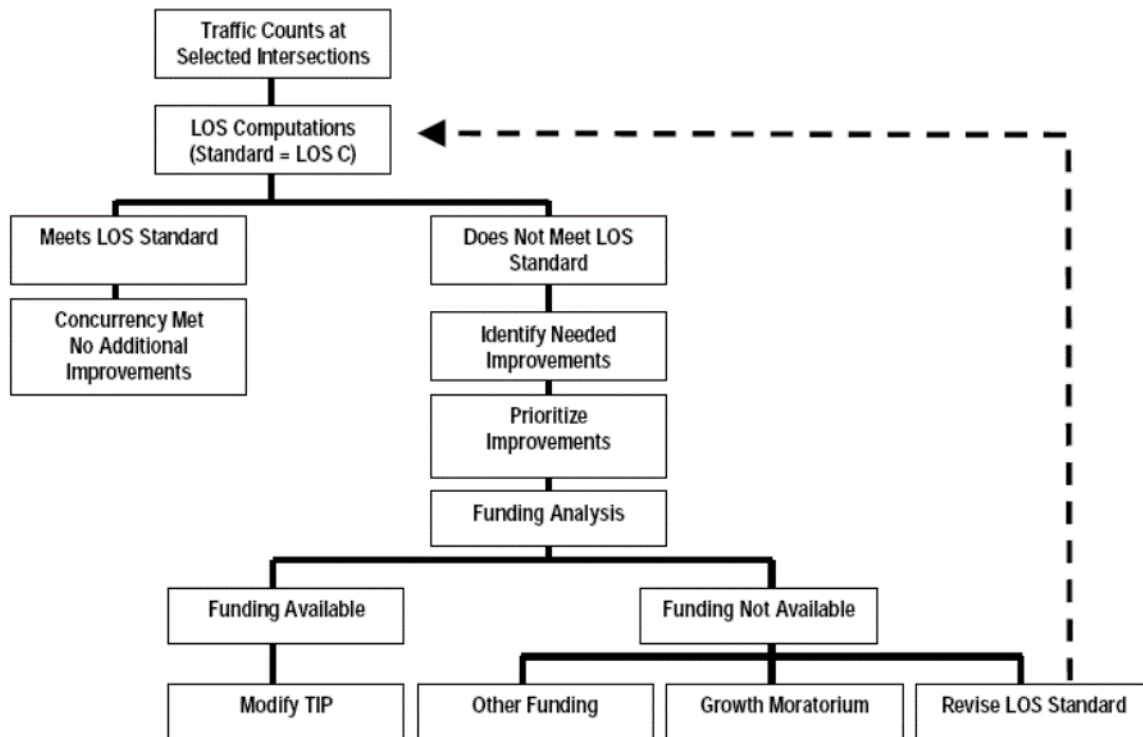
A system to monitor concurrency was developed and is illustrated in Figure 0-1. As noted in the chart, there are four options for the City to consider:

- Future Considerations. In the future as the MPD development agreements near expiration the City will need to begin to look for other funding sources and strategies to meet the future traffic needs post MPD development. Look for other funding sources, such as dedicating the second 1/4 of 1 percent of the Real Estate Excise Tax for street projects.
- Reassess LOS standards. GMA allows a community to change LOS standards annually. Any changes to LOS standards should be done in connection with annual TIP reviews.
- Reassess Land Use. GMA requires that if the funding for capital improvements (such as roads) cannot be met, the land use or levels of development within the plan should be re-assessed.
- Growth Moratorium. Per GMA requirements. If funding cannot be met, and the LOS standard unchangeable, then GMA requires development to be stopped until either issue can be resolved.

Analyzing External Influences on Concurrency Management System.

The City's LOS standards will also be used to evaluate impacts to the transportation system created by development outside the City. The City's annual TIP development process will evaluate if concurrency standards have been exceeded and identify the improvements needed to maintain the City's standards. The City should seek appropriate funding sources to mitigate through traffic impacts.

Figure 0-1: Concurrency Management System



Transportation Plan

The Black Diamond Comprehensive Transportation Plan emphasizes that the transportation system should be designed to provide safe and efficient multi-modal circulation consistent with the City’s vision as an active, beautiful and friendly community based on a rich historic heritage and exceptional natural setting, with a small-town atmosphere. This circulation network will facilitate the transportation needs of retail, industrial/Business Park, office, tourist and local cottage industries as well as city residents including a system of trails, bikeways and greenbelts connecting housing, shopping and employment with nearby regional parks and recreational facilities.

The City plans to continue developing its transportation network as a grid system. The Plan will use a grid of similar smaller roads as well as linking existing and planned neighborhoods to accommodate future growth. Street construction standards are to be used to reinforce the transportation goals and policies.

The plan's policy guidance includes using the existing transportation system efficiently and encouraging transportation alternatives, such as transit, HOV use, and pedestrian and bicycle facilities. Cooperation between affected jurisdictions (the City, State of Washington, King County and the Puget Sound Regional Council) in planning for state highways and county roads is also supported by City policies. The presence of both state and county roads as the primary arterial system requires coordination with King County and Washington State in the planning of these roads.

Alternative Modes

The Comprehensive Plan identifies that a comprehensive network of non-motorized facilities, including trails, sidewalks, and bicycle facilities needs to be developed. These facilities would enhance non-motorized mobility options and reduce automobile dependency. Similarly, an off-street parking plan for Old Town, a park-and-ride for City residents, and visitor parking to serve bicyclists who come to the City to ride on weekends are identified as desired elements of the plan.

The Lawson Hills and Villages Master Planned Developments will both include extensive new trail networks. Lawson Hills will add 4.5 miles of internal multi-purpose trails, sidewalks and forest paths. The Villages will add 12 more miles of trails including connections to off-site locations.

Funding Strategies

To provide for the necessary transportation facilities, the plan identifies an ongoing program of transportation facility planning and private MPD development funded projects by the authority of a development agreement, developer contributions, and public funds. The plan identifies that development should cover the cost of the impact of development on transportation system.

Transportation Improvement Program

Road improvement projects for existing deficiencies are identified for the short term (2010 to 2016) as required by GMA. New roads are identified for both the short-term and the long-term (2017 to 2022) for better circulation for vehicles. The road system identified in the attached map figures forms the basis for the long-term motorized transportation improvements. Non-motorized transportation improvements will be identified in the City's update to the trails plan.

The improvements proposed for the short and long term are intended to mitigate the impacts of anticipated traffic growth. Construction of additional roads identified in the proposed Arterial and Collector System Plan will serve to divert and spread traffic flows.

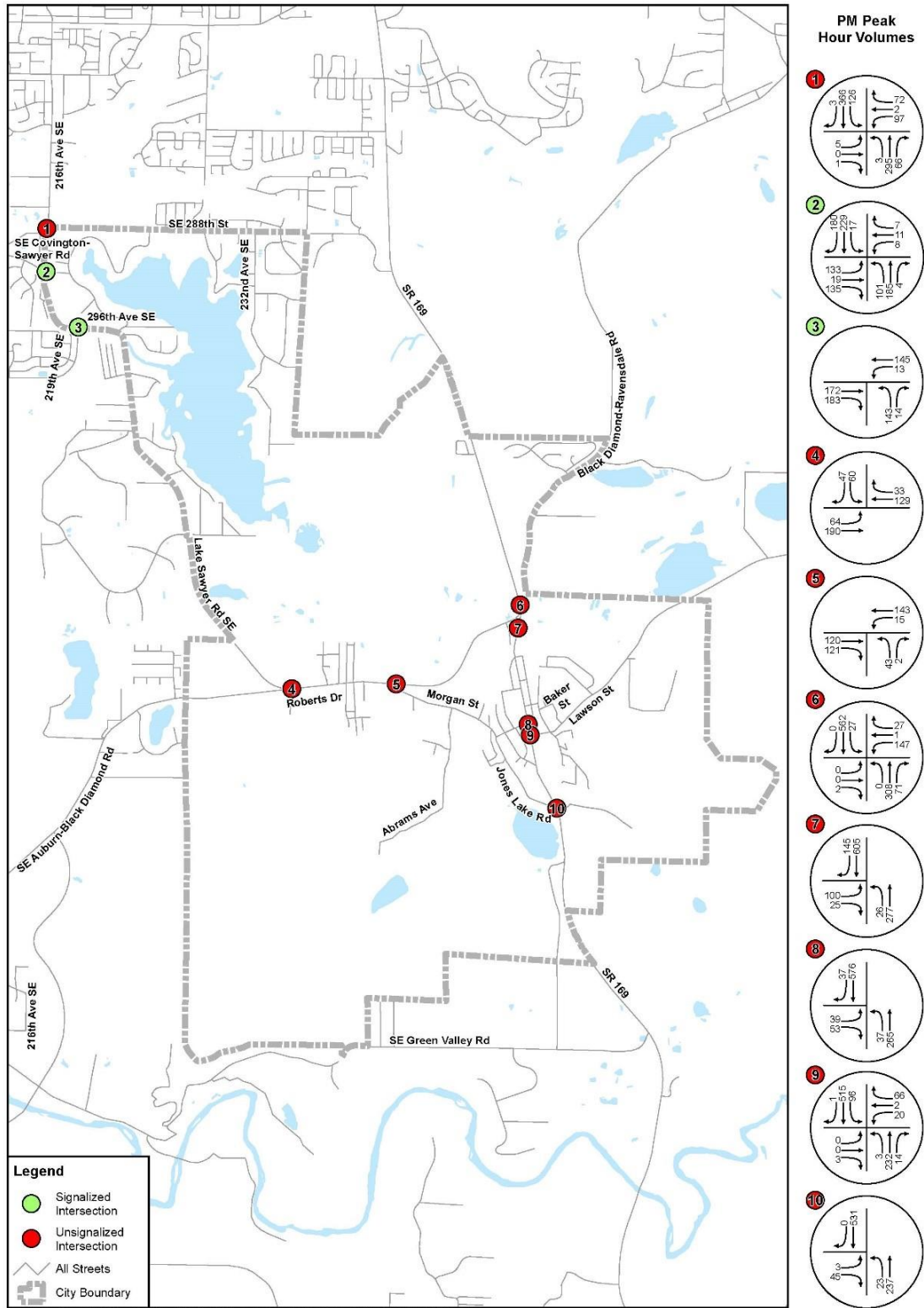
Transportation and Land Use Element Coordination

The Black Diamond Comprehensive Plan Transportation and Land Use Elements are intended to work together to maintain the City's unique character in the face of increasing regional traffic. Surrounding King County land uses and other regional land use patterns may produce adverse effects on City traffic. Land use patterns that perpetuate automobile dependency would be expected to increase traffic in the City. It should be noted that an isolated change of land uses within the City may not, by itself, be expected to produce improved City-wide mobility.

Transportation Facilities and LOS Standards Coordination

Intergovernmental coordination is essential for the cost-effective provision of transportation services. The City does not possess the resources nor is it fiscally responsible for addressing all the of the transportation circulation system needs that might be identified through transportation planning. The City has reviewed the plans of the County and State Department of Transportation and has assessed the impact of their plan on the transportation facilities in the City. The LOS standards and proposed transportation improvements to be adopted by this element are not inconsistent with the LOS standards or plans of other jurisdictions. In addition, the City is committed to actively seek financial resources necessary to achieve the goals of the Comprehensive Transportation Plan. The City is an active participant (Mayor Benson has been the chair for two years) in the South County Area Transportation Board, SCATB, that serves as a South King County forum for information sharing, consensus building, and coordinating in order to resolve transportation issues and promote transportation programs that benefit the south King County area. Additionally, the City of Black Diamond joined SEAL-TC, South East Area Legislative Transportation Coalition which was formed by Covington, Maple Valley and Black Diamond chamber of commerce. This Coalition has a mission to improve access to, from and through our communities by way of public-private collaboration, legislative advocacy and commitment to our region.

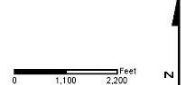
The City's existing intergovernmental coordination efforts could be further expanded through the establishment of a coalition of cities in both King and Pierce counties, focused on developing corridor-wide transportation solutions for SR 169. This group could work in partnership with WSDOT to identify forecast safety and operational deficiencies as well as possible solutions. The products of these efforts could be used to formulate an intergovernmental strategy to pursue joint state and/or grant funding and equitable distribution fo developer-provided funds to all affected jurisdictions.



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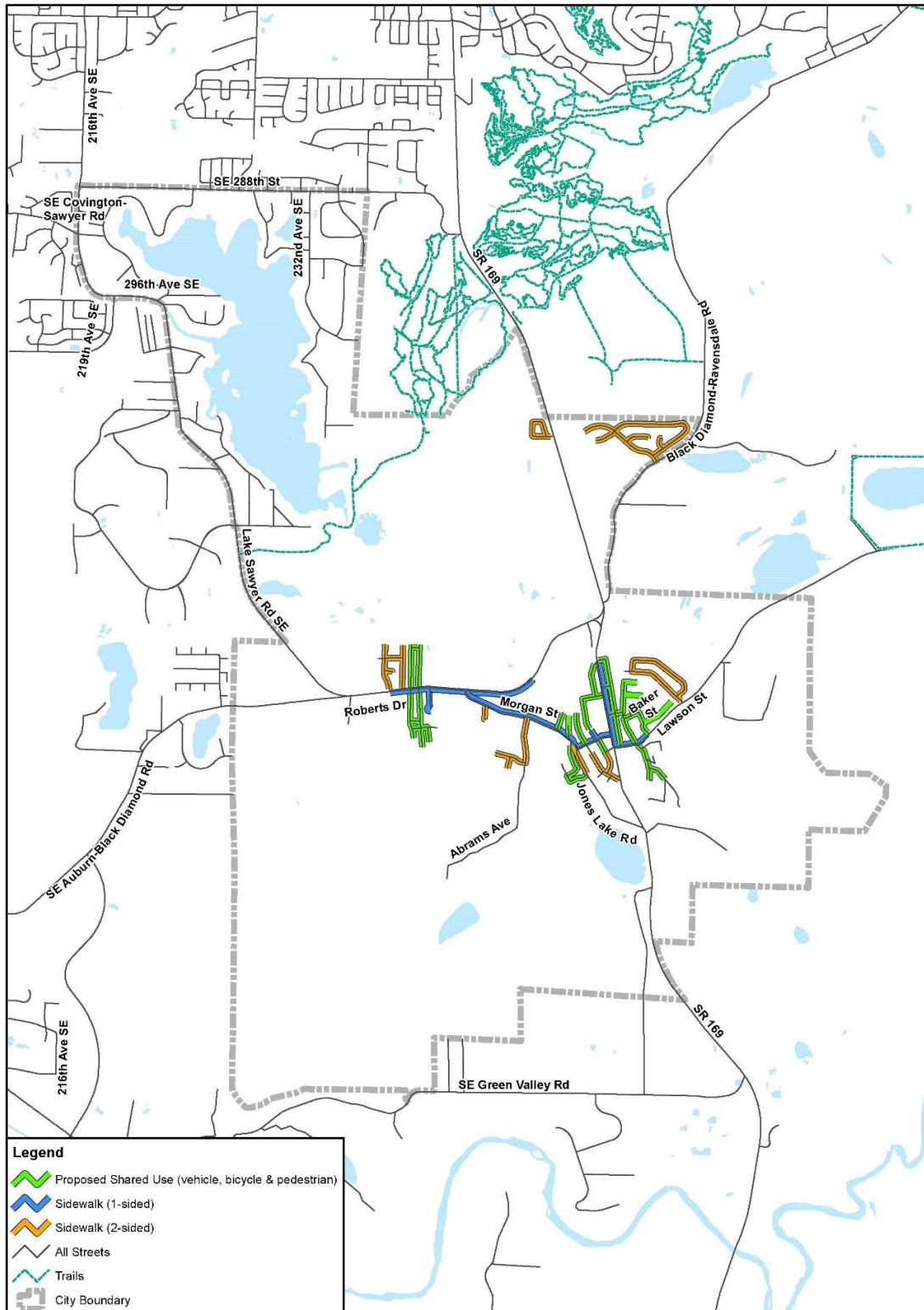


GIS Data: City of Black Diamond & King County
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Existing Road Network & PM Peak Traffic Volumes
 Comprehensive Plan Update
 City of Black Diamond
 April 2018

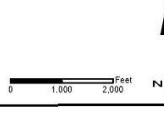
Figure 7-1



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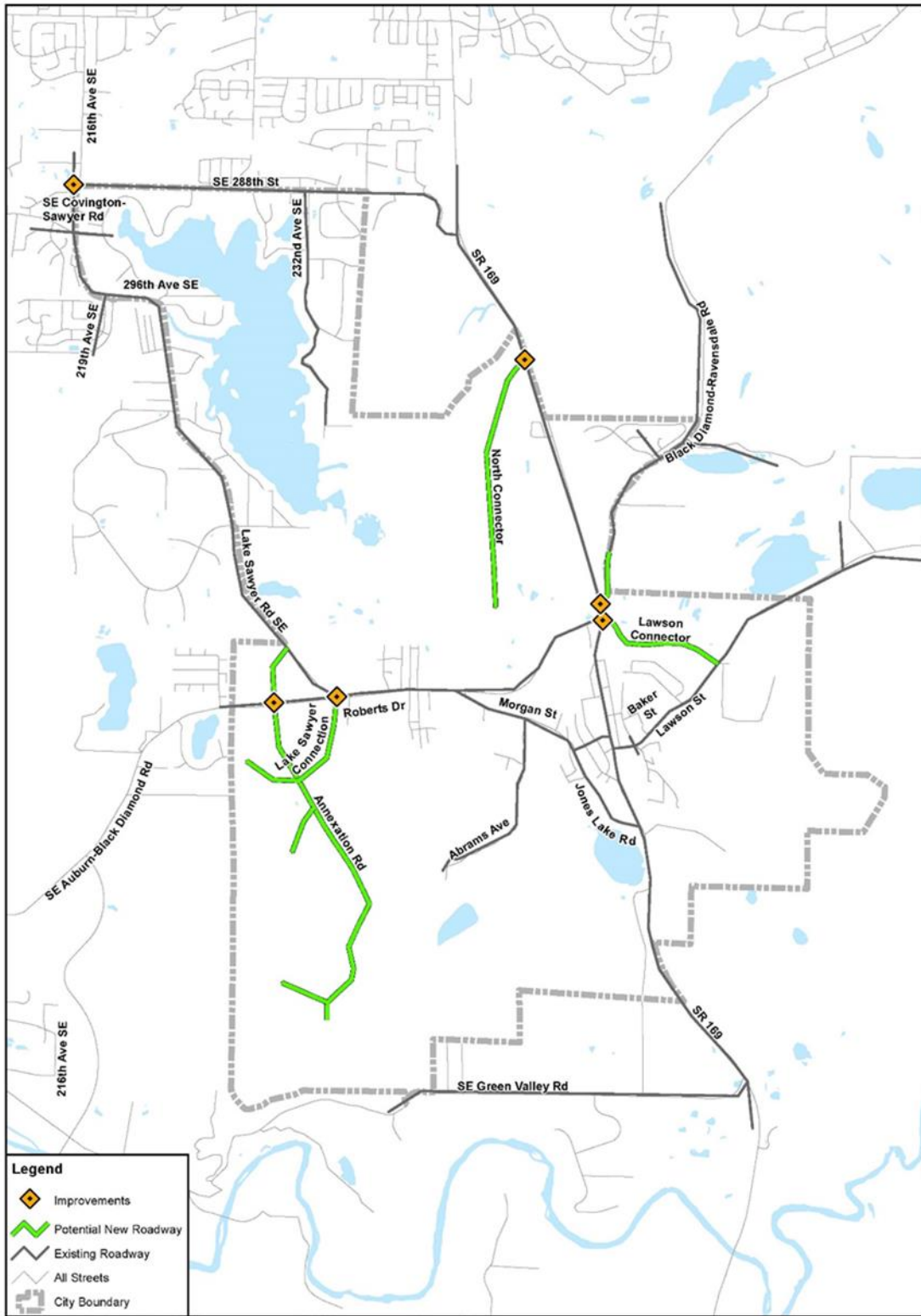
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Existing Non-Motorized Transportation Network
 Comprehensive Plan Update
 City of Black Diamond
 April 2018

Figure



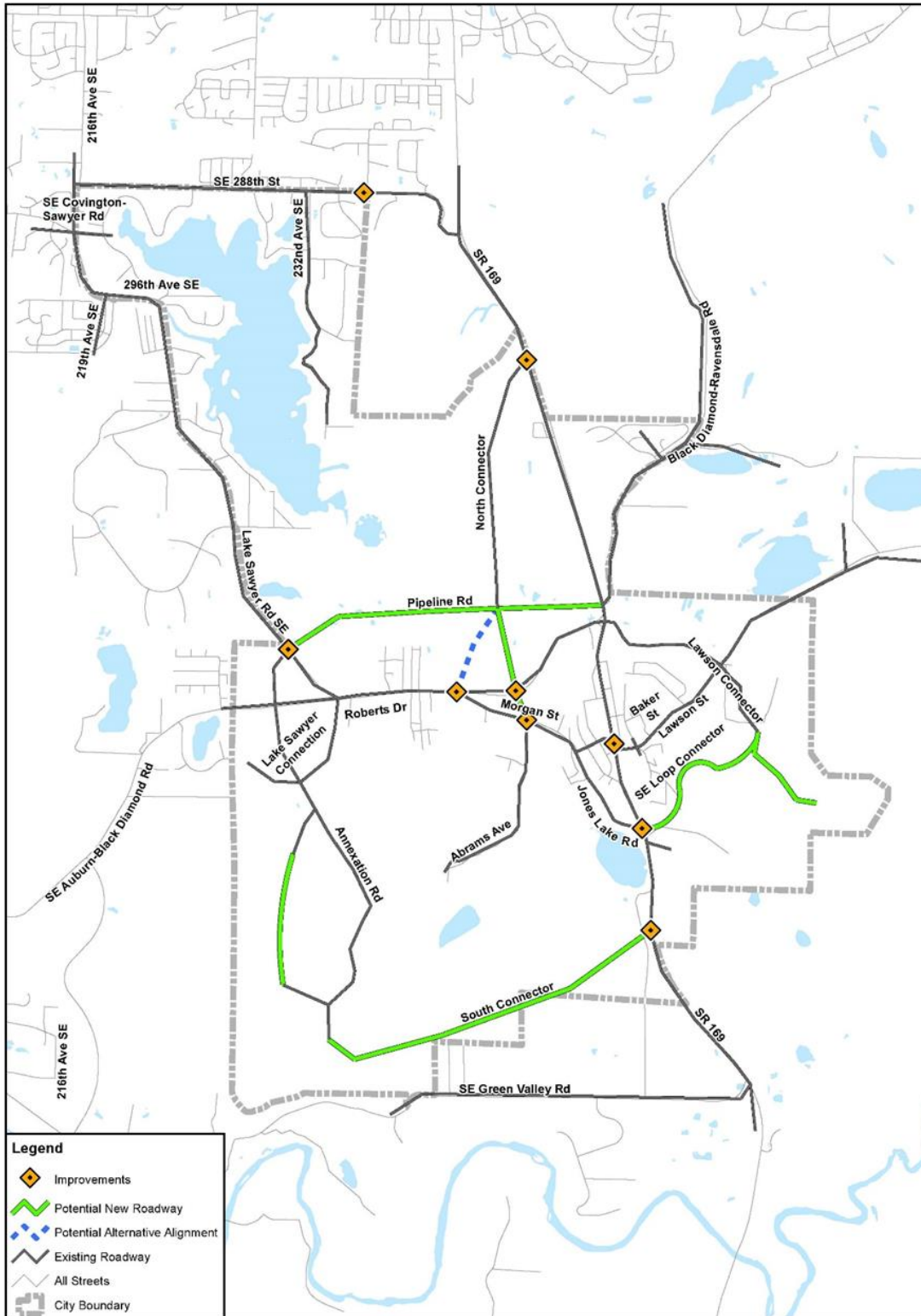
Legend

- Improvements
- Potential New Roadway
- Existing Roadway
- All Streets
- City Boundary

GIS Base: City of Black Diamond & King County
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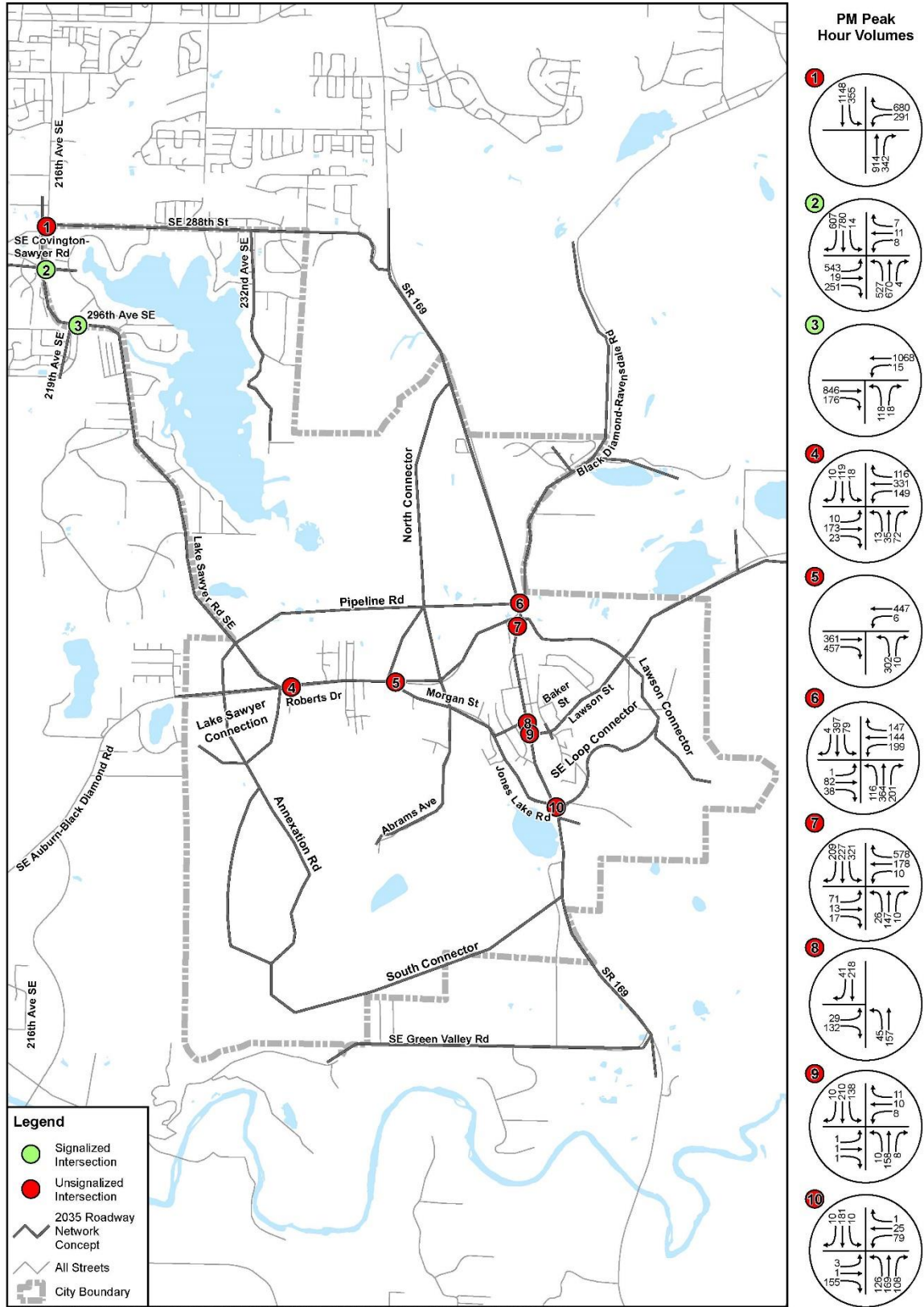


Transportation Improvements (2015-2021)
 Comprehensive Plan Update
 City of Black Diamond
 April 2018



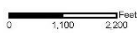
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- Improvements
- Potential New Roadway
- Potential Alternative Alignment
- Existing Roadway
- All Streets
- City Boundary



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2035 Peak Hour Traffic Volumes and Roadway Network
 Comprehensive Plan Update
 City of Black Diamond
 April 2018

Figure

7-7