



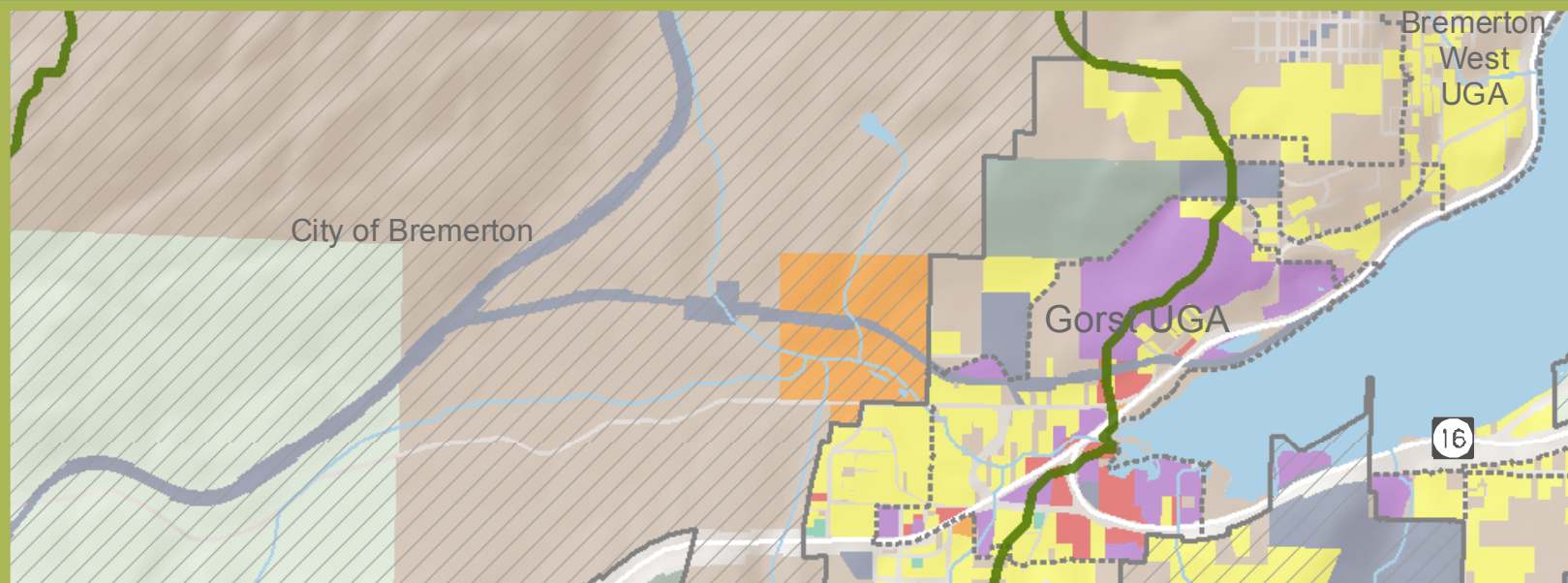
KITSAP COUNTY



CITY OF BREMERTON

Volume 2: Draft Gorst Planned Action Environmental Impact Statement

June 2013



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VOLUME 2: GORST PLANNED ACTION ENVIRONMENTAL IMPACT STATEMENT

Part of a three-volume plan for Gorst

Volume 1: Gorst Creek Watershed Characterization & Framework Plan (under separate cover)

Volume 2: Gorst Planned Action Environmental Impact Statement (this document)

Volume 3: Gorst Subarea Plan (under separate cover)

June 2013

Prepared for

City of Bremerton

Department of Community Development

Bremerton, Washington

Prepared by

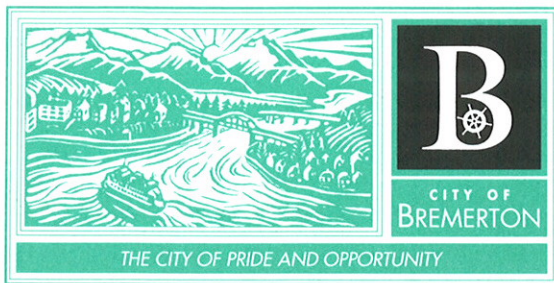


Seattle, Washington

This Draft Environmental Impact Statement (EIS) has been prepared in compliance with the State Environmental Policy Act (SEPA) of 1971, as amended (Chapter 43.21C, Revised Code of Washington [RCW]); the SEPA Rules, effective April 4, 1984, as amended (Chapter 197-11, Washington Administrative Code [WAC]); and Bremerton SEPA Rules (Bremerton Municipal Code [BMC]) Chapter 20.04 State Environmental Policy Act, which implement SEPA.

This Draft EIS has been prepared for the purpose of review and comment by members of the public, stakeholder groups, and federal, state, and local agencies. Preparation of this document is the responsibility of the City of Bremerton's Department of Community Development in consultation with Kitsap County. This Draft EIS is not an authorization for an action, nor does it constitute a decision or recommendation for an action; in its final form, it will accompany the Proposed Action and will be considered in making the final decision for the Proposed Action.

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Department of Community Development

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June 10, 2013

Subject: Gorst Draft Planned Action Environmental Impact Statement (EIS)

Dear Reader:

The City of Bremerton and Kitsap County, in partnership with other state, federal, and tribal agencies, has developed a 20-year plan for the future of Gorst. The purpose of this cooperative planning effort has been to develop a land use plan that is based on the ecological values and functions of the Gorst Creek Watershed in southeast Kitsap County. The preparation of a plan of this nature required significant up-front environmental analysis and careful consideration of the effects that land use decisions would have on the environment.

There are three documents that have been prepared for Gorst, and though they can be read separately, each document relies on the information contained in the others:

Volume 1. Gorst Creek Watershed Characterization & Framework Plan (under separate cover)

Based on the results of a Watershed Characterization Study prepared in 2012 studying water flow and habitat, the Gorst Creek Watershed Characterization & Framework Plan guides water quality, habitat, and land use plans and activities across the 6,000-acre watershed. The Gorst Creek Watershed Characterization & Framework Plan provides a common set of goals, policies, and best management practices (BMPs) intended for adoption and implementation by the City of Bremerton, which governs nearly two-thirds of the watershed in its city limits, and by Kitsap County, which governs unincorporated lands comprising over one-third of the watershed.

Volume 2. Gorst Planned Action EIS (this document)

The Gorst EIS is an informational document that provides the City of Bremerton, Kitsap County, members of the public, and other agencies with environmental information, an evaluation of alternatives, and potential mitigation measures to minimize environmental impacts. The EIS allows the City of Bremerton and Kitsap County to consider designating a planned action for some or all of the Gorst Urban Growth Area (UGA). Designating a planned action streamlines environmental review for development proposals consistent with EIS mitigation measures that are adopted in a planned action ordinance.

Volume 3. Gorst Subarea Plan (under separate cover)

The Gorst Subarea Plan is a comprehensive 20-year plan that establishes the general patterns for future land use, transportation and other infrastructure needs in Gorst. The purpose of this plan is to provide greater detail, guidance and predictability to future development within the Gorst UGA, while also protecting the environment. The UGA is currently under the jurisdiction of Kitsap County and assigned to the City of Bremerton as an annexation area, and the Subarea Plan will be adopted jointly by both jurisdictions. The Gorst Subarea Plan and implementing zoning are anticipated to serve as pre-annexation planning and zoning pursuant to RCW 35.13.177.

Draft EIS Alternatives and Environment Topics

The watershed land use pattern is expected to remain similar to adopted plans, but the UGA land use pattern is expected to change to match the following alternative visions:

- Alternative 1 (No Action) – Gorst is a relatively small highway-oriented commercial and industrial center.
- Alternative 2 – Gorst is a well-designed regional commercial center.
- Alternative 3 – Gorst becomes a complete community.

For each alternative, the Draft EIS evaluates current conditions, potential impacts, and mitigation measures for the following topics: Natural Environment (geology/soils, water resources, air quality, and plants and animals),

Noise, Hazardous Materials, Land Use Patterns, Socioeconomics, Aesthetics, Cultural Resources, Transportation, Public Services and Utilities, and Relationship to Plans and Policies.

While the Watershed Characterization & Framework Plan will provide for enhanced environmental protection and restoration throughout the watershed and UGA, the Gorst Subarea Plan would allow increased redevelopment of the Gorst UGA to a more intensive commercial, residential, or mixed use character consistent with the vision of the alternatives. The key environmental issues facing decision makers are potential increases in growth and associated air and greenhouse gas (GHG) emissions, conversion of land use patterns, changes to visual character, need for stormwater and transportation infrastructure investments, and increased demand for public services and utilities.

Public Review

The City of Bremerton is requesting comments from citizens, agencies, tribes, and all interested parties on the Draft EIS as well as associated plans from **June 10, 2013 to July 24, 2013, by 5:00 PM**. All written comments should be directed to:

Allison Daniels, City Planner
City of Bremerton Department of Community Development
345 6th Street, Suite 600, Bremerton, WA 98337
Allison.Daniels@ci.bremerton.wa.us 360-473-5845

The City of Bremerton and Kitsap County will also hold the following meetings during the comment period at which comments may be submitted.

Gorst Draft Plans & EIS Introduction

Kitsap County Planning Commission
Date: June 18, 2013
Location: Kitsap County Administration Building,
Commissioner's Chambers, 619 Division Street,
Port Orchard, WA 98366
Time: 9:00 am

Gorst Draft Plans & EIS Introduction

City of Bremerton Planning Commission
Date: June 18, 2013
Location: First Floor Chambers
Norm Dicks Government Center
345 6th Street, Bremerton, WA 98337
Time: 5:30 pm

Gorst Preferred Alternative Community Workshop

Date: June 20, 2013
Location: Family Worship Center at 3649 W. Frontage Road, Port Orchard, WA 98367 (in Gorst)
Time: 5:00 PM - 7:00 pm

Preferred Alternative Direction

Kitsap County Planning Commission
Date: July 16, 2013
Location: Kitsap County Administration Building,
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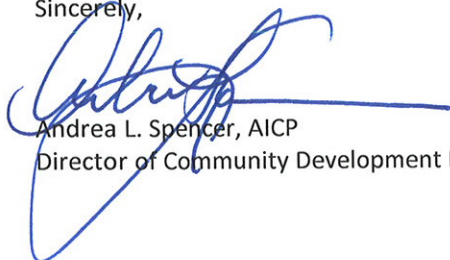
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Responses to comments on the Draft EIS will be presented in a Final EIS together with clarifications and corrections to the Draft EIS. It is anticipated the Final EIS will be issued in fall 2013.

You may review the City of Bremerton's website for more information at www.gorstwatershed.com. If you desire clarification or have questions please contact Allison Daniels at Allison.Daniels@ci.bremerton.wa.us or 360-473-5845.

Sincerely,



Andrea L. Spencer, AICP
Director of Community Development Department and SEPA Responsible Official

FACT SHEET

Project Title

Gorst Creek Watershed Characterization & Framework Plan, Gorst Subarea Plan, and Gorst Planned Action

Proposed Action and Alternatives

The City of Bremerton, in partnership with Kitsap County and other state, federal, and tribal agencies, is planning the future of the Gorst Creek Watershed and Gorst UGA. These coordinated efforts are intended to:

- Make Gorst a place where people want to live, shop and recreate,
- Protect water quality, habitat and fish while fostering economic development,
- Identify areas for development, restoration and protection based on science,
- Adopt a land use plan for Gorst, and
- Implement a long-range capital improvement plan to provide for future utility services, public services and transportation needs.

Products of the planning effort to date include a Draft Gorst Creek Watershed Characterization & Framework Plan for the 6,000-acre watershed as a whole and a Draft Gorst Subarea Plan for the 335-acre Gorst UGA. This Draft Gorst Planned Action Environmental Impact Statement (Draft EIS) evaluates possible environmental impacts of the draft plans and alternatives.

In addition to these plans and development regulations, the City of Bremerton and Kitsap County are considering designating a planned action for some or all of the Gorst UGA. A planned action provides more detailed environmental analysis during an area-wide planning stage rather than at the project permit review stage. Designating a planned action streamlines environmental review for development proposals consistent with EIS mitigation measures that are adopted in a planned action ordinance.

To illustrate a range of possible futures in Gorst, the following alternatives are evaluated in the Draft Gorst Subarea Plan and this Draft EIS:

- Alternative 1 (No Action) – Gorst is a relatively small highway-oriented commercial and industrial center.
- Alternative 2 – Gorst is a well-designed regional commercial center.
- Alternative 3 – Gorst becomes a complete community.

Alternative 1 is a required alternative under the SEPA. It represents a continuation of the current Comprehensive Plan and regulations. Action alternatives represent a range of land use, growth, policies, and regulations and were developed as part of a public outreach process. These alternatives are discussed more fully in Chapter 2.

Proponent

The City of Bremerton and Kitsap County

Tentative Date of Implementation

December 2013

Lead Agency

City of Bremerton

Responsible Official

Andrea L. Spencer, AICP
Director, Department of Community Development
City of Bremerton

Contact Person

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City of Bremerton
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Allison.Daniels@ci.bremerton.wa.us
360-473-5845

Licenses or Permits Required

Adoption of a Gorst Creek Watershed Characterization & Framework Plan, Gorst Subarea Plan, and Planned Action Ordinance by the City of Bremerton City Council and Kitsap County Board of County Commissioners (BOCC).

Recommendations to the City of Bremerton City Council and BOCC will be made by the City of Bremerton and Kitsap County Planning Commissions, respectively.

In addition, the Washington State Department of Commerce reviews proposed comprehensive plan and development regulation amendments during a 60-day review period prior to adoption. The Puget Sound Regional Council (PSRC) reviews comprehensive plans amendments for consistency with regional plans.

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Draft EIS Date of Issuance

June 10, 2013

Draft EIS Comment Due Date

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Public Meeting Opportunities

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Date: July 16, 2013
Location: First Floor Chambers
Norm Dicks Government Center
345 6th Street, Bremerton, WA 98337
Time: 5:30 pm

Date of Final Action

December 2013

Prior Environmental Review

An inventory was developed for the study area in August 2011. A Watershed Characterization Study has been prepared in conjunction with the Washington State Departments of Ecology (Ecology) and Fish and Wildlife (WDFW) to evaluate water quality and habitat related issues as they relate to land use planning. These documents are available at the City of Bremerton's website www.gorstwatershed.com.

The City of Bremerton prepared the South Kitsap Industrial Area (SKIA) Subarea Plan and Planned Action EIS in 2012. A small portion of the SKIA area lies in the watershed.

In addition, Kitsap County recently completed the Kitsap County UGA Sizing and Composition Remand Final EIS (August 2012) which addressed the Gorst UGA and other UGAs. It contains analysis relevant to the "No Action" alternative.

Where appropriate, information from these prior environmental documents was used in the preparation of this EIS.

Location of Background Data

You may review the City of Bremerton's website for more information at www.gorstwatershed.com. If you desire clarification or have questions please contact Allison Daniels at Allison.Daniels@ci.bremerton.wa.us or 360-473-5845.

Draft EIS Purchase Price

This Draft EIS is available for review at Bremerton City Hall: 345 6th Street, Suite 600, Bremerton, WA 98337. The Draft EIS is posted on the City of Bremerton's website at www.gorstwatershed.com. Compact disks are available for purchase at Bremerton City Hall. Cost at the time of this writing is \$2.00.

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Acronyms

ACM	asbestos containing materials
ALS	advanced life support
ASTM	American Society for Testing and Materials
BLS	basic life support
BMC	Bremerton Municipal Code
BMPs	best management practices
BNSF	Burlington Northern-Santa Fe Railroad
BOCC	Board of County Commissioners
BPA	Bonneville Power Administration
CAFÉ	Corporate Average Fuel Economy
CAO	Critical Areas Ordinance
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CESQG	Conditionally Exempt Small Quantity Generator
CFP	Capital Facilities Plan
CFP	Capital Facilities Plan
cfs	cubic feet per second
cfs	cubic feet per second
CLCSL	Confirmed and Suspected Contaminated Sites List
CNG	Cascade Natural Gas Corporation
CO	carbon monoxide
CO2	carbon dioxide
COBD	City of Bainbridge Island Disposal
County	Kitsap County
CPP	Countywide Planning Policies
CTR	Commute Trip Reduction
CUL	city utility lands
CWA	Clean Water Act
DAHP	Department of Archaeology & Historic Preservation
dB	decibels
dba	A-weighted
DPS	Distinct Population Segment
Draft EIS	Draft Environmental Impact Statement
Ecology	Department of Ecology
EDNA	environmental classification for noise abatement
EDR	Environmental Data Resources
EDU	education employment
EMS	emergency medical services
EPA	U.S. Environmental Protection Agency
ESU	Evolutionarily Significant Unit
FC	freeway corridor
FCC	Federal Communications Commission

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FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FINDS	Facility Index System;
FIRES	financial, insurance, and real estate
FTE_U	Full-time equivalent college
GHG	greenhouse gas
GMA	Growth Management Act
HOV	high occupancy vehicle
HRU	hydrologic response units
HSL	Hazardous Sites List
HSPF	Hydrological Simulation Program - Fortran
HSS	Highway of Statewide Significance
HUC	Hydrologic Unit Code
ICR	Independent Cleanup Report
JARPA	Joint Aquatic Resources Permit Application
KCC	Kitsap County Code
KCHD	Kitsap County Health District
KCPW	Kitsap County Public Works
KRCC	Kitsap Regional Coordinating Council
KRLS	Kitsap Regional Library System
kV	kilovolt
lbs	pounds
Ldn	Day-Night Noise Level
LED	light emitting diode
Leq	equivalent noise level
LID	low impact development
Lmax	maximum noise level
Lmin	minimum noise level
Ln	statistical descriptor
LUST	Leaking Underground Storage Tank
mPa	micro-Pascals
MTCA	Model Toxics Control Act
NAAQS	National Ambient Air Quality Standards
NFA	No Further Action
NHB	non-home-based trips
NHS	National Highway System
NO2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
Nox	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OFM	Office of Financial Management
OSPI	Office of the Superintendent of Public Instruction
OVTS	Olympic View Transfer Station
PCB	Polychlorinated Biphenyls

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PM10	Particulate matter less than 10 micrometers in size
PM2.5	Particulate matter less than 2.5 micrometers in size
ppm	parts per million
PROS	Parks, Recreation, and Open Space
PSCAA	Puget Sound Clean Air Agency
PSE	Puget Sound Energy
PSNERP	Puget Sound Nearshore Ecosystem Restoration Project
PSNS	Puget Sound Naval Shipyard
PSRC	Puget Sound Regional Council
RAGF	Olalla Recycling & Garbage Facility
RCA	Resource Conservation and Recovery Act Non-Generator
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
REET	Real Estate Excise Tax
RTP	Regional Transportation Plan
SCOOT	Smart Commuter Option of Today
Sea-Tac	Seattle-Tacoma
SEPA	State Environmental Policy Act
SIP	State Implementation Plan
SKFR	South Kitsap Fire and Rescue
SKIA	South Kitsap Industrial Area
SKSD	South Kitsap School District
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO2	sulfur dioxide
SOV	single occupancy vehicle
SPCC	Spill Prevention Control and Countermeasure
STC	Sound Transmission Class
SUSTAIN	System for Urban Stormwater Treatment and Analysis Integration
SWMMWW	Stormwater Management Manual for Western Washington
SWOT	strengths, weaknesses, opportunities, and threats
SWRCY	Solid Waste and Recycling
TAZ	Transportation Analysis Zones
TCPs	Traditional Cultural Properties
TDM	Travel Demand Management
TEA-21	Transportation Equality Act for the 21-Century
THPO	Tribal Historic Preservation Officers
TIA	total impervious surface
TIP	Transportation Improvement Program
TOD	Transit Oriented Development
UGA	Urban Growth Area
UGAMA	urban growth area management agreements
USDA	United States Department of Agriculture
UST	Underground Storage Tanks
V/C	Volume-to-Capacity Ratio
VCP	Voluntary Cleanup Program

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VMT	vehicle miles traveled
VOCs	volatile organic compounds
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WHR	Washington Heritage Register
WISAARD	Washington Information System for Architectural and Archaeological Records Database
WMWI	Waste Management Washington Incorporated
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation
WSF	Washington State Ferries
WTP	Washington Transportation Plan
WUTC	Washington Utilities and Transportation Commission

1.0 SUMMARY

1.1 Purpose of Proposed Action

The City of Bremerton, in partnership with Kitsap County and other state, federal, and tribal agencies, is planning the future of the Gorst Creek Watershed and UGA. These coordinated efforts are intended to:

- Make Gorst a place where people want to live, shop and recreate,
- Protect water quality, habitat and fish while fostering economic development,
- Identify areas for development, restoration and protection based on science,
- Adopt a land use plan for Gorst, and
- Implement a long-range capital improvement plan to provide for future utility services, public services and transportation needs.

Products of the planning effort to date include a Draft Gorst Creek Watershed Characterization & Framework Plan for the 6,000-acre watershed as a whole and a Draft Gorst Subarea Plan for the Gorst UGA. This Draft EIS evaluates possible environmental impacts of the draft plans and alternatives. In addition to these plans and development regulations, the City of Bremerton and Kitsap County are considering designating a planned action for some or all of the Gorst UGA. A planned action provides more detailed environmental analysis during an area-wide planning stage rather than at the project permit review stage. Designating a planned action streamlines environmental review for development proposals consistent with EIS mitigation measures that are adopted in a planned action ordinance.

To illustrate a range of possible futures in Gorst, the following alternatives are evaluated in the Draft Gorst Subarea Plan and this Draft EIS:

- Alternative 1 (No Action) – Gorst is a relatively small highway-oriented commercial and industrial center
- Alternative 2 – Gorst is a well-designed regional commercial center
- Alternative 3 – Gorst becomes a complete community

Alternative 1 is a required alternative under the SEPA. It represents a continuation of the current Comprehensive Plan and regulations. Action alternatives represent a range of land use, growth, policies, and regulations and were developed as part of a public outreach process. These alternatives are discussed more fully in this Chapter.

1.2 State Environmental Policy Act Process

SEPA (Chapter 43.21C RCW) requires government officials to consider the environmental consequences of actions they are about to take and better or less damaging ways to accomplish these proposals. The officials must consider whether the proposal will have a probable significant adverse environmental impact on the natural and built environment.

The Draft EIS is an informational document that provides the City of Bremerton, Kitsap County, members of the public, and other agencies with environmental information, an evaluation of alternatives, and potential mitigation measures to minimize environmental impacts. This Draft EIS is being made available to the City of Bremerton and Kitsap County decision makers, other agencies, and the public for review and comment (see Fact Sheet). Following the comment period, the City of Bremerton, in consultation with Kitsap County, will prepare a Final EIS that responds to comments and describes a preferred alternative that may be similar to a Draft EIS alternative or is in the range of studied alternatives.

The Draft EIS considers potential environmental impacts in Gorst Creek Watershed and Gorst UGA study area at a programmatic level of detail. The adoption of comprehensive plans or other long-range planning activities such as a subarea plan is classified by SEPA as a nonproject (i.e., programmatic) action. A nonproject action is defined as an action that is broader than a single site-specific project, and involves decisions on policies, plans, and programs. An EIS for a nonproject proposal does not require site-specific analyses; instead, the EIS discusses impacts and alternatives appropriate to the scope of the nonproject proposal and to the level of planning for the proposal (WAC 197-11-442). The process used to determine the scope of this EIS is found in Appendix A *Scoping Summary*.

Further, portions of the study area that are considered for a planned action are highlighted, and sufficient analysis and mitigation measures are proposed to allow future project expedited environmental review when consistent with planned action ordinance thresholds and mitigation measures.

Planned Action

The City of Bremerton and Kitsap County propose to designate the Gorst UGA as a planned action, pursuant to SEPA and implementing rules.¹ According to WAC 197-11-164, a planned action is defined as a project that has the following characteristics:

- is designated a planned action by ordinance,
- has had significant environmental impacts addressed in an EIS,
- has been prepared in conjunction with a comprehensive plan, subarea plan, master planned development, a phased project, or with subsequent or implementing projects of any of these categories,
- has had project level significant impacts adequately addressed in an EIS unless the impacts are specifically deferred for consideration at the project level pursuant to certain criteria specified in the law,
- is located within a UGA,
- is not an essential public facility, as defined in RCW 36.70A.200, unless an essential public facility is accessory to or part of a residential, office, school, commercial, recreational, service, or industrial development that is designated a planned action under this subsection, and
- is consistent with a comprehensive plan or subarea plan adopted under GMA.

Review of a planned action is intended to be simpler and more focused than for other projects. If the planned action ordinance is adopted, the City or County would follow the applicable procedures contained in the ordinance to determine if the proposed project impacts are consistent with the Planned Action EIS. When a permit application and environmental checklist are submitted for a project that is being proposed as a planned action project, the City or County must first verify the following:

- The project meets the description of any project(s) designated as a planned action by ordinance or resolution.
- The probable significant adverse environmental impacts were adequately addressed in the EIS.
- The project includes any conditions or mitigation measures outlined in the ordinance or resolution.

If the project meets the above requirements, the project qualifies as a planned action project and a SEPA threshold determination is not required. However, the following actions (i.e., the permit process) are still applicable as described more fully in Chapter 2:

¹ Another option is to have some land use and environmental standards (for example, the Planned Action Ordinance) become effective only upon annexation to encourage annexation, which is a Growth Management goal reflected in Kitsap County's assignment of the UGA to the City.

- The project must continue through the City's or County's permit process pursuant to any notices and other requirements contained in the City's or County's development regulations.
- The project must still be analyzed for consistency with the zoning and development regulations.
- Designation of a planned action project does not limit the City or County from using other authority (e.g., a conditional use permit) to place conditions on a project. The City or County may still use applicable laws or regulations to impose conditions on a project qualifying as a planned action project.
- Public notice for a planned action project is tied to the underlying permit. If notice is otherwise required for the underlying permit, then the notice will indicate that the project qualifies as a planned action.

The manner in which the City or County would monitor the development levels approved in the Planned Action Area would likely be as follows:

- Determine if the proposed land uses are within categories of land use studied in the EIS.
- Establish the maximum development potential within the Planned Action Area as reviewed in the EIS. Development potential can be expressed in terms of total vehicle trips, square feet of development, or other methods.
- As specific development is proposed, deduct from the Planned Action Area's development potential. The planned action ordinance would establish how methods of measuring projected development capacity relate to one another if more than one method is used.

Appendix B *Draft Planned Action Ordinance* contains a draft of the planned action ordinance including the information on the draft process and the parameters used to determine consistency with EIS assumptions.

Prior Environmental Review

An inventory was developed for the study area in August 2011. A Watershed Characterization Study has been prepared in conjunction with Ecology and WDFW and Fish and Wildlife to evaluate water quality and habitat related issues as they relate to land use planning. These documents are available at the City of Bremerton's website www.gorstwatershed.com.

The City of Bremerton prepared the SKIA Subarea Plan and Planned Action EIS in 2012. A small portion of the SKIA area lies in the watershed.

In addition, Kitsap County recently completed the Kitsap County UGA Sizing and Composition Remand Final EIS (August 2012) which addressed the Gorst UGA and other UGAs. It contains analysis relevant to the "No Action" alternative.

Where appropriate, information from these prior environmental documents was used in the preparation of this EIS.

1.3 Public Involvement

The City of Bremerton and Kitsap County have created a variety of opportunities for public and agency input into the Watershed Characterization & Framework Plan, Gorst Subarea Plan, and Planned Action EIS. Key efforts are described below:

- The City of Bremerton's **website**, located at: <http://www.gorstwatershed.com/>, includes information about the project, links to draft products, and a comment form.
- An **Advisory Committee**, composed of representatives from Bremerton Planning Commission, City of Bremerton Council, Bremerton Mayor, Kitsap County Planning Commission, Kitsap BOCC, and Suquamish Tribal Council, represents the interests of their respective bodies and convenes at key project milestones to address issues and concerns for Gorst Creek Watershed Plan.

- An extensive group of agencies, organizations and individuals are partnering to fund and develop the plan, and working together as **Project Partners** to steer the project, including: City of Bremerton, Kitsap County, United State Environmental Protection Agency, Ecology and WDFW, Suquamish Tribe, Port of Bremerton, Kitsap County Health District, Kitsap County Health District, Sustainable Bremerton, West Sound Watershed Council and Gorst property owners, Pat and Cheryl Lockhart.
- **Scoping comment period and workshop.** Public and agency comment was solicited by the City of Bremerton as lead agency in a 21-day written scoping period from October 15 to November 5, 2012. A scoping summary is provided in Appendix A *Scoping Summary*.
- **Preliminary alternatives workshop.** At a February 12, 2013 workshop, the City of Bremerton and Kitsap County asked public input about preliminary land use alternatives that should be evaluated in a draft subarea plan and EIS.
- **Legislative meetings.** On February 19, 2013, the Bremerton Planning Commission and Kitsap County Planning Commission met separately at their regular meetings to review the preliminary alternatives. Additional Planning Commission, City of Bremerton City Council, and Kitsap County BOCC meetings are planned later in the process to help identify a preferred alternative, refine and deliberate on the framework and subarea plans, and consider a planned action ordinance. A project schedule is available at <http://www.gorstwatershed.com/>.
- **Draft EIS Comment Period.** This Draft EIS allows for a public comment period (see Fact Sheet) during which time the City of Bremerton will accept written comments regarding the alternatives and environmental impacts and mitigation measures. The City of Bremerton will issue a Final EIS providing responses to comments and may address a Preferred Alternative. The Preferred Alternative may include elements from one or more alternative studied in this Draft EIS.

1.4 Proposed Action, Alternatives, and Objectives

Objectives

SEPA requires a statement of objectives that address the purpose and need for the proposal. The proposal objectives for the future of Gorst can be found in the Guiding Principles listed in the Draft Watershed Characterization & Framework Plan and Gorst Subarea Plan. These Guiding Principles are listed in Table 1-1 *Watershed Characterization & Framework Plan and Gorst Subarea Plan Guiding Principles*.

Table 1-1
Watershed Characterization & Framework Plan and Gorst Subarea Plan Guiding Principles

Community Vision & Economic Development
Make Gorst a place where people want to live, shop and recreate.
Facilitate development of economically valued land. ¹
Recognize environmental restoration as a tool that can support the local economy. ¹
Development Pattern
Identify and prioritize land that can be more intensely developed with less environmental consequences.
Promote green infrastructure for both new and existing facilities, such as by identifying areas to target for stormwater retrofits.
Support development incentives and evaluate options such as off-site mitigation, mitigation banking, and other tools where appropriate.
Environmental Protection
Identify and protect critical areas.

Prioritize areas to be protected and restored.

Protect and enhance water quality/quantity for fish and wildlife habitat as well as for human use.

Promote shoreline reclamation.

Urban Design, Land Use & Transportation

Create a cohesive and attractive urban character in the Gorst UGA such as by improving building design, and creating and enhancing public spaces such as parks, trails, pedestrian corridors and streetscapes.

Allow an environmentally sustainable pattern of forestry, low density residential, small scale employment, and recreation uses in the rural areas of watershed.

Improve transportation mode choices including transit, bicycle, pedestrian, and autos, recognizing local as well as regional travel needs.

Promote interpretive art, signage, and public spaces that recognize cultural history and environmental features.

Reduce collisions and improve safety.

Note: ¹ Such as by establishing land use plans that offer business and housing opportunities, and capital plans that incentivize shoreline reclamation and amenities such as open space and recreation, community design, and streetscapes.

Proposed Action and Alternatives

This Draft EIS evaluates three alternatives that set a range of land use patterns and mix of residential and employment growth:

- Alternative 1 – Gorst is a relatively small highway-oriented commercial and industrial center. This is a SEPA-required alternative. It represents No Action and continuing with the current Comprehensive Plan.
- Alternative 2 – Gorst is a well-designed regional commercial center.
- Alternative 3 - Gorst becomes a complete community.

Each alternative proposes a different mix of land use, growth, policies, and regulations described below.

Alternative 1 – No Action, Current Plan: Gorst is a relatively small highway-oriented commercial and industrial center

The No Action Alternative would retain current Kitsap County and City of Bremerton Comprehensive Plans. The Watershed Characterization & Framework Plan would not be adopted. New low impact development (LID) and stormwater standards would not be adopted throughout the watershed; however, some portions of the watershed are already subject to National Pollutant Discharge Elimination System (NPDES) standards that are intended to reduce water quality impacts and promote improved stormwater management.

Reflecting the current Comprehensive Plan vision for the Gorst UGA, Gorst would be a relatively small highway-oriented commercial and industrial center. Within the UGA, Alternative 1 would allow greater employment growth of 742 jobs and a smaller population growth of 82 persons over the next 20-30 years. No planned action ordinance would be adopted.

No new capital facility improvements, stormwater, or habitat regulations would be implemented beyond adopted Capital Facility Plans.

Alternative 2 – Gorst is a well-designed regional commercial center

Under Alternative 2, the Watershed Characterization & Framework Plan would be adopted. While rural land use and zoning would be retained, amended LID and stormwater standards would be applied throughout the watershed.

Under Alternative 2, the Gorst UGA is envisioned as a regional commercial corridor along the waterfront providing locations for the Bremerton community and Kitsap County residents to shop. Gateway and boulevard treatments,

shoreline access, green infrastructure, and habitat BMPs provide for a more well designed sustainable development pattern. More medium density clustered residential development would occur in the northwest portion of the UGA, and infill single-family residential development would occur in the western portion of the UGA.

Alternative 2 would allow a moderate increase in employment of 606 jobs and a more substantial increase in residents of 985 persons. A Planned Action would be designated for most of the UGA except waterward of SR 16 and SR 3, along Sinclair Inlet.

Capital facility improvements and amended stormwater and habitat regulations would be implemented.

Alternative 3 - Gorst becomes a complete community

Under Alternative 3, the Watershed Characterization & Framework Plan would be adopted along with LID and stormwater standards throughout the watershed. Under Alternative 3, the Gorst UGA would be guided by a Subarea Plan intended to ensure Gorst evolves into a complete community with places to live, play, shop, and work, in a waterfront setting. Mixed uses would be predominate. Along the waterfront a lower intensity commercial land use pattern develops with smaller impervious footprints interspersed by trails, parks, and reclaimed shoreline habitat. Central Gorst allows more intensive regional commercial, office, hotel, and mixed use residential developments. Small-scale mixed use neighborhoods lie along West Belfair Road and West Frone Road. Clustered development occurs along Gorst Creek. A residential neighborhood along Sherman Heights Road provides a range of detached and attached residential choices in clustered patterns and small-scale, neighborhood-serving commercial uses. Alternative 3 supports less job growth than the other studied alternatives at 333 jobs but the highest population growth at 1,082 persons. A Planned Action would be designated for the whole UGA.

Capital facility improvements and amended stormwater and habitat regulations would be implemented.

Each alternative is further described in Chapter 2.

1.5 Major Issues, Significant Areas of Controversy and Uncertainty, and Issues to be Resolved

Major issues and issues to be resolved include:

- The selection of a preferred land use alternative for the Gorst UGA and development of implementing zoning and environmental regulations to address recommendations of the Gorst Creek Watershed Characterization & Framework Plan and Gorst Subarea Plan.
- The provision of infrastructure, public services, and utilities to accommodate growth, create a more walkable and connected community, mitigate stormwater and flooding conditions, and transition from County governance to City governance over time.
- The need to reallocate population through amendments to the Countywide Planning Policies recognizing new growth capacity in the Gorst UGA with action alternatives.

1.6 Summary of Impacts and Mitigation Measures

Impacts Common to All Alternatives

This section describes impacts found to be similar among all studied Alternatives 1, 2, and 3.

Geology/Soils

Watershed. Creation of impervious surface would result in a long-term loss of soil functions within affected areas, and could lead to increased surface water runoff and erosion of soils in adjacent areas. Removal of trees and other vegetation within these areas could also lead to reduced infiltration and erosion of exposed soils from affected sites. Additionally, use of heavy equipment for clearing and construction activities could result in compaction of

soils. Given that geologic hazards and unstable soil conditions occur throughout the watershed, future development would have the potential to impact slope stability.

Gorst UGA. Under all alternatives, most impacts to soils would occur within the Gorst UGA, where the majority of planned development would be focused. Potential impacts associated with construction activities within the UGA would be similar to those described for the watershed, although creation of new impervious surface would be a smaller factor in the UGA. The potential for loss of soil through erosion, soil compaction, and soil contamination would be present, all of which would have the potential to be minimized, to varying degrees by pertinent plans and BMPs.

Planned development within the UGA would potentially result in a long-term loss of soil functions over a small area if currently undeveloped areas are developed in the future. It is expected that the total area of impervious surface could increase within the UGA, leading to increased soil erosion. Future development within the UGA would have the potential to impact slope stability in steep areas.

Water Resources

Watershed. The Gorst-Parish floodplain complex is subject to frequent flooding. Anticipated population growth and subsequent development upstream of this location would likely increase the amount of untreated surface water, peak runoff flows, and sedimentation. Flooding in the Gorst-Parish floodplain complex has been identified as priority and would eventually be addressed. Because economic development and population growth in the watershed would occur under all project alternatives, effects would be similar and considered minor impacts on water resources.

Gorst UGA. Under all alternatives, construction activities within the UGA would have the potential to impact water resources caused by site demolition or construction (water turbidity, debris in the water, etc.), similar to those described in Section 3.1 *Geology/Soils*. Overall, construction activities would result in short-term minor impacts on water resources.

Air Quality

Current air quality regulations would prevent new developments and commercial facilities within the Gorst study area from generating unacceptable air pollutant emissions that would affect nearby areas during construction or operation. Because all of the alternatives would increase population, commercial space, and industrial space in the Gorst study area above existing conditions, the air pollutant emissions generated within the Gorst study area are expected to increase. Similarly, regional vehicle miles traveled (VMT) by vehicles used by Gorst residents and those who work in Gorst would also increase in the Gorst study area, along with the tailpipe emissions generated by those vehicles. However, the VMT generated by the new homes and businesses in the Gorst study area would be a small fraction of the overall VMT generated within Kitsap County, so it is unlikely that any of the alternatives would significantly affect regional air quality.

Plants and Animals

Watershed. New construction in rural areas would result in removal of terrestrial habitats, which could injure and/or displace common species of wildlife. Migratory birds could be affected, particularly by construction that occurs during the breeding season. Under all alternatives, regulations to protect sensitive species would help prevent impacts to these species during the construction process. Depending on where it occurs, new construction in the watershed could also affect wildlife habitat connectivity through fragmentation or interruption of existing wildlife corridors.

Noise associated with construction activities in the watershed would likely disturb terrestrial wildlife species, particularly in rural areas where baseline noise levels are low. Noise disturbance would constitute a short-term impact, lasting only as long as the construction activities, with lower levels of noise associated with residential uses

once construction is completed. Wildlife could adapt to the noise or leave the area. The greatest risk for adverse effects would be during breeding periods, when noise could impact nesting/breeding success.

Construction activities adjacent to stream channels, other bodies of water, and wetlands would have the potential to affect these habitats and the species that occur in them, including listed and sensitive fish species. Additionally, stormwater runoff from the developed sites could potentially impact aquatic habitats including creeks that support salmon species.

Gorst UGA. Under all alternatives, development of the remaining privately held open space within the Gorst UGA is planned or likely to occur. Such development would decrease the amount of vegetated area, including areas with wildlife habitat value, such as the block of forestland on the mine property. This reduction in wildlife habitat would remove populations of some common wildlife species, or force them to move to undeveloped areas nearby. In some cases, newly developed areas would support urban wildlife species such as rats, raccoons, and gray squirrels. It is anticipated that some migratory birds would be impacted as a result of loss of undeveloped habitat, particularly for activities that occur during the breeding season.

In areas that are currently developed, noise associated with future redevelopment activities would be short term, lasting only for the duration of construction activities in a given location. Some habitat removal could occur, even on developed sites, but in most cases these sites would receive new landscaping that provides the same level of wildlife habitat value. In certain areas, construction activities could disturb wildlife in nearby undeveloped areas, potentially causing some stress to individuals or interfering with nesting or breeding for a limited number of animals. These effects would be minimized to baseline levels once the construction is completed. Terrestrial sensitive species and their habitats within the UGA, such as the bald eagle territory along the shoreline of the Sinclair Inlet and the osprey nest near Alexander Lake should be protected from long-term harm, and disturbance to these species minimized, under applicable Critical Area Ordinance (CAO) regulations. However, some disturbance to these species is likely to occur as a result of nearby construction work.

Construction activities adjacent to stream channels, other bodies of water, and wetlands would have the potential to affect these habitats and the species that occur in them, including listed and sensitive fish species. Additionally, stormwater runoff from the developed sites could potentially impact aquatic habitats, including the creeks that support salmon species, and Sinclair Inlet, which supports numerous sensitive anadromous and marine species. As discussed for the watershed, stormwater plans, BMPs, and SPCC plans would help minimize impacts to aquatic habitats to varying degrees.

Noise

Watershed. Development in the watershed, outside of the Gorst UGA, may involve construction activity near existing residences, temporarily increasing noise levels. Development in the watershed would result in increases in future traffic volumes on highways and local roads outside of the UGA, resulting in higher ambient noise levels from moving and idling vehicles. Potential noise impacts on sensitive receivers would vary with distance from the roadway.

Gorst UGA. Potential noise impacts associated with construction activities within the UGA would be similar to those described for the watershed. However, because construction activity would be concentrated over a smaller area, and multiple construction activities may occur simultaneously or in overlapping timeframes in the same general area, residences and other noise sensitive receptors within the Gorst UGA would likely experience temporary increases in noise levels from construction more often and for longer periods of time, and construction noise levels may be higher.

Development both within and outside of the UGA would result in increases in future traffic volumes on highways and local roads within the UGA, resulting in higher ambient noise levels from moving and idling vehicles. Potential noise impacts on sensitive receivers would vary with distance from the roadway. Modeled future daily traffic volumes and PM peak hour vehicles on study area roads are similar under all alternatives, and are estimated to

increase by less than 35 percent over existing (2010) volumes. Based on the modeled data, traffic noise would be expected to increase by less than three dB(A), a change that is barely perceptible to the average human ear.

Land use within the Gorst UGA under all alternatives would include residential and commercial use to varying degrees. New commercial development would likely occur near existing or future residences and other sensitive receivers.

Hazardous Materials

Watershed. Under all alternatives, development and redevelopment would occur within portions of the Gorst Creek Watershed. Three sites in the watershed outside of the Gorst UGA are currently releasing hazardous materials to the environment, although it is assumed that some level of cleanup of these sites would occur in the future under all of the alternatives. Redevelopment of these sites would likely include construction activities that could disturb contaminated areas, exposing workers, soil, groundwater, and/or surface water to hazardous materials. Additionally, construction activities elsewhere in the watershed could expose new contamination not previously documented, which would provide opportunities for remediation. Demolition of existing structures under any of the alternatives could be associated with risks to workers from exposure to lead-based paint and/or asbestos containing materials (ACMs).

Gorst UGA. One Reasonably Predictable and seven Substantially Contaminated Sites have been identified within the Gorst UGA. Many of these sites are currently undergoing cleanup or remedial actions, and it is likely that cleanup actions would continue into the future under all of the alternatives. However, since many sites in the UGA are currently documented as storing hazardous substances or waste, it is likely that additional contaminated sites will be discovered in the future. As discussed for the watershed, there would be risks associated with exposures or releases of hazardous materials during redevelopment activities, including disturbance of contaminated soil, demolition of buildings with lead-based paint or ACMs, and use/storage of hazardous materials at construction sites.

Land Use Patterns

Under all alternatives, additional growth is anticipated in the Gorst UGA. Vacant land would, over time, be developed for commercial, residential, recreational, or industrial use, as allowed by the land use and zoning districts adopted under that alternative. Properties occupied by nonconforming uses would eventually be redeveloped in a manner consistent with adopted zoning, and new development and redevelopment would also entail the eventual modification or demolition of some existing structures, as well as the construction of new buildings, which could cause temporary construction-related impacts, such as increased levels of noise, fugitive dust, and vehicle traffic.

Socio-Economics

Watershed. Outside the Gorst UGA, it is not expected there will be any differences for the Gorst Creek Watershed in terms of population and employment growth between the alternatives. Population growth will most likely occur on rural lots in the areas designated Rural Residential and Urban Reserve in the southern part of the watershed. Both designations limit development to relatively low densities. Rural Residential allows one dwelling unit per five acres and Urban Reserve allows one unit per 10 acres. Commercial and employment growth will most likely occur within parts of SKIA and Bremerton in the watershed. Impacts from the large increase in jobs in SKIA are addressed in the SKIA Subarea Plan and EIS.

Gorst UGA. Under all alternatives, additional growth is anticipated in the Gorst UGA. The number and composition of people and housing varies considerably by alternative. See Table 1-2 *Comparison Matrix of Impacts*.

Aesthetics

Watershed. Impacts to the visual character of the City Utility Lands (CUL), SKIA, and McCormick Woods would be minimal for all alternatives as they would be managed based on present zoning and adopted plans under all alternatives.

Cultural Resources

Watershed. Impacts that can adversely affect important cultural resources include anything that might significantly destroy or alter the important features of a cultural resource. Direct and indirect effects to cultural resources can result from human activities or natural events. Under all alternatives, development would occur throughout the Gorst Creek watershed, to varying degrees as allowed by zoning and applicable regulations.

Gorst UGA. Potential impacts associated with development and construction activities within the UGA would be similar to those described for the watershed. The potential for loss of significant cultural resources would be present, including archaeological sites, historic built environment resources, and traditional cultural properties (TCPs), all of which would have the potential to be minimized, to varying degrees by conducting preconstruction cultural resources inventories and evaluations within the High Probability Areas and implementing mitigation measures.

Transportation

Daily trips and daily vehicle miles are very similar for all three alternatives. See Table 1-2 *Comparison Matrix of Impacts*.

Fire Protection and Emergency Medical Service (EMS)

Watershed. No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA. Growth would occur based on adopted plans, which already have been accounted for in County and City of Bremerton Comprehensive Plans and associated capital facility plans. Updated stormwater and habitat regulations in this area are not anticipated to have any effect on the demand for fire protection and EMS. Therefore, no significant impacts to these services are anticipated under any of the alternatives that aren't already accounted for in existing planning documents.

Law Enforcement

Watershed. No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA. Updated stormwater and habitat regulations in this area are not anticipated to have any effect on the demand for police protection. Therefore, no significant impacts to law enforcement services are anticipated under any of the alternatives that aren't already accounted for in existing planning documents.

Schools

Watershed. No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA beyond already adopted Comprehensive Plans. Updated stormwater and habitat regulations in this area are not anticipated to have any effect on the number of students in the South Kitsap School District (SKSD).

Gorst UGA. Annexation by Bremerton of the Gorst UGA would not change the district boundaries for children living in Gorst. The alternatives will affect SKSD by increasing residential development, and consequently the number of students enrolled in SKSD. Under all alternatives, the number of students generated is fairly minimal and should not increase demand much beyond that addressed in the Preferred Alternative adopted in the 2012 *Kitsap County UGA Sizing and Composition Remand Final Supplemental Environmental Impact Statement*.

Parks, Recreation, and Open Space

Watershed. No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA beyond adopted Comprehensive Plan. Updated stormwater and habitat regulations in this area are not anticipated to have

any effect on the demand for parks, recreation, and open space. Therefore, no significant impacts to these services are anticipated under any of the alternatives.

Gorst UGA

County Impacts. If the Gorst UGA remains in the County, all alternatives would result in a marginal increase in demand for County park and recreation facilities. The specific facilities impacted or the geographic need for new facilities would depend in part on the location of growth, which will vary by alternative.

Per Kitsap County Code (KCC) Chapters 410.110.020 and 410.110.210, the County collects a parks impact fee for each new housing unit developed in unincorporated areas. Impact fee revenues are directed toward park planning, land acquisition, site improvements, construction and engineering, mitigation costs, and capital equipment. New development under the alternatives would also generate revenue from Real Estate Excise Tax (REET), which can be used for any type of capital project in the County. A portion of increased tax revenues could be used to fund acquisition and development of new parks and recreation facilities, as well as operation and maintenance of new and existing facilities under all alternatives.

City of Bremerton Impacts. If the City of Bremerton were to annex the Gorst UGA, the current population and projected population growth within the UGA would drive some additional demand for Parks services. While the City of Bremerton does not charge a parks impact fee to offset the demand from new development, the City of Bremerton could require that any master planned development include park or open space land for its residents.

Libraries

Under all alternatives, population growth in the Gorst Creek watershed and within the Gorst UGA would increase demand for library services in proportion to the population growth anticipated. Impacts of each alternative are summarized in Table 1-2 *Comparison Matrix of Impacts*.

Power

Under all alternatives, population growth in the Gorst Creek watershed and within the Gorst UGA would increase demand for power in proportion to the population growth anticipated. Impacts of each alternative are summarized in Table 1-2 *Comparison Matrix of Impacts*.

Solid Waste

Watershed. No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA. Updated stormwater and habitat regulations in this area are not anticipated to have significant effects on solid waste management needs in this area.

Gorst UGA. Since solid waste service is provided on a regional level, impacts to the service provider (Waste Management) and management organization are nearly identical whether or not Gorst is annexed by the City of Bremerton.

The additional population capacity generated under the three alternatives would marginally increase demand for solid waste capacity. The County, through contracts with private haulers, will continue to be able to provide solid waste management for an increased population regardless of the alternative ultimately chosen. The County would have adequate time to plan for landfill capacity for solid waste generation under all alternatives, and the County's current contracted landfill location is expected to have sufficient capacity through 2025 and beyond if a new or extended contract is enacted.

Water, Wastewater, and Stormwater

Watershed. Over the next 20 to 30 years jobs would substantially increase from 264 to 2,305 primarily due to economic development in the SKIA. The added jobs in the SKIA area would be subject to the SKIA Subarea Plan. Population growth is projected to increase from 1,810 to 2,659. These changes in the watershed would increase

demand in utilities services. The CFPs for the specific growth areas in the watershed would ensure adequate utility services matched the new demand and reduce the potential for disruption of utility services.

Gorst UGA. Under all alternatives, construction activities within the UGA would have the potential to impact utilities. Depending on the scale, construction projects would likely result in short-term disruptions of service. Scale and intensity of construction projects would vary by alternative.

Under all alternatives, the Gorst UGA would be annexed to the City of Bremerton, resulting in a transition from County to City governance.

Under all alternatives, the water (drinking) and wastewater systems have the capacity to accommodate anticipated growth. However, only the projected growth for no action (Alternative 1) is accounted for in Kitsap County CFP. Both action alternatives (Alternatives 2 and 3) propose development at the mine site and would require an evaluation of drinking water and wastewater capital improvements which are described under the respective alternative in Table 1-2 *Comparison Matrix of Impacts*.

Telecommunications

Under all alternatives, demand for cable television, phone, internet, and other telecommunications services would increase in response to population growth. Additional growth in the Gorst Creek watershed and Gorst UGA would require installation of additional infrastructure, installed as development occurs. Compared to the regional customer bases of each of the service providers, the growth anticipated in the Gorst area is relatively small and unlikely to have any significant impact on provision of telecommunication services in Kitsap County.

Relationship to Plans and Policies

All alternatives would maintain adopted land use plans in the watershed, which maintains consistency with current Kitsap County and City of Bremerton plans. All alternatives also maintain present UGA boundaries, allowing for consistency with Growth Management Act (GMA) provisions regarding UGA sizing. Last each alternative has been developed and reviewed during public outreach opportunities as identified in Section 2.0 *Alternatives*.

Matrix of Impacts by Alternative

Table 1-2 *Comparison Matrix of Impacts* provides a summary of impacts by alternative based on the analysis of Chapter 3.0 *Affected Environment, Significant Impacts, and Mitigation Measures*. Impacts are presented without the context of the affected environment and are significantly abbreviated. For the full context, Chapter 3.0 should be consulted.

Table 1-2
Comparison Matrix of Impacts

Topic	Alternative 1	Alternative 2	Alternative 3
Geology/Soils			
Watershed	Development within the watershed would continue to be haphazard, and despite existing regulations and guidance, soil erosion within the watershed may increase as a result of new development.	On a watershed scale, planned improvements to stormwater facilities, stream restoration, and protection of key recharge/ discharge/ storage areas, if implemented, would help to minimize the impacts of new development and associated erosion, and would likely result in a reduction in flooding and export of soils from the watershed.	Similar to Alternative 2.

Topic	Alternative 1	Alternative 2	Alternative 3
Gorst UGA	Creation of impervious surface would result in the loss of soils on up to 41 net acres, as well as the functions that they provide (e.g., ability to support native plant species and other vegetation, and infiltration of water), and could contribute to increased erosion of soils.	Development on currently undeveloped parcels would result in the long-term loss of soils and their functions on up to 70 net acres; though the alternative does recognize public park/open space areas. Creation of new impervious surface could contribute to increased erosion of soils. Construction on the mine site could require substantial mitigation, including project design to minimize impacts to soils and geologic resources.	Developable land would equal about 69 net acres. This alternative includes the same amount of open space as Alternative 2, as well as Low Intensity Waterfront, which reduces impervious surfaces and promotes shoreline reclamation and open space. Therefore some soil functions would be retained within the developable land. Potential impacts associated with the mine site would be similar to Alternative 2.
Water Resources			
Water Quality and Flooding	Commercial areas would likely be redeveloped on the previously disturbed impervious surface without water quality treatment and would continue to impact floodplains and the shoreline. Incremental restoration and potential water quality treatment would occur on waters that are 303(d) listed.	Overall, Alternative 2 would have a minor effect on water resources from short-term construction related impacts and moderate effects from long-term development continued development of high density commercial areas along the shoreline. The long-term effects of the commercial development may be offset by implementation of the adopted Watershed Characterization & Framework Plan. Due to greater scrutiny of permits in floodplains and due to the listing of fish species, the developability of the Gorst Creek floodplain area for intensive commercial uses is expected to be challenging.	Similar to Alternative 2.
Air Quality			
Emissions from Vehicle Travel (VMT) due to Gorst UGA Growth	Alternative 1 would produce 29,067 daily VMT, which would contribute less than one percent (0.4%) of the Kitsap County regional VMT forecast for 2035.	Alternative 2 would produce 49,350 daily VMT (0.7%) less than one percent of the Kitsap County VMT forecast for 2035.	Alternative 3 would produce 45,707 daily VMT (0.7%) less than one percent of the Kitsap County VMT forecast for 2035.
Gorst UGA Emission increase, metric tons CO ₂ -equivalent per year compared to existing conditions	7,474	14,371	12,922

Topic	Alternative 1	Alternative 2	Alternative 3
Soil Carbon GHG Emissions Based on Removal of Existing Vegetation, metric tons CO ₂ -equivalent per year	120	237	237
Plants and Animals			
Land and habitat disturbance: UGA	Undeveloped land on approximately 41 net acres in parcels, or less than one percent of the total area of the Gorst watershed, would be developed in the future. There is a minimal amount of high quality wildlife habitat in the UGA.	Approximately 70 net acres, or one percent of the total area of the Gorst watershed, would be developed in the future which could affect wildlife habitat through permanent or short-term loss. Parks, recreation areas, and other open spaces would be expected to provide more wildlife habitat. Subarea Plan and Watershed Framework Plan policies and BMPs would be applied and help offset impacts.	Similar to Alternative 2, though 69 net parcel acres would be disturbed.
Impervious area and water quality: UGA	Creation of new impervious surface in the UGA could occur under this alternative, which would exacerbate water quality issues associated with stormwater. However, adoption of the LID guidance manual would avoid new impacts though not address existing stormwater issues. Existing fish passage barriers would continue. No new standards promoting BMPs would apply.	While impervious surfaces could be added, the new Stormwater Management Plan, Watershed Characterization & Framework Plan, and Gorst Subarea Plan would include efforts to minimize impervious surface in developed/redeveloped areas, improve stormwater facilities, restore degraded stream channels, and protect key recharge/discharge/storage areas. All of these features would benefit aquatic species within the watershed and UGA by reducing impacts to water quality.	Similar to Alternative 2. Additionally, the Low Intensity Waterfront, would allow commercial uses with smaller amounts of impervious area and there would be incentives for shoreline reclamation. This zoning would potentially result in the highest quality wildlife habitat within the southeast portion of the UGA. However, it is expected that urban wildlife and common species would still predominate.
Noise			
Transportation and Operation Noise	Land uses under Alternative 1 would include urban industrial uses, including heavy industrial. However, residential land uses under Alternative 1 would cover only 13 percent of the total UGA and the overall number of existing and future sensitive receivers that could potentially experience noise impacts is much smaller than under	Residential land uses under Alternative 2 would cover 49 percent of the UGA, increasing the overall number of existing and new sensitive receivers that could potentially be affected by noise from new commercial operations. While residential land uses under Alternative 2 are zoned separately from commercial zones, new commercial operations could occur near existing or new	Under Alternative 3, areas zoned as Gorst Mixed Use would likely include residential uses located above or in very close proximity to commercial uses, and in areas served by public transit along major roadways. This development pattern increases the potential for operational noise levels associated with commercial

Topic	Alternative 1	Alternative 2	Alternative 3
	Alternatives 2 and 3. Regardless, new commercial and industrial operations could occur near existing or new residences and other sensitive receivers, and operations could cause noise levels to exceed Kitsap County's and the City of Bremerton's noise ordinance.	residences and other sensitive receivers, and operations could cause noise levels to exceed the Kitsap County's and City of Bremerton's noise ordinance.	development to exceed noise thresholds in the Kitsap County's and City of Bremerton's noise ordinance and impact nearby sensitive receivers.
Hazardous Materials			
Contamination and Exposure	Non-residential land uses would make up 87 percent of the land area in the UGA. The potential for contamination of soil and water from land uses would likely be greatest under this land use breakdown, as compared to the action alternatives. Redevelopment of industrial or commercial properties to residential uses would also have an associated risk of human exposure to contaminants.	Under this alternative, the land use breakdown within the UGA would not include an industrial component. The potential for contamination of soil and water from future land uses would be lower under Alternative 2 than under Alternative 1. Implementation of the Watershed Characterization & Framework Plan and Gorst Subarea Plan would help address flooding and stormwater infiltration issues throughout the watershed, which would help minimize the amount of flooding onto developed areas and associated movement of hazardous materials in surface water.	Similar to Alternative 2.
Land Use Patterns			
Land Use Patterns	Land use patterns would remain similar to existing conditions. Current zoning would promote a gradual transition toward more commercial development in the Gorst UGA.	Land use patterns in the Gorst UGA would transition away from industrial uses to a greater proportion of commercial and residential uses. New land use designations and zoning would take effect along Sinclair Inlet, causing existing industrial uses to eventually redevelop as commercial uses or open space as dictated by the subarea plan.	Changes in land use patterns would be subtle due to implementation of mixed-use zoning. Industrial uses would transition to commercial, residential, office, or mixed-use development.
Lands Use Compatibility	Because the Gorst UGA contains a large amount of residential development within commercially-zoned areas, some temporary incompatibilities may arise as new commercial development occurs	Some temporary incompatibilities could arise as new commercial development occurs adjacent to existing residential uses. In locations where residences are adjacent to industrial uses, the transition of these properties to	Commercial development would be designed for a mixed-use environment with associated design guidelines, thereby reducing the potential for incompatibilities with existing residential

Topic	Alternative 1	Alternative 2	Alternative 3
	adjacent to existing residential uses.	commercial use may improve compatibility.	development or other sensitive uses. In locations where residences are adjacent to industrial uses, the transition of these properties to commercial use may improve compatibility.
Socio-Economics			
Population and employment growth	<p>The limited residential growth and lack of change in land use regulations make it likely that any change in the local economy will be a continuation of the current character with some larger scale and/or more intense commercial uses that cater to the regional market and pass through traffic. The additional employees in the community during the day would spur demand for some retail establishments, such as lunch and coffee spots.</p>	<p>The additional residential growth and ability for larger scale commercial uses could lead to the establishment of new businesses and change of current businesses to larger scale ones. The addition of almost 1,000 residents would likely increase the demand for small scale retail uses, especially convenience items and food services.</p> <p>The additional residents and employees in Gorst would increase the need for infrastructure, open space, and amenities, especially at the mine site.</p> <p>These changes would likely change the character of the local economy by adding some smaller scale businesses that support the new residents as well as the potential for larger scale and/or more intensive businesses, which could displace some of the existing businesses and uses with highway access.</p>	<p>The additional residential growth, the allowance of more types and intensity of commercial uses throughout the UGA, and better access to open space and recreational facilities could make area more attractive for more types of commercial uses. This may lead to the establishment of new businesses and business types that do not currently exist in the area. The addition of almost 1,100 residents would likely increase the demand for small scale retail uses similar to Alternative 2. In addition, better access to opens space and recreation, a better connection to the waterfront, and the associated view add value to these sites, which make them more attractive certain commercial and recreational uses. Under this situation the character of the local economy has the potential to be different from what it is today.</p>
Aesthetics			
Visual Character	<p>Watershed development may incorporate fewer BMPs that retain vegetation and natural features.</p> <p>New development along the highway corridors would continue a pattern of low rise development with large areas of impervious surfaces.</p> <p>Some existing, low density</p>	<p>Future development within the watershed would result in less vegetation clearing, fewer impervious surfaces, and a more natural visual character than what would be expected under Alternative 1.</p> <p>Implementation of Alternative 2 would result in substantial changes to the present visual character of the UGA. Areas of</p>	<p>The impacts of Alternative 3 are similar to those of Alternative 2 in terms of the extent of overall change in visual character from the present condition to a more compactly developed urban center, the potential for conflicts during the transition from current conditions to future build</p>

Topic	Alternative 1	Alternative 2	Alternative 3
	residential uses would be displaced by more intensely developed commercial uses of a substantially different character.	existing low-density residential uses would be converted to more intense commercial development, and the mine site would be converted from its present resource extraction use to a residential neighborhood. New Gorst Subarea Plan policies and urban design concepts would result in new design guidelines that mitigate many of the negative aesthetic qualities frequently associated with the Gorst UGA.	out, and the overall positive effect of new design policies and concepts. Within mixed use areas, the greater amount of residential may ease some of the potential transition conflicts in currently residential areas. The Low Intensity Waterfront zone would have the effect of transitioning this area from its current condition to one more characterized by low impact commercial development with less impervious area, greater shoreline setbacks, more vegetation, and more public access.
Building Height, Bulk, and Scale: Gorst UGA	In those areas of existing low density residential or undeveloped land that are identified for commercial and mixed uses, the potential exists for negative impacts related to building height, bulk, and scale as these areas transition from residential to commercial during the course of the plan horizon.	Similar to Alternative 1, some conflicts of scale may occur as areas currently occupied by low-density residential uses transition to more intensely developed commercial uses. Subarea Plan policies and design concepts should mitigate much of this conflict by encouraging a more consistent building-street relationship and avoiding the often haphazard nature of development that currently characterizes much of the UGA.	Similar to Alternative 2.
Views: Gorst UGA	Views of Sinclair Inlet may be negatively affected as waterfront areas are more intensely developed with commercial and industrial uses. Given the extent of development already present, however, these impacts are not expected to be significant.	Similar to Alternative 1 some localized view impacts may occur as sites develop; however, these impacts are not expected to be significant. Development of the mine site as a residential neighborhood would have positive (for new site users) and negative (due to clearing) view impacts.	Similar to Alternative 2.
Cultural Resources			
Construction, Operations, Indirect, and Cumulative Impacts: Gorst UGA	Development and associated construction activities would result in ground disturbance within 41 net developable acres,	New development on currently undeveloped parcels has the potential to impact significant cultural resources on up to 70 net developable acres, which is	The area of net developable land identified for Alternative 3 is approximately 69 acres, roughly the same as under

Topic	Alternative 1	Alternative 2	Alternative 3
	and could contribute to increased disturbance to known and undocumented archaeological sites, historic built environment resources, and TCPs.	greater than that under Alternative 1.	Alternative 2, but greater than under Alternative 1.
Transportation			
Daily Vehicle Trips: Countywide (and Attributed to Alternatives 2 and 3)	884,937	887,760 (+2,823)	886,968 (+2,031)
Countywide Model Daily Vehicle Miles of Travel (VMT)	6,602,656	6,615,322	6,604,458
Deficient County Roadway Segments	5.6	5.6	5.6
Projected State Highway Deficiencies by 2035 (Length of deficient segments)	1.87	1.87	1.66
Countywide Model Daily Transit Person Trips by 2035	14,467	14,495	14,533
Fire Protection and Emergency Services			
South Kitsap Fire and Rescue	Gorst UGA population would increase by 82 residents under Alternative 1. SKFR's existing facilities will allow it to meet its level of service (LOS) through 2035.	Gorst UGA population would increase by 985 residents under Alternative 2. SKFR's existing facilities will allow it to meet its LOS through 2035.	Gorst UGA population would increase by 1,082 residents under Alternative 3. SKFR's existing facilities will effectively allow it to meet its LOS through 2035.
Bremerton Fire Department	Annexing Gorst UGA would increase population served by 304 people, which would not be expected to impact fire and EMS services.	Annexing Gorst UGA would increase population served by 1,207 people, which would not be expected to impact fire and EMS services.	Annexing Gorst UGA would increase population served by 1,304 people, which would not be expected to impact fire and EMS services.
Law Enforcement			
Kitsap County Sheriff's Office	An estimated 82 additional residents from growth in the Gorst UGA under Alternative 1 would have minimal impact on LOS. The County is estimated to need 1 additional work release bed.	An estimated 985 additional residents from growth in the Gorst UGA under Alternative 2 would have minimal impact on LOS. The County is estimated to need 2 additional work release beds.	An estimated 1,082 additional residents from growth in the Gorst UGA under Alternative 3 would have minimal impact on LOS. The County is estimated to need 2 additional work release beds and one county jail bed.

Topic	Alternative 1	Alternative 2	Alternative 3
Bremerton Police Department	Annexation of 304 additional residents and increased geography by the City would require an estimated increase in police service of about 0.5 commissioned officers.	Annexation of 1,207 additional residents and increased geography by the City would require an estimated increase in police service of about 2.2 commissioned officers.	Annexation of 1,304 additional residents and increased geography by the City would require an estimated increase in police service of about 2.4 commissioned officers.
Schools			
South Kitsap School District	Alternative 1 has the lowest enrollment projections of all alternatives. The District is estimated to have a deficiency of about 2,200 students in 2035.	Alternative 2 has the second lowest enrollment projections of all alternatives. The District is estimated to have a deficiency of about 2,400 students in 2035.	Alternative 3 has the highest enrollment projections of all alternatives. The District is estimated to have a deficiency of about 2,430 students in 2035.
Parks, Recreation and Open Space			
Kitsap County Parks and Recreation	The County will be able to meet its adopted LOS through 2035 under Alternative 1.	Under Alternative 2, growth of 985 residents in the Gorst UGA would drive estimated additional need of 31 open space acres, 8 regional park acres, and 7 community park acres.	Under Alternative 3, growth of 1,082 residents in the Gorst UGA would drive estimated additional need of 37 open space acres, 9 regional park acres, 1 heritage park acre, and 8 community park acres.
Bremerton Parks and Recreation	Under Alternative 1, the City would need an estimated additional 1 open space acre and 2 regional park acres.	Under Alternative 2, the City would need an estimated additional 2 open space acres, 17 regional park acres, and 1 local park acre.	Under Alternative 3, the City would need an estimated additional 3 open space acres, 20 regional park acres, and 2 local park acres.
Libraries			
Annual Circulation per Capita	The No Action Alternative would increase population by 82 residents. Effects on countywide demand for circulation items would be negligible.	Alternative 2 would add 985 residents. To maintain existing levels of service, an additional 8,816 items in annual circulation would be required.	Alternative 3 would add 1,082 residents. To maintain existing levels of service, an additional 9,684 items in annual circulation would be required.
Facility Square Footage per Capita	The No Action Alternative would increase population by 82 residents. Effects on countywide demand for facility space would be negligible.	Alternative 2 would add 985 residents. To maintain existing levels of service, an additional 345 square feet of facility space would be required. The Downtown Bremerton and Port Orchard libraries are most likely to be directly affected.	Alternative 3 would add 1,082 residents. To maintain existing levels of service, an additional 379 square feet of facility space would be required. The Downtown Bremerton and Port Orchard libraries are most likely to be directly affected.

Topic	Alternative 1	Alternative 2	Alternative 3
Power			
Demand for Electricity and Natural Gas	The No Action Alternative would increase population by 82 residents and 742 jobs. Effects on countywide demand for power would be negligible.	Alternative 2 would increase population by 985 residents and 606 jobs. Demand for power would increase, and additional distribution infrastructure would be installed as development occurs. The growth anticipated is relatively small and is unlikely to have significant impacts on regional provision of power.	Alternative 3 would increase population by 1,082 residents and 333 jobs. Demand for power would increase, and additional distribution infrastructure would be installed as development occurs. The growth anticipated is relatively small and is unlikely to have significant impacts on regional provision of power.
Solid Waste			
Countywide Demand	Alternative 1 has the least population growth and therefore less demand than other alternatives. The County has adequate solid waste capacity under all alternatives.	Alternative 2 has the second highest population projection, and therefore higher demand than Alternative 1 but lower demand than Alternative 3. The County has adequate solid waste capacity under all alternatives.	Alternative 3 has the highest population projects and therefore the highest demand for solid waste capacity. The County has adequate solid waste capacity under all alternatives.
Water, Wastewater and Stormwater			
Water	Growth in the Gorst UGA would be served by current water service providers, which have adequate capacity for growth.	The Gorst UGA would be served by current water service providers, which have adequate water source capacity for growth. New development at the mine site would require developer installed improvements for adequate distribution of drinking water. Adoption of the Watershed Characterization & Framework Plan would provide a directive for enhancing and protecting water for human use to residents of the UGA.	Similar to Alternative 2.
Wastewater	Wastewater deficiencies were addressed following the installation of the collection system in 2010. However, given the gradual increase in demand, extension of service would be needed for new development.	Projected growth is not accounted for in the Kitsap County CFP. In general an extension of sewer mains and improvement to existing pump stations may be required for the proposed Medium Density Residential area in the mine area. The proposed new residential	Similar to Alternative 2.

Topic	Alternative 1	Alternative 2	Alternative 3
		area would require developer installed improvements to the wastewater system to accommodate new growth	
Stormwater	New stormwater standards would not be adopted, and deficiencies would continue to be unresolved. However, Kitsap County's CFP would eventually incorporate measures for addressing deficiencies. Runoff during storm events would continue to cause sheet flow over roads and discharge directly to streams and water bodies including Gorst Creek and Sinclair Inlet. The increase in development, particularly from commercial development would also likely increase impervious surfaces to about 51.3 acres.	Current deficiencies in stormwater conveyance would be resolved. Stormwater management on proposed new development and redevelopment would follow the Watershed Characterization & Framework Plan and result in reduced stormwater runoff. Compilation of watershed data and use of the hydrology and hydraulic modeling would also assist in identify priority areas and optimize investment of stormwater facilities. However, for a conservative analysis in this EIS, a comparison of impervious area shows an increase in impervious area over the Alternative 1 No Action option due to the added development of the mine site at 68 acres.	Similar to Alternative 2, but the estimated impervious acres are slightly higher at 59 acres.
Telecommunications			
Demand for Telecommunication Service	See Impacts Common to All Alternatives	See Impacts Common to All Alternatives	See Impacts Common to All Alternatives
Relationship to Plans and Policies			
GMA Planning Goals	Alternative 1 meets GMA goals for economic and housing growth in urban areas, supported by transportation and public facility improvements. Alternative 1 would apply shoreline and critical area regulations.	Alternative 2 meets GMA goals for economic and housing growth in urban areas, supported by transportation and public facility improvements. Alternative 2 would apply shoreline and critical area regulations. Alternative 2 would further meet the intent of GMA goals for open space and environmental protection.	Similar to Alternative 2.
Countywide Population Forecasts	Alternative 1 is consistent with CPP allocations.	Alternative 2 assumes greater population allocations than found in the CPPs.	Alternative 3 assumes greater population allocations than found in the CPPs.
Countywide Planning Policies Vision 2040	Alternative 1 would be consistent by focusing	Alternative 2 would be consistent by focusing growth	Same as Alternative 2. In terms of reducing

Topic	Alternative 1	Alternative 2	Alternative 3
Transportation 2040	growth in UGAs and offering employment and housing opportunities.	<p>in UGAs and offering employment and housing opportunities.</p> <p>Alternative 2 would promote joint City-County planning for an assigned UGA consistent with CPPs. All facilities and services are addressed in this EIS are consistent with CPP guidance for joint planning and service transition.</p> <p>Alternatives 2 and 3 use a science-based and landscape level approach to identifying areas of protection, restoration, and development with BMPs to protect water processes and habitat.</p>	congestion, the mixed use pattern and lower commercial growth in Alternative 3 provides less congestion and may in the future provide more support to transit use.
Kitsap County and Bremerton Comprehensive Plans	<p>The watershed would be protected through standard natural environment policies of the County and City of Bremerton Comprehensive Plans.</p> <p>Alternative 1 (No Action) would continue current plans and regulations which are consistent with each other – the City of Bremerton shows Kitsap County land use designations in its assigned UGAs and has pre-designated zones that most closely match County zones.</p>	<p>This alternative meets County land use policies that assign the Gorst UGA to Bremerton and that promote joint planning with UGAMAs.</p> <p>This alternative promotes Gorst as the southern gateway to the City of Bremerton, a concept in the City of Bremerton's Comprehensive Plan.</p> <p>This alternative meets City of Bremerton policies that support subarea planning for different types of centers in the community</p>	Same as Alternative 2.
Shoreline Master Program and Critical Areas	Both the County and City have locally adopted new Shoreline Master Programs that require Ecology approval prior to their being effective. These pending Shoreline Master Programs primarily differ with respect to shoreline buffers on Gorst Creek.	<p>The adoption of the Gorst Subarea Plan is an opportunity to develop joint standards for stream and shoreline protection.</p> <p>Appendix D <i>Shoreline Buffer Comparison & Options</i> provides options for common shorelines standards along Gorst Creek to achieve some of the Watershed Characterization Study BMPs. These options could be considered as the final Subarea Plan is developed around a preferred alternative.</p>	Same as Alternative 2.

Summary of Mitigation Measures

This section summarizes three types of mitigation measures for each environmental topic:

- Existing plan policies or concepts under Alternative 1 or features of the proposed Watershed Characterization & Framework Plan, Gorst Subarea Plan under Alternatives 2 and 3 – that serve as mitigation.
- Applicable regulations and commitments at the federal, state, and local level that would mitigate impacts.
- Other potential mitigation that could modify current or proposed plans or regulations.

For the full text, consult Chapter 3.0, *Affected Environment, Significant Impacts, and Mitigation Measures*.

Geology/Soils

Incorporated Plan Features

New plans that would be implemented under Alternatives 2 and 3 include features that would serve as mitigation for potential impacts to soils and geologic resources. Implementing regulations associated with the Gorst Subarea Plan, and Gorst Creek Watershed Characterization & Framework Plan would incorporate the suggested management measures shown in Table 2-8 *Integrated Watershed Processes and Habitat Results and Management Measures*.

Possible plan features that would serve as mitigation for potential impacts to soil include the following:

- Minimization of new development in certain areas.
- Limiting logging activities and maintain appropriate zoning in areas with high sediment export.
- Implementation of measures to reduce erosion and sediment export in areas identified for future development (e.g., buffers, setbacks from steep slopes, reduction of overland flow through infiltration).
- Restoration of cleared/degraded areas.
- Implementation of stormwater retrofits to reduce impervious surface.

Additionally, capital facility improvements have been recommended for addressing stormwater deficiencies and flooding issues. Implementation of these improvements would help reduce soil erosion and loss of soil from the watershed. Based on policies in the proposed Draft Gorst Subarea Plan and Draft Gorst Creek Watershed Characterization & Framework Plan implementing regulations could include a zero stormwater discharge requirement limiting direct and untreated stormwater and a requirement that future development incorporate a series of LID measures to infiltrate or detain runoff.

Applicable Regulations and Commitments

- Kitsap County CAO
- City of Bremerton CAO
- KCC Chapter 12, Stormwater Drainage, and Kitsap County Stormwater Design Manual.
- BMC Chapter 15, Stormwater Management Manual for Western Washington (SWMMWW) and LID Guidance Manual.

Other Potential Mitigation Measures

No additional mitigation measures are proposed for soil and geologic resources.

Water Resources

Incorporated Plan Features

Features of the Watershed Characterization & Framework Plan and Gorst Subarea Plan that serve as mitigation for potential impacts on water resources include the following concepts found in Guiding Principles and Goals and Policies:

- Identify and protect critical areas such as floodplains along Gorst Creek.
- Prioritize areas for restoration that would improve water quality.
- Protect and enhance water quality/quantity.
- Promote shoreline reclamation.

Additionally, capital facility improvements have been recommended to address runoff from impervious surfaces and flood-prone areas.

Applicable Regulations and Commitments

Surface water quality standards are implemented through the Clean Water Act Section 401 certifications, water quality modifications, and compliance with the standards in Chapter 90.48 RCW and WAC 173-201A. Applications for water quality related permits include the Joint Aquatic Resources Permit Application (JARPA) process, and the NPDES permits. In addition there are shoreline and critical area regulations applied by the City and County.

Other Potential Mitigation Measures

Other potential mitigation measures could include the following:

- During construction, future projects will need to comply with all construction-related stormwater requirements, including temporary erosion and sediment control, and development and implementation of a stormwater pollution and spill prevention plan.
- The project-specific design will determine the necessary permanent, long-term water quality treatment requirements, necessary for all vehicle-accessible areas and redevelopments. Large areas of landscaping or lawn, unless strict policies on pesticide and fertilizer use are adopted, will also be subject to water quality treatment requirements.
- No specific water quality treatment method is proposed at this point, but it is likely that treatment would consist of various LID systems to the extent feasible. Additional erosion protection improvements may be needed at project outfalls because of increased peak runoff rates caused by an increase in impervious surface.
- If Gorst Subarea Plan policies and BMPs are implemented with corresponding development regulations there would be incentives for the removal of existing impervious areas and smaller new impervious footprints. Implementation of these types of incentives and standards could result in beneficial effects on water resources.

The concept of allowing commercial or mixed uses on smaller impervious footprints could be extended to the Gorst Creek corridor and floodplain similar to Low Intensity Waterfront designation, recognizing the convergence of critical areas and difficulties of development in the floodplain. This would replace portions of Commercial Corridor in Alternative 2 and Gorst Mixed Use in Alternative 3.

Air Quality

Incorporated Plan Feature

The Gorst Subarea Plan includes policies promoting compact development as well as a policy on adapting to sea level rise. It also includes policies promoting incentives for increased heights and densities, increased landscaping, and energy reduction that could encourage GHG reduction. In addition Kitsap County and City of Bremerton Comprehensive Plans include additional land use and transportation goals that would encourage GHG reduction.

Applicable Regulations and Commitments

- National Ambient Air Quality Standards
- State Ambient Air Quality Standards

- Puget Sound Clean Air Agency State Outdoor Burning Regulations per Washington Clean Air Act at Chapter 70.94.743 RCW
- Puget Sound Clean Air Agency Regulations related to construction and operation including industrial and commercial air pollutant sources
- State of Washington GHG Reduction Limits
- City of Bremerton SKIA Subarea Plan: A subarea plan for SKIA was adopted in 2012. A portion of the Gorst Watershed is located within the SKIA subarea. The SKIA subarea plan contains development incentives and requirements to ensure sustainable development and reduce GHG emissions.
- Kitsap County Energy Efficiency and Conservation Plan: In 2011, the Kitsap County developed an Energy Efficiency and Conservation Plan, which is focused on achieving greater energy efficiency and reducing GHG emissions. The plan outlines a list of recommendations that once implemented would serve to increase energy efficiency and reduce GHGs.

Other Potential Mitigation Measures

Construction Emission Control

Kitsap County and the City of Bremerton should require all construction contractors to implement air quality control plans for construction activities in the Gorst study area. See Section 3.3 *Air Quality* for more information.

GHG Reduction Measures

Washington State has established GHG reductions with 2020 (1990 levels), 2035 (20 percent reduction below 1990) and 2050 (50 percent reduction below 1990) limits and adopted requirements for capital investments, an energy strategy, and VMT reduction targets. However, neither Ecology nor EPA has adopted numerical GHG emissions standards, GHG reduction requirements, or numerical GHG significance thresholds that direct local government land use development actions. It is the City of Bremerton's and Kitsap County's responsibility to implement its GHG reduction requirements for new developments.

Table 3.3-8 *Potential GHG Reduction Mitigation Measures* in Section 3.3 *Air Quality* lists a variety of mitigation measures that could reduce GHG emissions caused by transportation facilities, building construction, space heating, and electricity usage (Ecology 2008). The table lists potential GHG reduction measures and indicates where the emission reductions might occur. Kitsap County and the City of Bremerton could require development applicants to consider the reduction measures shown in Table 3.3-8 *Potential GHG Reduction Mitigation Measures* for their projects. Kitsap County and the City of Bremerton can incorporate potential GHG reduction measures through its goals, policies, or regulations, including the proposed Planned Action Ordinance.

In addition, additional vehicle trip reduction measures and land-use-related GHG reduction measures have been published by various air quality agencies. For example, Table 3.3-9 *SMAQMD² Recommended Measures for Land Use Emission Reductions* lists the emission reduction measures developed by SMAQMD, 2010. The table lists SMAQMD's estimated "mitigation points" value, where each point value corresponds to the percent reduction in emissions. For example, a mitigation point value of 1.0 corresponds to a one percent reduction in land-use-related emissions. SMAQMD developed this table to quantify reductions in criteria pollutant emissions, but the listed measures would also generally reduce GHG emissions. This table could also be used as a source of potential GHG reduction measures that could be implemented in goals, policies, or regulations, including the proposed Planned Action Ordinance.

² Sacramento Metropolitan Air Quality Management District

Plants and Animals

Incorporated Plan Features

New plans that would be implemented under Alternatives 2 and 3 include features that would serve as mitigation for impacts to plants and animals within the study area. Regulation amendments would incorporate the suggested management measures shown in Table 2-8 *Integrated Watershed Processes and Habitat Results and Management Measures*.

Possible plan features that would serve as mitigation for potential impacts to plants and animals include the policies and BMPs that address:

- Minimizing new development and maintaining forest cover in areas that have high wildlife habitat value.
- Maintaining appropriate zoning to protect areas with high wildlife habitat value.
- Restoring areas with high habitat value or a high potential to provide salmon refugia.
- Implementing measures to reduce erosion and sediment export in areas identified for future development (e.g., buffers, setbacks from steep slopes, reduction of overland flow through infiltration).

Capital facility improvements may include removal or repair of culverts and other fish passage blockages that restrict the movement of fish upstream. Other improvements would address stormwater deficiencies and flooding issues, which would help reduce associated water quality impacts and improve aquatic habitats.

Applicable Regulations and Commitments

- City of Bremerton Comprehensive Plan – Environment Chapter
- Kitsap County Comprehensive Plan – Natural Systems Chapter
- Kitsap County CAO
- City of Bremerton CAO
- Kitsap County Shoreline Master Program
- City of Bremerton Shoreline Master Program
- Federal regulations that pertain to the protection of plants and animals and their habitat include the Endangered Species Act, CWA, Migratory Bird Treaty Act, and the Marine Mammal Protection Act.

Other Potential Mitigation Measures

- Consider wildlife corridors and connectivity when designing and permitting new developments within the Gorst Creek Watershed.
- Implement clearing of vegetation and construction activities outside the breeding period for sensitive bird species and migratory birds, as feasible.
- Consider applying common shoreline standards, such as one of the shoreline buffer options in this Draft EIS Appendix D *Shoreline Buffer Comparison & Options* or another similar option to provide for compatibility of shoreline buffer standards, particularly for Gorst Creek.

Noise

Incorporated Plan Features

Under Alternative 3, the proposed balance of residential and commercial uses would reduce future traffic congestion on state routes compared to Alternatives 1 and 2 which have about the same level of congestion. Please see Section 3.11 *Transportation*.

Applicable Regulations and Commitments

- BMC Chapter 6.32 (Noise Levels) establishes limits on noise levels and durations of noise crossing property boundaries with the City of Bremerton.
- KCC Chapter 10.28 (Noise) establishes limits on noise levels and durations of noise crossing property boundaries within the unincorporated areas of Kitsap County.
- The FHWA has adopted criteria for evaluating noise impacts associated with federally funded highway projects, and for determining whether such impacts are sufficient to justify funding of noise abatement. These criteria are specified in the Code of Federal Regulations (23 CFR 772), Procedures for Abatement of Highway Traffic Noise and Construction Noise. WSDOT has adopted the FHWA Noise Abatement Criteria for evaluating noise impacts and determining whether such impacts are sufficient to justify funding of noise abatement for roadway improvement projects with state funding. Any roadway improvements that would occur within the study area that would use state or federal funding would be subject to State and/or FHWA policies and procedures for evaluating traffic noise impacts and noise abatement. In cases where no state or federal funding is involved, the WSDOT and FHWA protocols are not applicable.

Other Potential Mitigation Measures

Section 3.5 *Noise* provides potential mitigation measures regarding site planning, noise barriers, and building construction that are summarized below:

- Proper site planning to reduce noise impacts should be considered for all noise sensitive developments.
- Noise barriers such as walls and earthen berms are commonly used to mitigate noise from ground transportation, commercial and industrial sources. Noise barriers can be used to reduce the noise level both outdoors and indoors.
- The location of a building on its site, the arrangement of rooms, and the location of doors and windows all have a bearing on interior noise control.

The following mitigation measures are general and programmatic in nature, and may be further refined in project-specific SEPA documents applicable in the watershed or applied in the Planned Action Ordinance in the UGA.

- Revise the Noise Ordinance and condition development proposals to achieve the following:
 - Provide hourly and maximum property line noise level limits for all major zoning districts defined in the Zoning Ordinance
 - Limit the hours of deliveries to commercial, mixed use, and industrial uses adjacent to residential and other noise sensitive land uses
 - Limit the hours of operation for commercial and retail to limit noise intrusion into nearby residential and other noise sensitive land uses
 - Limit noise levels generated by commercial and industrial uses
 - Limit outdoor industrial activities or operations to control excessive noise at adjacent residential properties
 - Limit the hours of operation of high noise-generating industrial equipment
 - Limit the hours of operation for refuse vehicles and parking lot sweepers if their activity results in an excessive noise level that adversely affects adjacent residential uses
 - Require the placement of loading and unloading areas so that commercial buildings shield nearby residential land uses from noise generated by loading dock and delivery activities. If necessary, additional sound barriers shall be constructed on the commercial sites to protect nearby noise sensitive uses

- Require the placement of all commercial HVAC machinery to be placed within mechanical equipment rooms wherever possible. (Equipment manufacturer's specifications for venting and access to outside air shall be maintained.)
- Require the provision of localized noise barriers or rooftop parapets around HVAC, cooling towers, and mechanical equipment so that line-of-sight to the noise source from the property line of the noise sensitive receptors is blocked. (Equipment manufacturer's specifications for venting and access to outside air shall be maintained.)

In project-specific SEPA documents applicable in the watershed or through the Planned Action Ordinance in the UGA, the Kitsap County and City of Bremerton should require construction contractors to implement the following measures during construction activities through contract provisions and/or conditions of approval as appropriate:

- Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., mufflers, silencers, wraps).
- Construction operations and related activities associated with the project shall comply with the operational hours outlined in the Kitsap County or City of Bremerton Noise Ordinance.
- Construction equipment shall not be idled for extended periods of time in the vicinity of noise sensitive receptors.
- Locate fixed and/or stationary construction equipment as far as possible from noise sensitive receptors (e.g., generators, compressors, rock crushers, cement mixers).
- Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on powered construction equipment.

Where feasible, temporary barriers shall be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. See Section 3.5 *Noise* for additional detail.

Hazardous Materials

Incorporated Plan Features

The Watershed Characterization & Framework Plan and Gorst Subarea Plan do not contain features that are specific to hazardous materials. However, features of both plans would have the indirect benefit of reducing risks of exposure to hazardous materials over the long term. Regardless of the land use alternative selected, the Gorst UGA would no longer have the urban industrial designation, meaning that new developments would have a lower potential for releases of hazardous materials than some current land uses.

Features of the Watershed Characterization & Framework Plan and Gorst Subarea Plan that would minimize flooding and increase infiltration of stormwater would help reduce risks of surface water contamination by reducing the likelihood that flood water or stormwater would run onto contaminated sites such as the Bremerton Auto Wrecking Landfill. These stormwater features are discussed in detail in Section 3.2 *Water Resources*.

Applicable Regulations and Commitments

Federal hazardous material and waste laws and regulations would be applicable to hazardous substances used, stored, or generated by the project. Applicable federal laws include the RCRA; Hazardous and Solid Waste Amendments; CERCLA (aka Superfund); and Superfund Amendments and Reauthorization Act. Pursuant to regulations promulgated under Section 102 of CERCLA, as amended, release of a reportable quantity of a hazardous substance to the environment in a 24-hour period must be reported to the National Response Center (40 CFR Part 302). Similarly, Washington hazardous material and waste laws and regulations would be applicable to hazardous substances used, stored, and generated by the project. The Model Toxics Control Act (mobile

source air toxics) requires reporting of a release of any hazardous substance within 90 days of the release (or within 24 hours for releases from a UST; WAC 173-340-300). Cleanup activities at contaminated sites are conducted under the MTCA and disposal of contaminated materials are conducted under the RCRA.

Demolition of older facilities may require asbestos and lead-based paint mitigation. Under the Washington Department of Safety and Health asbestos standards (WAC 296-62, 296-65, and 296-155), thermal system insulation (pipe lagging, boiler insulation, etc.), surfacing materials (spray-on acoustical plasters, troweled on plaster coatings, etc.) and flooring materials (vinyl tile, sheet goods, etc.) are all presumed to contain asbestos in buildings built before 1981 unless these materials are shown not to contain asbestos by a certified contractor. Demolition of asbestos in the project area is regulated by the Puget Sound Clean Air Agency (Article 4: Asbestos Control Standards) and requires an asbestos survey, a notification of demolition, verification that all asbestos was properly removed, and proper disposal of the asbestos-containing materials.

The Washington State Department of Commerce (WAC 365-230), regulates certification, accreditation, enforcement and compliance for firms and individuals to use lead-safe work practices when working on pre-1978 homes or child-occupied facilities. The regulations apply to training and certification requirements for individuals and firms and to accreditation requirements for training programs.

Other Potential Mitigation Measures

The following general mitigation measures would minimize or eliminate construction impacts within the Study Area and could be incorporated into the Planned Action Ordinance:

- Since encountering unreported spills or unreported underground fuel tanks is a risk when performing construction, require contractors to provide hazardous materials awareness training to all grading and excavation crews on how to identify any suspected contaminated soil or groundwater, and how to alert supervisors in the event of suspected contaminated material. Signs of potential contaminated soil include stained soil, odors, oily sheen, or the presence of debris.
- Require contractors to implement a contingency plan to identify, segregate, and dispose of hazardous waste in full accordance with the MTCA.
- Require contractors to develop and implement the Stormwater Pollution Prevention Plan, BMPs, and other permit conditions to minimize the potential for a release of hazardous materials to soil, groundwater, or surface water during construction.
- Require contractors to follow careful construction practices to protect against hazardous materials spills from routine equipment operation during construction; prepare and maintain a current spill prevention, control, and countermeasure plan, and have an individual on site designated as an emergency coordinator; and understand and use proper hazardous materials storage and handling procedures and emergency procedures, including proper spill notification and response requirements.
- Require contractors to identify all ACM and lead-based paint in structures prior to demolition activities in accordance with 24 CFR Part 35. If ACM or lead-based paint is identified, appropriately trained and licensed personnel would contain, remove, and properly dispose of the ACM and/or lead based paint material according to federal and state regulations prior to demolition of the affected area.
- If warranted, require contractors to conduct additional studies to locate undocumented USTs and fuel lines before construction of specific development projects (areas of concern include current and former commercial and residential structures) and will permanently decommission and properly remove USTs from project sites before commencing general construction activities.

The following general mitigation measure would minimize or eliminate operational impacts within the Study Area and could be incorporated into the Planned Action Ordinance:

- Require applicants for development on properties identified as having potential for contamination to conduct a thorough site assessment. If contamination is discovered then require the applicant to comply with all state and federal regulations for contaminated sites.

Land Use Patterns

Incorporated Plan Features

Adoption of the Watershed Characterization & Framework Plan and the Gorst Subarea Plan are part of both action alternatives. Adoption of these two plans would include the following:

- Alternatives 2 and 3 would include implementation of new capital facility and urban design improvements, such as streetscape improvements and trails.
- Alternatives 2 and 3 would include adoption of new policies promoting amended stormwater and habitat regulations throughout the Gorst Creek watershed.
- Alternatives 2 and 3 would include policies and urban design concepts that would improve the landscape, streetscape, and site design of developments.
- As described above, the land use designations proposed for Alternative 3 would guide development toward a predominantly horizontal or vertical mixed-use pattern. Associated development regulations and design guidelines in the subarea plan would ensure that incompatibilities between more intense uses and less intense uses are minimized.

Applicable Regulations and Commitments

In addition to the new stormwater regulations that would be applied to the Gorst Creek watershed and the design guidelines and development regulations that would be applied to the Gorst UGA, the following regulations and commitments would help mitigate impacts regarding land use compatibility throughout the watershed study area.

- KCC 17.382 – Density, Dimensions, and Design
- KCC 17.385 – Landscaping
- KCC Title 19 – CAO

Other Potential Mitigation Measures

Adoption of implementing zoning and urban design regulations to fulfill Draft Gorst Subarea Plan policies would help mitigate changes to land use patterns and compatibility. It is anticipated that such regulations would be prepared with a Preferred Alternative.

Socio-Economics

Incorporated Plan Features

Under Alternative 2 and Alternative 3, the Watershed Characterization & Framework Plan and the Gorst Subarea Plan would be adopted. The adoption of these plans includes specific features that help mitigate for the impact of additional people and economic activity within the watershed. Features of the plans include:

- Implementation of new capital facility improvements and urban design improvements.
- Adoption of amended stormwater and habitat regulations throughout the Gorst Creek watershed.
- The creation of new land use designations, development regulations and design guidelines in Alternative 3 to minimized impacts of development, especially in environmentally sensitive areas.

Applicable Regulations and Commitments

In addition to the incorporated plan features, the following regulations and commitments would help mitigate impacts of additional people, activity, and development within the watershed and UGA. Below are listed key sections of Kitsap County's code and Comprehensive Plan.

- KCC 17.382 – Density, Dimensions, and Design
- KCC 17.385 – Landscaping
- KCC Title 19 – CAO
- Kitsap County Capital Facility Plan, an appendix to the Comprehensive Plan

Corollary chapters of the BMC and Comprehensive Plan include:

- BMC Title 20, Division III. Zoning, with development standards in each zone as well as general and specific standards for particular uses
- Chapter 20.50, Landscaping
- BMC Chapter 20.14, Critical Areas
- Bremerton City Services Element of Comprehensive Plan

Other Potential Mitigation Measures

None.

Aesthetics

Incorporated Plan Features

Watershed

The Gorst Creek Watershed Framework & Characterization Plan identifies areas for protection, restoration, and development. The effects of these actions on aesthetics relate to the maintenance of a more natural or rural visual character, the maintenance of vegetation cover, and the minimization of impervious areas.

Areas of protection are to be managed for the maintenance of forest cover, limited clearing, and minimal impervious surfaces. Areas identified for protection include the CUL and other forested areas in the north central portion of the watershed.

Areas of restoration would promote the re-establishment of habitat, including forest cover, riparian areas, and wetlands. Areas of restoration include the Gold Mountain Golf Club in the western portion of the watershed, and rural residential areas along Sunnyslope Road and to the west of the Gorst UGA. Existing development would remain in these areas, but new regulations would gradually increase native habitat.

Areas of development are considered to be suitable for growth, but would implement measures to control erosion and promote infiltration. Clustered development and LID would be encouraged for new development in these areas. Clustered development allows for the permitted density of a proposed development to be located on a smaller portion of a site, while requiring that the remainder portion be kept in a natural state.

LID is a method of land development that seeks to mimic pre-development hydrology through the use of clustering, retaining native vegetation, and minimizing impervious surfaces, among other measures.

Identified areas of development include the SKIA area and adjacent areas, and the currently developed areas of the Gorst UGA and the McCormick Woods area of the City of Port Orchard. SKIA would be subject to its recently adopted design guidelines. McCormick Woods is a master planned development subject to a development agreement. The Gorst UGA would have its own design guidelines in the Subarea Plan as further described below.

Gorst UGA

The Gorst Subarea Plan projects growth for the UGA that differ for each alternative. These growth projections would affect aesthetics within the UGA as a result of differences in the extent of development expected within the UGA, the mix of development types expected (e.g., residential versus commercial), and the density of development expected (e.g., medium density residential versus low density residential). The primary means of implementation would be zoning and development regulations that determine allowed and prohibited uses and establish minimum and maximum densities.

Applicable Regulations and Commitments

Current regulations and policies that may affect the aesthetic characteristics of the watershed and UGA include Kitsap County and City of Bremerton comprehensive plans, shoreline master programs, critical area regulations, and zoning and development regulations, including those addressing landscaping, lighting, signage, and project review procedures. Following is a list of some of the applicable regulations and policies.

Kitsap County

- 2012 Comprehensive Plan
- KCC Title 16 Land Division and Development
- KCC Title 17 Zoning
- KCC Title 19 CAO
- KCC Title 21 Land Use Development and Procedures
- Shoreline Master Program (2013 updated draft adopted by Kitsap County, currently in review by Ecology) – also codified as KCC Title 22

City of Bremerton

- 2004 Comprehensive Plan
- BMC Title 20 Land Use Shoreline Master Program (update adopted by City of Bremerton, currently in review by Ecology) – part of BMC Title 20 Land Use, Chapter 16

Other Potential Mitigation Measures

Once a Preferred Alternative is selected development and design regulations would be prepared and are anticipated to address:

- Allowed and prohibited uses/development types
- Minimum and maximum density
- Building height
- Building setbacks
- Maximum lot coverage
- Maximum impervious area
- Critical area buffers

In addition other City or County regulations such as those governing signage, lighting, and landscaping would apply.

Future design guidelines developed with the Preferred Alternative would likely establish discretionary review of future development proposals focusing on the design of the public realm and those portions of private

development sites that directly affect the public realm. The design guidelines are intended to promote walkability, complete streets, identifiable character, the efficient and coordinated use of land and infrastructure, and LID. Accordingly, the design guidelines may address:

- Streetscape guidelines
- Site planning guidelines

The streetscape guidelines apply to the design of public rights-of-way. Streetscape guidelines would address:

- Design of the roadway, including width of travel, bicycle, and parking lanes
- Design of the curb zone, which includes street trees and other amenities and infrastructure
- The sidewalk
- The transitional zone, which is the area between the sidewalk and edge of right-of-way
- Building frontage elements such as the provision of weather protection where buildings abut the right-of-way

The streetscape guidelines could vary based on type of roadway.

The site planning guidelines associated with the Preferred Alternative would likely address the design of individual building sites with regard to several aspects, including:

- Building orientation, including the location of entrances
- Building façade, including street-facing windows, building articulation, and blank wall limitations
- Parking and vehicular access, including location of parking, curb cuts, shared parking, and pedestrian accessibility

Cultural Resources

Incorporated Plan Features

The Draft Watershed Characterization & Framework Plan proposes the following Guiding Principle and Policy:

- Promote interpretive art, signage, and public spaces that recognize cultural history and environmental features
- Celebrate cultural history in the watershed through interpretive displays and events. Protect sensitive cultural resources from disturbance.

Applicable Regulations and Commitments

Federal and state laws would apply as listed in Section 3.10 *Cultural Resources*, “Regulatory Context” section.

Kitsap County and the City of Bremerton have adopted historic preservation regulations to promote a special tax valuation to promote historic site rehabilitation and preservation and protect important archaeological and historic sites. Additional County and City regulations include:

- Kitsap County recently approved (January 2013) a shoreline master program undergoing Ecology review. It includes several measures designed to protect cultural resources including that “all Tribal Historic Preservation Officers (THPOs) for tribes with jurisdiction will be provided the opportunity to review and comment on all development proposals in the Kitsap County shoreline jurisdiction, both terrestrial and aquatic, in order to ensure all known or potential archaeological sites, TCP and Traditional Cultural Landscapes are acknowledged, properly surveyed and adequately protected.” In addition, “sites with known or potential archaeological resources, as determined pursuant to the resources listed at the beginning of this section, shall require a site inspection by a professional archaeologist” and “work on sites with identified archaeological resources shall not re-commence until authorized by the Department of Archaeology and Historic Preservation through an Archaeological Excavation and Removal Permit, which may condition development permits.”
- KCC 18.12.020, Eligible lands. The Open Space Act (Chapter 84.34 RCW) describes lands which may be considered for current use assessment as open space. Kitsap County has refined this definition to a prioritized list of lands which may be eligible for enrollment in the open space taxation program within the unincorporated area of Kitsap County. Kitsap County provides for the preservation of any land area, the preservation of which in its present use would preserve historic sites.
- Bremerton has recently adopted a Shoreline Master Program that would when approved by Ecology include several protective measures including “a site assessment by a qualified professional archaeologist or historic preservation professional and ensure review by qualified parties including the Washington State Department of Archaeology and Historic Preservation, and the Suquamish Tribe Archaeology and Historic Preservation Program” for properties with known cultural resources and “stop work” orders on any newly discovered cultural features with a requirement for notification of the State and tribes and an assessment.

Other Potential Mitigation Measures

A cultural resources study should be conducted at the applicant’s expense for specific projects within High Probability Areas (Table 3.10-6 *Cultural Resources Mitigation Measures*) to determine if archaeological sites, TCPs, or historic built environment resources are present that may be significant. This should include but is not limited to background research, consultation with appropriate Tribes and interested parties, field study, and reporting. A desktop review of existing background information regarding cultural resources should be conducted at a minimum for projects within Moderate Probability Areas to determine if resources older than 50 years are present requiring evaluation and/or additional field studies. Table 3.10-6 *Cultural Resources Mitigation Measures* identifies the potential mitigation measures for significant cultural resources and when they should be completed.

Transportation

Incorporated Plan Features

All alternatives would implement City of Bremerton and County Comprehensive Plan Transportation Elements including adopted policies regarding levels of service, concurrency, TDM, etc.

The Gorst Creek Watershed Characterization & Framework Plan and Gorst Subarea Plan include the following policies that would address transportation impacts:

- Manage land use and growth to avoid increases in traffic congestion, and create opportunities for improvements to existing congestion.
- Improve safety and circulation, and improve transportation mode choices including transit, bicycle, pedestrian, and automobiles.
- Encourage improved Kitsap Transit service such as added park and ride facilities.
- Design roads to incorporate gateway treatments, boulevard style streetscape improvements, and access improvements to invite the community to Gorst and allow convenient travel to regional businesses.

In addition, applicable to Alternatives 2 and 3, the Gorst Subarea Plan also identifies areas where connectivity improvements for non-motorized travel should be considered.

Applicable Regulations and Commitments

Current adopted County or City of Bremerton regulations or programs as described in the Affected Environment of Section 3.11 *Transportation*.

Other Potential Mitigation Measures

Belfair Road is projected to operationally deficient prior to 2035. This roadway was identified in the Kitsap County UGA Remand SEIS as needing widening from 2 to 4 lanes. All of the other County roadways within the Gorst Sub Area have capacity to support the additional traffic associated with all three alternatives.

Due to the lack of capacity on SR 3 and SR 16 within the center of Gorst as well as a variety of merging and diverging movements, any new developments or redevelopments should be designed to direct traffic either north (Sherman Heights) or west (Sam Christopherson Avenue or Belfair Valley Road) of the SR 3/ SR 16 junction.

While access to the north via Sherman Heights Road does not provide the most direct route to Werner Avenue and SR 3, this corridor (including Sherman Heights Road, Kent Avenue, 3rd Avenue and Union Avenue) should be evaluated for spot intersection improvements to make this route and attractive route for traffic originating in the Gorst UGA to head north to avoid having to access SR 3 in central Gorst.

While Werner road is north of the Gorst UGA, this roadway is considered an important route for Gorst UGA traffic to access SR 3. The Werner Road corridor between Union Avenue and SR 3 should be evaluated as part of traffic impact analysis reports prepared for new development in order to optimize the traffic flow on this corridor.

To address increased pedestrian demand between the proposed residential areas and the waterfront commercial and recreation land uses associated with Alternatives 2 and 3, consideration should be made to construct grade separated pedestrian overpasses that would connect the both the residential and walkable commercial areas that are on both sides of SR 3 and SR 16. The exact location(s) of these overpasses need to be determined in conjunction with any proposed highway improvements in this area.

Fire Protection and EMS

Incorporated Plan Features

- The County CFP determines LOS standards for fire protection/EMS. Future needs and costs can be determined based on these standards. Under the CFP, the County fire and rescue districts would continue to improve fire protection efficiency by focusing on eliminating overlapping responsibilities and system inefficiencies, as well as coordinating service provision with population growth.
- From the County perspective, the No Action Alternative levels of growth are already accounted for in existing planning documents due to the adoption of the 2012 Final Kitsap County Comprehensive Plan and CFP.
- Alternatives 2 and 3 focus growth and concentrate densities, allowing for improved efficiency of service, such as potentially lower response times.

Applicable Regulations and Commitments

- New development would be required to meet City of Bremerton and County codes, as well as International Fire Code and International Building Code regulations, regarding the provision of fire hydrants, fire flow, alarm systems, sprinklers, and emergency vehicle access.

Other Potential Mitigation Measures

- If the City of Bremerton experiences unexpected demand needs due to annexation of Gorst, the City of Bremerton could work with SKFR to develop a Mutual Aid Agreement to serve the Gorst UGA area. This agreement could include information on sharing levy revenues generated within the Gorst UGA boundaries.

Law Enforcement

Incorporated Plan Features

- Alternatives 2 and 3 focus growth and concentrate densities, allowing for improved efficiency of service. Creating a more compact development pattern allows for smaller patrol areas and faster response times.
- If urban areas are annexed into adjoining cities or incorporated into new cities, patrol-related functions may be assumed by the cities, while joint use of some facilities (e.g., jails) could be retained at the County level.

Applicable Regulations and Commitments

- Police departments and the Sheriff's Office are maintained primarily through the general fund, which is funded through sales and property tax revenues. The increased tax base associated with increased population and development would increase tax revenues and bonding potential, providing additional funding for law enforcement services and facilities.

Other Potential Mitigation Measures

- In order to address future deficiencies, the Kitsap County Sheriff's Office could choose to adjust their LOS standards to reflect the likely service levels in 2035, given estimated population growth and planned facilities.
- The City of Bremerton and County could pursue implementation of mutual aid agreements if increasing Gorst population impacts levels of service.

Schools

Incorporated Plan Features

- The County's regular review of the CFP in coordination with the school districts should allow for ongoing long-range planning for educational services.

Applicable Regulations and Commitments

- School districts are required to plan for growth over time by regularly updating their six-year capital improvement program.
- Adopted school impact mitigation fees would be collected for new residential development within Gorst if it remains in unincorporated Kitsap County.

Other Potential Mitigation Measures

- To address enrollment changes on an ongoing basis, prior to reaching the level of demand that would necessitate construction of a new facility; districts can use portable classrooms to temporarily meet growth demands. Portables can be funded by impact fees paid by residential developers.
- The County, cities, and school districts could work together to identify potential sites for new school development in areas where higher amounts of growth are planned.

Parks, Recreation, and Open Space

Incorporated Plan Features

- Gorst Alternatives 2 and 3 show County-purchased Open Space/Recreation land along Sinclair Inlet. The property on the south shore could allow for some recreation activities consistent with environmental limitations. Property on the north shore is inaccessible but provides open space and environmental protection.
- **Kitsap County.** The County's 2012 Parks, Recreation, and Open Space (PROS) Plan sets forth strategies, goals, and objectives for development and management of parks, open space, and recreational facilities for a 5-year planning period.

- **Acquisition.** The County plans to acquire new trails, shoreline, and open space as part of the Parks Plan. One of its highest priorities is a partnership to acquire 7,000 acres known as the Kitsap Forest and Bay Project, which would effectively double the County's current park ownership and allow the County to meet all of its LOS standards in the next 20+ years with this increase in Open Space. This potential acquisition is not included in this analysis because the details have not been finalized and therefore it is not included in the Parks Capital Facilities Plan.
- **Partnerships.** In cases where the County has identified a need and has determined they will not be able to provide adequate capacity to meet demand, they will work to partner with other agencies to meet the demand. Partner agencies can assist with acquisition, funding upgrades, and providing technical expertise.
- **City of Bremerton.** The City has also developed a PROS Plan that aims to refine and improve its LOS standards going forward. Under this Plan, the City would create LOS standards that are geographically based in order to better measure how accessible parks are to residents. If the City adopts this Plan, it should review its LOS standards in relation to the location of the Gorst UGA to ensure its residents are being adequately served.

Applicable Regulations and Commitments

- **Kitsap County.** Impact fees are applied to all new housing developments. Fees could be reassessed to reflect increased costs of land for park acquisition, or increased impacts within areas of significant intensification such as the Silverdale or Port Orchard UGAs.

Other Potential Mitigation Measures

- **Kitsap County.** The County could adopt updated Base LOS targets that will accommodate the eventual preferred alternative's growth in the Gorst UGA through 2035. This would involve changing the Base LOS for open space, regional parks, community parks, and potentially heritage parks, depending on the adopted alternative. The County would not need to adjust levels of service for shoreline access or trails.
- **City of Bremerton.** The City could require that master planned developments within the Gorst UGA provide parks and/or open space as part of the development in order to serve the residents of that development and offset the need for the City to acquire and develop additional facilities.

Libraries

Incorporated Plan Features

None.

Applicable Regulations and Commitments

- With additional development and population in the Gorst UGA, property tax revenues, which are the primary source of funding for the Kitsap Regional Library, would increase over time. These additional revenues could be used to purchase additional circulation materials for the Downtown Bremerton and Port Orchard libraries to offset the additional demand generated by growth.

Other Potential Mitigation Measures

- The Kitsap Regional Library could partner with the Cities of Bremerton and Port Orchard to acquire additional circulation materials or expand their local branches to accommodate growth in Gorst.
- The Kitsap Regional Library could increase the amount of circulation materials and services that are available online to reduce demand for physical library space and offset new growth in Gorst.

Power

Incorporated Plan Features

- Mixed-use and clustered development is encouraged in select areas under Alternative 3, and both Alternatives 2 and 3 would result in increased residential density over existing conditions. Providing power to higher-density and cluster development is often more efficient than provision of power to low-density development.

Applicable Regulations and Commitments

- All future development of energy resources and transmission facilities would be required to comply with federal and state laws, the regulations of the Northwest Power Planning Council, and the Washington Utilities and Transportation Commission (WUTC).

Other Potential Mitigation Measures

- As development permits are issued for future development in the Gorst UGA, either by Kitsap County or the City of Bremerton, PSE and CNG should be advised of large development or redevelopment projects and allowed to provide input on their ability to adequately serve the project.

Solid Waste

Incorporated Plan Features

- Focusing growth in existing UGAs and cities where solid waste services already exist would reduce impacts related to providing curbside pickup for added population and promote more curbside customers. There would also be less need for additional Recycling & Garbage Facilities (RAGFs).

Applicable Regulations and Commitments

- Coordination and monitoring at transfer facilities and RAGFs would be ongoing to ensure adequate solid waste capacity. Service levels for curbside collection as outlined in the CFP would continue or improve to encourage recycling.

Other Potential Mitigation Measures

- Based on available landfill capacity at the County's current contracted landfill location a new or extended contract could be enacted to provide landfill capacity well beyond the 2025 planning horizon.

Water, Wastewater, and Stormwater

Incorporated Plan Features

All alternatives including the No Action would be subject to NPDES programs and rules. Continued application of County and City NPDES programs and stormwater manuals (which incorporated LID) will help reduce impacts.

Features of the Gorst Creek Watershed Characterization & Framework Plan and Gorst Subarea Plan that serve as mitigation include the following:

- Implement tailored stormwater standards for the Gorst Creek Watershed, including LID standards in areas of development, restoration and protection.
- Wherever practicable, new development and redevelopment should incorporate LID measures such as infiltration. Where impractical, stormwater detention may be allowed.
- Minimize clearing and promote stormwater management in the upper and middle portions of the watershed to reduce impacts to the lower watershed.
- Promote green infrastructure for both new and existing facilities, such as by identifying areas to target for stormwater retrofits.

- Allow zero direct and untreated discharge to streams and marine water bodies in association with development and redevelopment.

Additionally, capital facility improvements have been recommended measures for addressing stormwater deficiencies. Implementation of these improvements could result in beneficial effects on stormwater and indirectly protect drinking water and wastewater facilities by reducing flood-prone damage and erosion.

Applicable Regulations and Commitments

Applicable regulations and commitments include the following:

- *Safe Drinking Water Act*. Sets national primary drinking water standards. The act includes the designation of sole source aquifers. The 1996 amendment identifies source water protection.
- *CWA*. Regulates discharge of stormwater from certain industries and municipalities. NPDES permit or water quality discharge permit. The EPA delegated the Department of Ecology the authority to implement these permits in Washington State.
- *Drinking Water Regulations Chapter 70.116 RCW*. Directs the Washington State Department of Health to assure safe and reliable drinking water and protect drinking wells.
- *Washington State Water Pollution Control Act Chapter 90.48 RCW*. Regulates various source control activities related to sediment management.
- *City of Bremerton Comprehensive Wastewater Plan and Updates*. Ensures adequate existing and future wastewater capacity.
- *City of Bremerton Stormwater Management Program*. Summarizes the actions to be taken by the City of Bremerton to fulfill its obligations as listed in the NPDES Phase II Municipal Stormwater Permit.
- *City of Bremerton BMC Chapter 15, Stormwater, SWMMWW and LID Guidance Manual*. Regulates for stormwater management associated with new development and redevelopment.
- *Kitsap County 20-year wastewater facility plan*. Ensures adequate existing and future wastewater capacity.
- *Kitsap County Surface and Stormwater Management Program*. Protects people, property and natural resources by reducing flooding and stormwater runoff, conserving groundwater, restoring fish habitat, and preventing stormwater pollution.
- *KCC Chapter 12, Stormwater Drainage, and Kitsap County Stormwater Design Manual*. Regulates for stormwater management associated with construction.
- Any future development would need to comply with applicable utility franchises and permits.

Other Potential Mitigation Measures

Other potential mitigation measures could include the following:

- Evaluate the effect on proposed utility relocations on other nearby utility infrastructure.
- Determine the exact location and depth of utilities and work with individual utility providers to verify the location.
- Complete utility relocation or modification, where feasible, prior to project-specific construction to reduce operational risks and reduce any potential disruption of service.

Telecommunications

Incorporated Plan Features

- Mixed-use and clustered development is encouraged in select areas under Alternative 3, and both Alternatives 2 and 3 would result in increased residential density over existing conditions. Providing wired communication services to higher-density and cluster development is often more efficient than provision to low-density development.

Applicable Regulations and Commitments

- Future construction of telecommunications infrastructure would be required to comply with federal and state laws, including the regulations of the FCC; the provisions of the Cable Television Consumer Protection and Competition Act, as appropriate; the regulations of the BMC; and the KCC.

Other Potential Mitigation Measures

- Encourage co-location of telecommunications facilities wherever appropriate and undergrounding of infrastructure to minimize aesthetic impacts.
- Encourage the use of appropriate site landscaping to screen telecommunications equipment from surrounding properties and the public realm.

Relationship to Plans and Policies

Incorporated Plan Features

The Watershed Characterization & Framework Plan and Gorst Subarea Plan provide a common set of plans and policies to ensure consistent and coordinated planning between the City of Bremerton, Kitsap County, and the Suquamish Tribe.

Applicable Regulations and Commitments

- In order to ensure consistency with GMA requirements, the City of Bremerton and Kitsap County will submit the Gorst plans to the Washington Department of Commerce for review and comment prior to adoption.
- As a preferred plan is prepared, the City of Bremerton and County will prepare a land capacity analysis prior to legislative adoption.

Other Potential Mitigation Measures

- The County and City of Bremerton could work with KRCC to reallocate population from undersized UGAs to Gorst to match Alternatives 2 or 3 population levels. This could be accomplished prior to the County and City of Bremerton's GMA required 2016 Comprehensive Plan Update. Until that time, the mineral resources designation could remain while the mine is still in active operation, thus not allowing residential growth until population targets are reallocated.
- The final Subarea Plan prepared for the preferred alternative could include coordinated shoreline and critical area standards. See EIS Appendix D *Shoreline Buffer Comparison & Options* for a description of options.

1.7 Significant Unavoidable Adverse Impacts

This section summarizes conclusions for each topic and indicates if there are residual impacts that are significant, unavoidable, and adverse despite the application of mitigation measures.

Geology/Soils

Under all of the alternatives, future development would lead to the loss of currently undeveloped soils within the UGA, which will eliminate their ability to support other uses. The area of land that is currently undeveloped but would be available for development ranges from 41 to 70 acres, depending on the alternative, plus land modified

in existing or future rights of way or on lands for public purposes. While the total acreage of soil lost is likely to be less than the acreage of developable acres, it would constitute an unavoidable adverse impact.

Under all alternatives, loss of soil from the watershed is likely to continue to occur as a result of flooding and stormwater runoff. Over the long term, these impacts would be greatest under Alternative 1, and lower under Alternatives 2 and 3.

Non-renewable mineral resources would continue to be extracted from the study area on an indefinite basis under Alternative 1, and on an interim basis under Alternatives 2 and 3. This ongoing extraction would constitute a long-term loss of these resources, although the material would be used for commercial purposes as intended by the GMA.

Water Resources

Under all alternatives, the Gorst Creek watershed and the Gorst UGA would experience additional population and employment growth. Development in the Gorst Creek UGA is anticipated under the alternatives would result in no significant unavoidable adverse impacts on water resources. All alternatives would have a minor effect on water resources from short-term construction related impacts. As previously described, Alternative 1 would have long-term moderate impacts on water resources. Both Alternatives 2 and 3 would provide long-term beneficial effects on water resources from adoption and implementation of the Watershed Characterization & Framework Plan. Alternative 3 provides the greatest ecological benefit by establishing a low intensity waterfront along the shoreline of Sinclair Inlet that would, as redevelopment occurs, partially restore natural hydrology along that portion of the shoreline.

Air Quality

No significant unavoidable adverse impacts on regional or local air quality are anticipated. Temporary, localized dust and odor impacts could occur during the construction activities. The regulations and mitigation measures described above are adequate to mitigate any adverse impacts anticipated to occur as a result of Gorst study area growth increases.

Plants and Animals

Most of the forested watershed is owned by the City of Bremerton and managed for very limited forestry and utility activities (see Section 3.14 *Relationship to Plans and Policies*). As such, large scale changes to wildlife habitat there are not anticipated under any alternative. One area designated for protection in the Watershed Characterization Study south of SR 3 (Assessment Unit 1) is zoned for Rural Residential uses by Kitsap County. Under Alternative 1, no added protective measures are considered and there could be a loss of forest cover that could displace wildlife. Under Alternatives 2 and 3, added measures such as LID requirements and clustering could mitigate that potential impact.

New impervious surfaces and cutting of trees would occur under all the alternatives particularly in the Gorst UGA but also on Rural Residential lands in the watershed, contributing to stormwater runoff, flooding, and sedimentation of surface water resources, which would impact aquatic species that occur within the watershed and UGA. These impacts would be greatest under Alternative 1, but reduced under Alternatives 2 and 3 as capital improvements to the stormwater system and BMPs to reduce erosion and sediment export would be implemented.

Noise

At the comprehensive planning level, implementation of the mitigation measures described above would avoid and/or reduce potential noise impacts to less than significant. If project-level impacts are identified as subsequent projects are proposed, specific mitigation measures would be required to meet Kitsap County and City of Bremerton noise limits.

Hazardous Materials

Under all of the alternatives future redevelopment of contaminated sites would presumably occur, potentially resulting in the release of hazardous materials to soil, groundwater, and surface water, or exposure of workers and the public to these materials. Most of these potential impacts would occur within the UGA, at industrial sites.

Contaminants from existing sites within the study area could continue to be transported off of these sites as a result of stormwater and flooding issues. Such movement of contaminants would continue to impact surface water, groundwater, and soil resources within the study area. These impacts would be greatest under Alternative 1, and lower under Alternatives 2 and 3, which would address stormwater and flooding issues in the UGA as well as limit future land clearing in areas of protection in the watershed. Contaminated sites would be avoided during project design when possible. Implementing the mitigation approaches described above would reduce adverse effects on human health and the environment.

Land Use Patterns

Under all alternatives, the Gorst Creek watershed in general, and the Gorst UGA in particular, would experience additional growth in population and employment. Vacant land in the Gorst UGA is anticipated to be developed, and some existing properties would redevelop over time. While the overall land use pattern in the area would be irreversibly changed, anticipated impacts can be mitigated with design and development standards.

Socio-Economics

Population, employment and housing will increase under any of the alternatives reviewed, to different degrees. Alternative 2 and Alternative 3 have the most growth in population and Alternatives 1 and 2 the most growth in employment. Additional growth in any of the scenarios will increase the demand for the development of housing and commercial uses. The additional growth will also result in secondary impacts on the natural and built environment and to the demand for utilities and public services, which is addressed in the appropriate sections of this EIS. Regarding the character of the local economy, there are no potential significantly adverse impacts are identified from the anticipated growth in population and employment.

Aesthetics

New development and redevelopment would result in changes to the current aesthetic conditions of the study area under all alternatives. The significance of visual impacts on the study area depends in large part on the values of those viewing the changes as well as the overall character and quality of the architectural and urban design features incorporated into future development.

Under all alternatives, temporary character and shading impacts would result from different building heights between adjacent properties as development of individual sites occurs. Currently, most properties in the study area are at low rise scales and have not developed to the extent allowed under present zoning. In some cases the action alternatives would allow greater heights than present zoning. Impacts would diminish as redevelopment becomes more widespread throughout the study area. Existing and potential development regulations regarding height limits, setbacks, and screening would mitigate for such impacts.

The overall aesthetic character of the study area would change under all alternatives as development and redevelopment occurs. All alternatives would be subject to mitigation measures in the form of policies, development regulations, and design standards that will mitigate for potentially adverse aesthetic impacts or result in a positive change to the aesthetic character of the study area. Therefore, no significant unavoidable adverse impacts on aesthetics are anticipated.

Cultural Resources

The impacts on cultural resources caused by new development associated with all studied alternatives could be significant and unavoidable, depending on the nature and proximity of the proposed development project.

Implementation of mitigation measures would identify potential impacts on cultural resources and reduce them to a less than significant level (Table 3.10-6 *Cultural Resources Mitigation Measures*).

Transportation

Implementation of any of the growth alternatives would result in increased traffic within the Gorst UGA and networks in south Kitsap County and Bremerton, with the lowest increase occurring under Alternative 3 and greater increases under Alternatives 1 and 2 (however, Alternative 2 is no greater than Alternative 1 No Action in terms of State Route congestion). Due to the large volume of regional "pass through" traffic that uses both SR 3 and SR 16, all three alternatives contribute a relatively small amount to cumulative volumes on state routes. While WSDOT has long range plans to address capacity on SR 3, the amount of widening of this roadway will be limited by the presence of Sinclair Inlet on the east side of the roadway, a steep hillside on the west side of the roadway and a railway crossing with abutments that limit widening.

Fire Protection and EMS

Future population growth and development will continue to increase the need for fire protection/EMS services under any studied alternative, and particularly the action alternatives. With mitigation, significant, unavoidable adverse impacts would not be anticipated.

Law Enforcement

Future population growth and development will continue to increase the need for law enforcement services and facilities under all alternatives. With mitigation, significant, unavoidable adverse impacts would not be anticipated.

Schools

The demand for school services and facilities will increase as new development occurs and the number of families with school-aged children increases. With mitigation, significant, unavoidable adverse impacts would not be anticipated.

Parks, Recreation, and Open Space

With the increase in population and urbanization of the Watershed and UGA under any of the alternatives, and particularly the action alternatives, there would be greater demand for parks, recreational facilities, and programs. To avoid impacts, the County and City could work with other agencies and regularly monitor population growth, service levels, and demand to bring supply and demand into balance; this can be accomplished with regular CFP updates as appropriate.

Neighborhoods surrounding existing, new or expanded parks would experience more activity in the form of vehicles and pedestrians. Cost for acquiring parks is expected to rise with the increased demand for urban land in the UGA over time.

Libraries

As population increases within the watershed and Gorst UGA, the demand for library services will also increase. The library system as a whole will experience increased demand as more people require greater collections of materials and other resources. With advanced coordination between the Library District, Kitsap County, and City of Bremerton; significant, unavoidable, adverse impacts are not anticipated.

Power

Population and employment growth under all studied alternatives, and particularly the action alternatives, will increase demands for energy that in turn will increase the need for additional facilities. Planning efforts to manage growth should reduce the demand and/or accommodate growth in a coordinated fashion than would otherwise occur.

Solid Waste

Future population growth and development would continue to increase the amount of solid waste generated in the county under any alternative, especially the action alternatives. With Solid Waste Management Plans, regularly updated as appropriate, no significant unavoidable adverse impacts are anticipated.

Water, Wastewater, and Stormwater

Under all alternatives, the Gorst Creek Watershed and the Gorst UGA would experience additional population and employment growth. Development in the Gorst Creek UGA is anticipated under the alternatives and comprehensive planning, as well as review of project specific development utility permits, would result in no significant unavoidable adverse impacts on water, wastewater, and stormwater.

Future project construction associated with any of the project alternatives could cause temporary service interruptions to existing utilities. Under the Alternative 1, the long-term higher frequency of maintenance on aging utility infrastructure and untreated stormwater discharging directly to fish-bearing streams, estuarine wetlands, and tidally influence waters is considered a moderate impact. Both Alternative 2 and 3 would have beneficial effects on stormwater management from adoption of the Watershed Characterization & Framework Plan.

Telecommunications

Population and employment growth under all studied alternatives will increase demands for telecommunications that in turn will increase the need for additional facilities. Planning efforts to manage growth should reduce the demand and/or accommodate growth in a coordinated fashion than would otherwise occur.

Relationship to Plans and Policies

With implementation of mitigation measures, no significant unavoidable adverse impacts are anticipated with regards to future plan consistency under any of the alternatives.

2.0 ALTERNATIVES

2.1 Introduction

The City of Bremerton, in partnership with Kitsap County and other state, federal, and tribal agencies, is planning the future of the Gorst Creek Watershed and Gorst UGA. These coordinated efforts are intended to:

- Make Gorst a place where people want to live, shop and recreate,
- Protect water quality, habitat and fish while fostering economic development,
- Identify areas for development, restoration and protection based on science,
- Adopt a land use plan for Gorst, and
- Implement a long-range capital improvement plan to provide for future utility services, public services and transportation needs.

Products of the planning effort to date include a Draft Gorst Creek Watershed Characterization & Framework Plan for the 6,000-acre watershed as a whole and a Draft Gorst Subarea Plan for the 335-acre Gorst UGA. This Draft EIS evaluates possible environmental impacts of the draft plans and alternatives. In addition to these plans and development regulations, the City of Bremerton and Kitsap County are considering designating a planned action for some or all of the Gorst UGA. A planned action provides more detailed environmental analysis during an area-wide planning stage rather than at the project permit review stage. Designating a planned action streamlines environmental review for development proposals consistent with EIS mitigation measures that are adopted in a planned action ordinance.

To illustrate a range of possible futures in Gorst, the following alternatives are evaluated in the Draft Gorst Subarea Plan and this Draft EIS:

- Alternative 1 (No Action) – Gorst is a relatively small highway-oriented commercial and industrial center
- Alternative 2 – Gorst is a well-designed regional commercial center
- Alternative 3 – Gorst becomes a complete community

Alternative 1 is a required alternative under the SEPA. It represents a continuation of the current Comprehensive Plan and regulations. Action alternatives represent a range of land use, growth, policies, and regulations and were developed as part of a public outreach process. These alternatives are discussed more fully in this Chapter.

2.2 Background

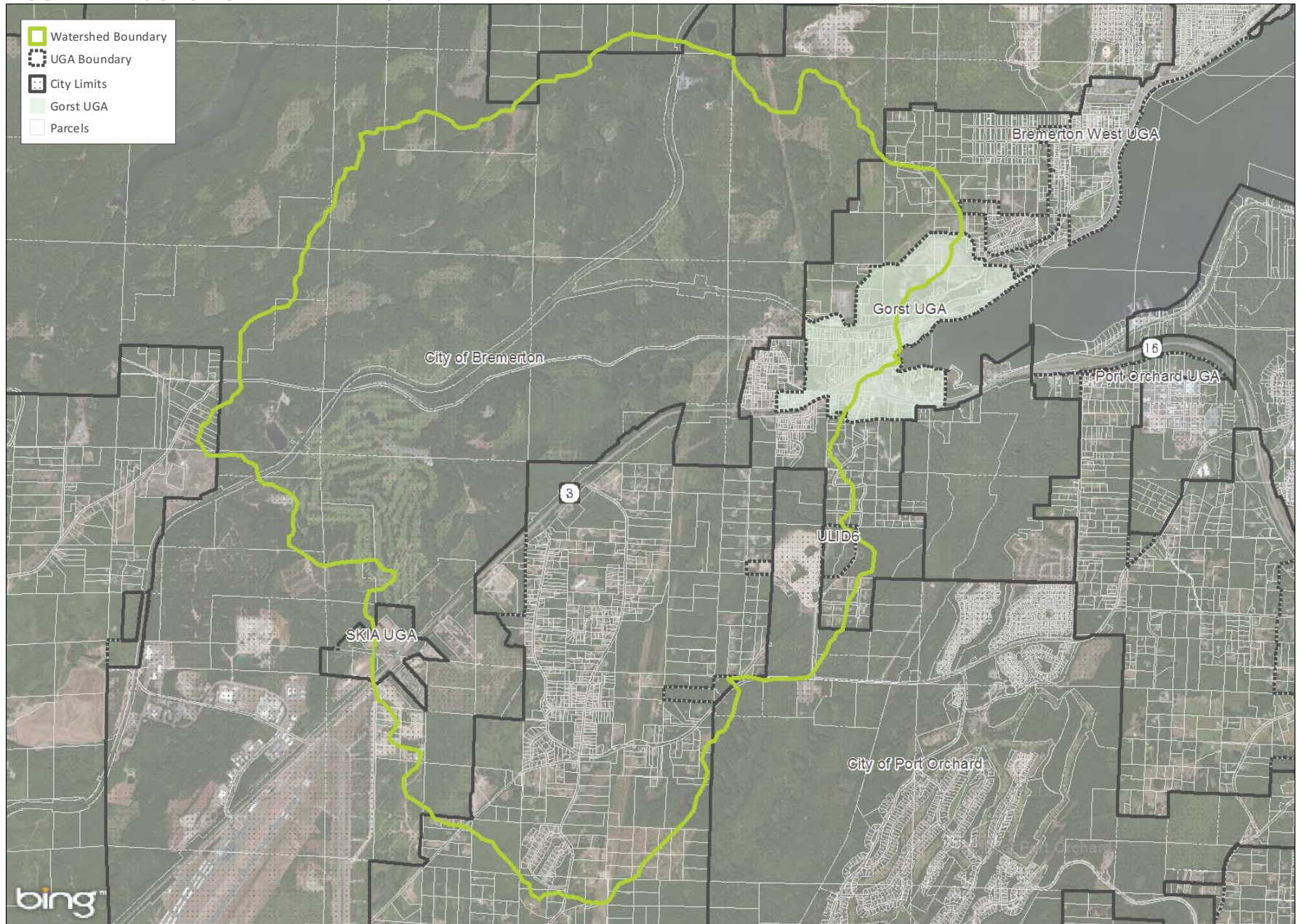
Study Area

The Gorst Creek Watershed (Figure 2-1 *Gorst Creek Watershed Aerial*) and Gorst UGA (Figure 2-2 *Gorst UGA*) together comprise the study area, and encompass over 6,000 acres in the southwestern portion of Kitsap County.

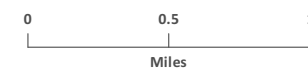
- About 3,597 acres comprise Bremerton city limits.
- The unincorporated Gorst UGA is approximately 335 gross acres in area (about half of which are in the watershed).
- Approximately 178 acres are in the McCormick Woods area of the City of Port Orchard.
- The balance of the watershed, about 1,941 acres, consists of rural unincorporated land.

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FIGURE 2-1 GORST CREEK WATERSHED AERIAL

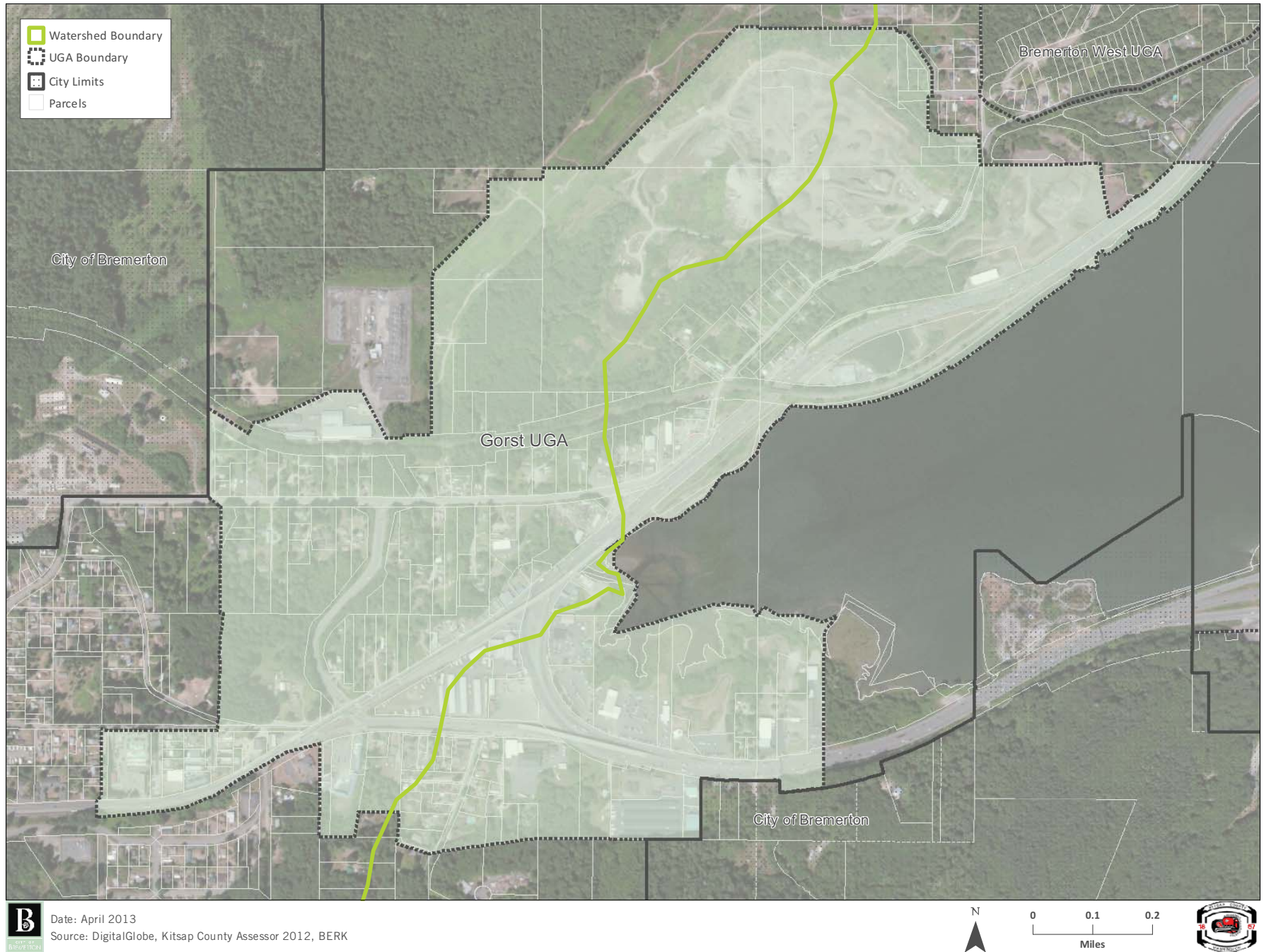


Date: May 2013
Source: Kitsap County Assessor 2012, WA State Department of Ecology, BERK



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FIGURE 2-2 GORST URBAN GROWTH AREA



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Current Conditions

The 6,000-acre Gorst Creek Watershed is diverse with thousands of acres of intact forest land, miles of streams and acres of wetlands, recreation at the Gold Creek Mountain Golf Course and Jarstad Park, as well as regional commercial uses along State Route (SR) 3 and 16, and unincorporated rural residential in between.

The Gorst Creek Watershed feeds the headwaters of Sinclair Inlet in the Puget Sound. While the overall watershed is largely undeveloped and forested, existing development is concentrated in the downstream areas around the mouth of Gorst Creek and along the shoreline of Sinclair Inlet. The Gorst Creek estuary is a major passageway and nursery for Puget Sound Chinook, Coho, and Chum salmon, along with Steelhead, and Sea-Run Cutthroat trout. The Suquamish Tribe and the Washington State Department of Fish and Wildlife co-manage a hatchery on Gorst Creek. The Tribe takes an active role in managing the natural resources within the watershed.

Having sub-optimal land use and environmental regulations for decades, development in the Gorst UGA, and especially along the Sinclair Inlet shoreline has occurred haphazardly. Upland residential development and associated clearing and lack of stormwater management have impacted water quantity and quality in the lowlands. Commercial and industrial activities have maximized impervious pavement resulting in pollutant runoff directly into adjacent receiving waters.

Historically, Gorst Creek has not met fecal coliform standards. Sewers were recently installed to address water quality concerns associated with fecal coliform. Sewers are also anticipated to make the developed land in the Gorst UGA more viable for redevelopment. Likewise, heavy traffic on State Routes 3 and 16 impacts the natural and built environment, but also may be attractive for future commercial development, with high volumes of traffic creating an economically desirable location.

Gorst Watershed Characterization & Framework Plan

The Watershed Characterization & Framework Plan is intended to promote environmentally and economically sustainable development in the Gorst Creek Watershed. The Draft Watershed Characterization & Framework Plan describes watershed conditions and objectives regarding appropriate places for development, restoration, and protection. The Draft Watershed Characterization & Framework Plan also identifies common goals for stormwater, habitat, and land uses. Both Kitsap County and City of Bremerton intend to adopt the Watershed Characterization & Framework Plan.

No UGA boundaries are proposed for change. Also no rural land use and zoning are proposed for change. However, the Draft Watershed Characterization & Framework Plan includes proposed goals addressing stormwater and LID measures. Kitsap County would implement the goals in the watershed through code amendments. Similarly, the City of Bremerton would apply stormwater management and LID measures in the watershed primarily on CULs.

Within the existing Gorst UGA boundaries, however, land use patterns *are* proposed for change through different land use alternatives described below under the Gorst Subarea Plan.

Gorst Subarea Plan

The City of Bremerton and Kitsap County have been developing a subarea plan to more directly and fully address future land use, urban design, stormwater, transportation, habitat protection, and other activities in the Gorst UGA. A subarea plan is an optional element of a comprehensive plan allowed under the GMA. Subarea plans apply to smaller focused areas than the comprehensive plan, which addresses the whole City of Bremerton or Kitsap County and its assigned unincorporated UGAs. Subarea plans are typically more detailed than a comprehensive plan and often establish specific visions, goals, policies, land use plans, design guidelines, zoning, infrastructure and public service needs, and other development regulations.

The Bremerton Comprehensive Plan includes several subarea plans for Downtown, Manette, SKIA, and several other locations; the City of Bremerton is now considering a subarea plan for the Gorst UGA to facilitate

coordinated Kitsap County-City of Bremerton planning and to anticipate a smooth transition from Kitsap County to City governance at the time of annexation, anticipated in the future.

Similarly, Kitsap County has a Comprehensive Plan including subarea plans for different urban and rural communities, such as Port Orchard/South Kitsap, Silverdale, Kingston, and other locations. Kitsap County intends to concurrently adopt the Gorst subarea plan, within its own Comprehensive Plan context.

Key components of the Draft Gorst Subarea plan include:

- Vision Statement
- Guiding principles, Goals, and Policies addressing land use, environment, stormwater and flooding, public services, and annexation
- Land Use Plan
- Urban Design Concepts

Once a preferred alternative is developed as described later in this Chapter, the Draft Subarea Plan will be revised to reflect the preferred vision and land use plan, and new development regulations, design guidelines, and a capital facilities plan will be prepared.

2.3 Public Review

The City of Bremerton and Kitsap County have created a variety of opportunities for public and agency input into the Watershed Characterization & Framework Plan. Gorst Subarea Plan, and Planned Action EIS. Key efforts are described below:

- The City of Bremerton's **website**, located at: <http://www.gorstwatershed.com/>, includes information about the project, links to draft products, and a comment form.
- An **Advisory Committee**, composed of representatives from Bremerton Planning Commission, City of Bremerton Council, Bremerton Mayor, Kitsap County Planning Commission, Kitsap County, the BOCC, and Suquamish Tribal Council, represents the interests of their respective bodies and convenes at key project milestones to address issues and concerns for Gorst Creek Watershed Plan. In January 2013, the Advisory Committee reviewed preliminary alternatives and provided direction and advice on the range of alternatives. The Advisory Committee suggested addressing road safety in guiding principles. Also, as a result of Advisory Committee input the preliminary alternatives were modified to show a lower intensity commercial designation along the waterfront (Alternative 3) and to identify an area that would not be subject to the planned action (areas waterward of highways in Alternative 2). These amended alternatives were then vetted at a public workshop and Planning Commission meetings. More meetings are planned in the spring and fall of 2013 as a set of preferred plans are developed.
- An extensive group of agencies, organizations and individuals are partnering to develop the plan, and working together as **Project Partners** to steer the project, including:

United States Environmental Protection Agency (EPA)	Suquamish Tribe
Ecology	Washington State Department of Fish and Wildlife
City of Bremerton	City of Port Orchard
Kitsap County	Kitsap County Health District (KCHD)
Port of Bremerton	West Sound Watershed Council
Sustainable Bremerton	Gorst property owners, Pat and Cheryl Lockhart

Project partners have met several times to discuss analysis methods and review technical documents such as the Watershed Characterization Study.

- **Scoping comment period and workshop.** Public and agency comment was solicited by the City of Bremerton as lead agency in a 21-day written scoping period from October 15 to November 5, 2012. Scoping notices and a meeting announcement were sent by mail to each property owner in the Gorst UGA, and to a list of federal, state, and local agencies and tribes. The City of Bremerton and Kitsap County also sent these documents by email to lists of persons interested in planning issues in the City of Bremerton and Kitsap County. The scoping notice was published in the Kitsap Sun on October 15, 2012 to notify any other persons having an interest in the project. The City of Bremerton, in coordination with the Kitsap County, also held a public meeting on October 29, 2012 to ask about the vision for Gorst and about the EIS scope. A table exercise asking participants to identify Gorst's strengths, weaknesses, opportunities, and threats (SWOT) was conducted. A scoping summary is provided in Appendix A *Scoping Summary*.
- **Preliminary alternatives workshop.** At a February 12, 2013 workshop, the City of Bremerton and Kitsap County asked public input about preliminary land use alternatives that should be evaluated in a Draft Subarea Plan and EIS. A postcard meeting announcement was sent by mail to each property owner in the Gorst UGA. A flier was emailed to persons who had participated in prior Gorst scoping events in fall 2012, and also to persons indicating a general interest in Kitsap County and City of Bremerton planning efforts. An article was published in the Kitsap Sun on February 7, 2013. As a result of the public workshop input, the preliminary alternatives were modified for analysis, including further emphasizing mixed uses in Alternative 3, further extending low density residential along Gorst Creek in both Alternatives 2 and 3, and recognizing additional Kitsap County-owned property as open space/recreation on the north side of Sinclair Inlet in both Alternatives 2 and 3.
- **Legislative meetings.** On February 19, 2013, the Bremerton Planning Commission and Kitsap County Planning Commission met separately at their regular meetings to review the preliminary alternatives. Additional Planning Commission, City of Bremerton Council, and Kitsap County BOCC meetings are planned later in the process to help identify a preferred alternative, refine and deliberate on the framework and subarea plans, and consider a planned action ordinance. A project schedule is available at <http://www.gorstwatershed.com/>.
- **Draft EIS Comment Period.** This Draft EIS allows for a 45-day public comment period (see Fact Sheet) during which time the City of Bremerton will accept written comments regarding the alternatives and environmental impacts and mitigation measures. The City of Bremerton will issue a Final EIS providing responses to comments and may address a Preferred Alternative. The Preferred Alternative may include elements from one or more alternative studied in this Draft EIS.

2.4 Proposal Objectives

SEPA requires a statement of objectives that address the purpose and need for the proposal. The proposal objectives for the future of Gorst can be found in the Draft Watershed Characterization & Framework Plan and Gorst Subarea Plan Guiding Principles. These are listed in Table 2-1 *Watershed Characterization & Framework Plan and Gorst Subarea Plan Guiding Principles*.

Table 2-1
Watershed Characterization & Framework Plan and Gorst Subarea Plan Guiding Principles

Community Vision & Economic Development
<p>Make Gorst a place where people want to live, shop and recreate.</p> <p>Facilitate development of economically valued land.¹</p> <p>Recognize environmental restoration as a tool that can support the local economy¹</p>
Development Pattern
<p>Identify and prioritize land that can be more intensely developed with less environmental consequences.</p> <p>Promote green infrastructure for both new and existing facilities, such as by identifying areas to target for stormwater retrofits.</p> <p>Support development incentives and evaluate options such as off-site mitigation, mitigation banking, and other tools where appropriate.</p>
Environmental Protection
<p>Identify and protect critical areas.</p> <p>Prioritize areas to be protected and restored.</p> <p>Protect and enhance water quality/quantity for fish and wildlife habitat as well as for human use.</p> <p>Promote shoreline reclamation.</p>
Urban Design, Land Use & Transportation
<p>Create a cohesive and attractive urban character in the Gorst UGA such as by improving building design, and creating and enhancing public spaces such as parks, trails, pedestrian corridors and streetscapes.</p> <p>Allow an environmentally sustainable pattern of forestry, low density residential, small scale employment, and recreation uses in the rural areas of watershed.</p> <p>Improve transportation mode choices including transit, bicycle, pedestrian, and autos, recognizing local as well as regional travel needs.</p> <p>Promote interpretive art, signage, and public spaces that recognize cultural history and environmental features.</p> <p>Reduce collisions and improve safety.</p>
<p>Note: ¹ Such as by establishing land use plans that offer business and housing opportunities, and capital plans that incentivize shoreline reclamation and amenities such as open space and recreation, community design, and streetscapes.</p>

2.5 Study Alternatives

This Draft EIS evaluates three alternatives that set a range of land use patterns and mix of residential and employment growth:

- Alternative 1 – Gorst is a relatively small highway-oriented commercial and industrial center. This is a SEPA-required alternative. It represents No Action and continuing with the current Comprehensive Plan.
- Alternative 2 – Gorst is a well-designed regional commercial center.
- Alternative 3 - Gorst becomes a complete community.

Each alternative proposes a different mix of land use, growth, policies, and regulations described below.

Alternative 1 – No Action, Current Plan: Gorst is a relatively small highway-oriented commercial and industrial center

The No Action Alternative would retain current Kitsap County and City of Bremerton Comprehensive Plans. The Watershed Characterization & Framework Plan would not be adopted. New LID and stormwater standards would not be adopted throughout the watershed; however, portions of the watershed would continue to be subject to NPDES standards that are intended to reduce water quality impacts and promote improved stormwater management.

Reflecting the current Comprehensive Plan vision for the Gorst UGA, Gorst would be a relatively small highway-oriented commercial and industrial center. Within the UGA, Alternative 1 would allow greater employment growth of 742 jobs and a smaller population growth of 82 persons over the next 20-30 years. No planned action ordinance would be adopted.

No new capital facility improvements, stormwater, or habitat regulations would be implemented beyond adopted Capital Facility Plans.

Alternative 2 – Gorst is a well-designed regional commercial center

Under Alternative 2, the Watershed Characterization & Framework Plan would be adopted. While rural land use and zoning would be retained, amended LID and stormwater standards would be applied throughout the watershed.

Under Alternative 2, the Gorst UGA is envisioned as a regional commercial corridor along the waterfront providing locations for the Bremerton community and Kitsap County residents to shop. Gateway and boulevard treatments, shoreline access, green infrastructure, and habitat BMPs provide for a more well designed sustainable development pattern. More medium density clustered residential development would occur in the northwest portion of the UGA, and infill single-family residential development would occur in the western portion of the UGA.

Alternative 2 would allow a moderate increase in employment of 606 jobs and a more substantial increase in residents of 985 persons. A Planned Action would be designated for most of the UGA except waterward of SR 16 and SR 3, along Sinclair Inlet.

Capital facility improvements and amended stormwater and habitat regulations would be implemented.

Alternative 3 - Gorst becomes a complete community

Under Alternative 3, the Watershed Characterization & Framework Plan would be adopted along with LID and stormwater standards throughout the watershed. Under Alternative 3, the Gorst UGA would be guided by a Subarea Plan intended to ensure Gorst evolves into a complete community with places to live, play, shop, and work, in a waterfront setting. Mixed uses would be predominate. Along the waterfront a lower intensity commercial land use pattern develops with smaller impervious footprints interspersed by trails, parks, and reclaimed shoreline habitat. Central Gorst allows more intensive regional commercial, office, hotel, and mixed use

residential developments. Small-scale mixed use neighborhoods lie along West Belfair Road and West Frone Road. Clustered development occurs along Gorst Creek. A residential neighborhood along Sherman Heights Road provides a range of detached and attached residential choices in clustered patterns and small-scale, neighborhood-serving commercial uses. Alternative 3 supports less job growth than the other studied alternatives at 333 jobs but the highest population growth at 1,082 persons. A Planned Action would be designated for the whole UGA.

Capital facility improvements and amended stormwater and habitat regulations would be implemented.

Each alternative is further described and compared below.

Watershed Land Use

Three urban areas are included in the study area:

1. Bremerton City Limits, including areas known as the City of Bremerton Utility Lands (CUL) and the SKIA.
2. The Port Orchard City Limits, encompassing a master planned community called McCormick Woods.
3. The Gorst UGA, including unincorporated land assigned to the City of Bremerton UGA.

Bremerton's CUL are owned by the City of Bremerton and are for low intensity forestry purposes. City of Bremerton zoning shows the following intended activities BMC 20.96.010: *"The intent of the CUL zone is to preserve resource-related functions of land, and to protect watersheds and timberlands. The CUL zone is also intended to ensure healthy forest cover and provide habitat for wildlife. The zone will accommodate some limited commercial and recreational activities, which adhere to a high standard of environmental BMPs, and LID."* No change is proposed in the designation of CUL.

The SKIA area is subject to its own subarea plan, recently adopted by the City of Bremerton in 2012. The area is planned as industrial. The SKIA Subarea Plan encourages development to occur in a sustainable, energy efficient and environmentally protective manner. The Gorst Creek Watershed Characterization & Framework Plan assumes that the SKIA Plan will be implemented.

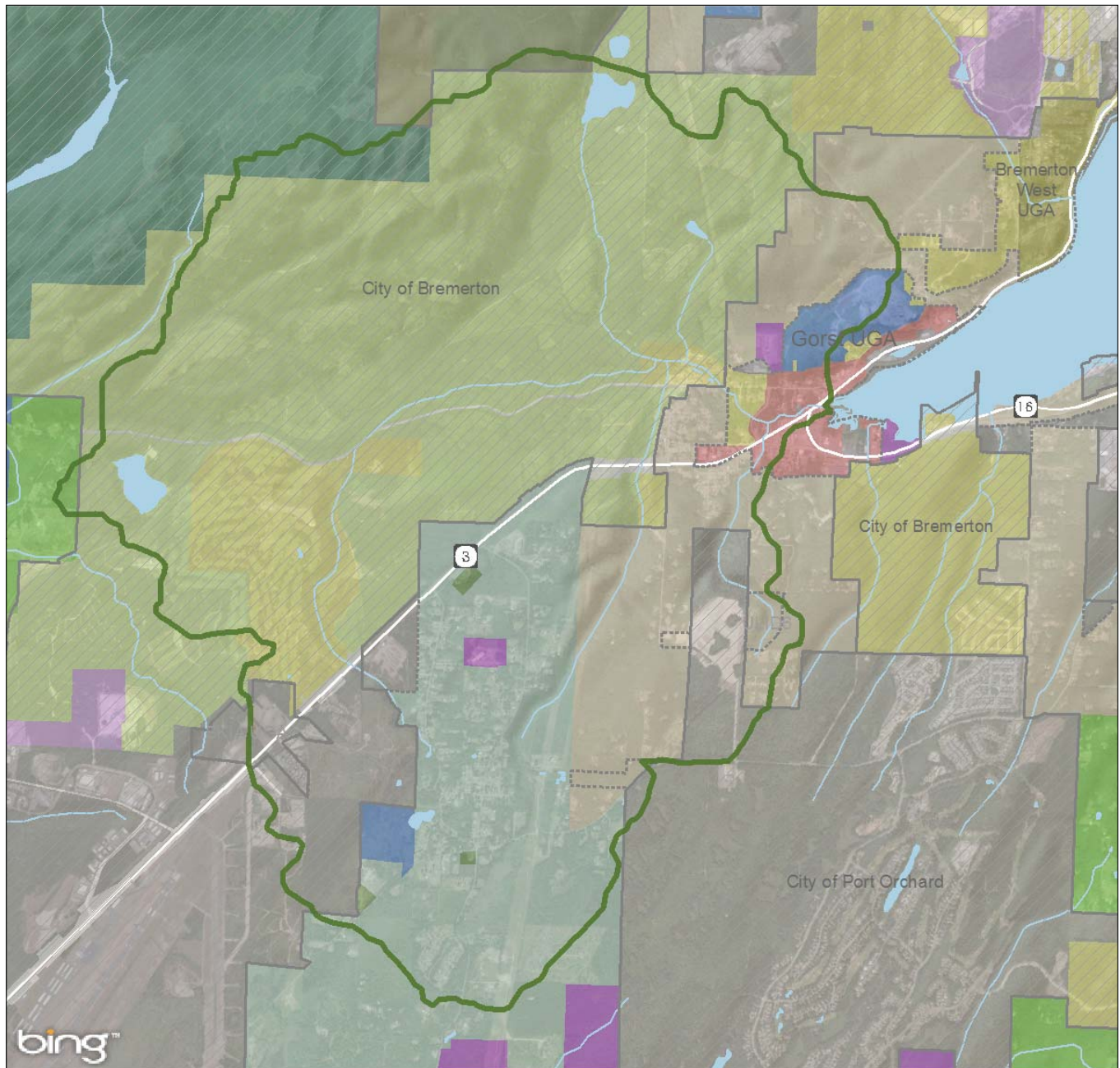
In 2012, the City of Port Orchard annexed the McCormick Woods land in, with the exception of three parcels newly added by Kitsap County as a UGA territory in August 2012. These three parcels are for public use purposes and are likely to be annexed soon by the City of Port Orchard. With an already approved residential master plan, no further change in land use is anticipated in the Gorst Creek Watershed Characterization & Framework Plan.

Around the Gorst UGA "Urban Reserve" designations would be primary locations for any future UGA boundary increases, but in the meantime allow rural densities. The balance of the study area is largely Rural Residential.

The Gorst UGA has been identified by Kitsap County as predominantly a commercial area. It contains a mine designated in the Comprehensive Plan as Mineral Resource, and zoned as Industrial.

Apart from the Gorst UGA described below, under all alternatives, the planned land use in the Gorst Creek Watershed would remain the same. See Figure 2-3 *Gorst Watershed Planning Area Land Use*.

FIGURE 2-3 GORST WATERSHED PLANNING AREA: LAND USE



Legend

Watershed Boundary

City Limits

UGA Boundary

Water

Streams

Landuse (City and County)

Low Density Residential

Medium Density Residential

Medium/High Density Residential

High Density Residential

High Intensity Commercial Mixed Use

Industrial

Industrial Park

Mineral Resource

Public Facility

City Utility Lands

Urban Reserve

Rural Protection

Rural Residential

Rural Commercial

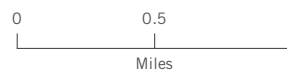
Rural Wooded

Forest Resource Lands

Watershed



Date: March 2013
Source: Kitsap County, City of Bremerton, BERK



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Gorst UGA Land Use

The Gorst UGA contains about 335 gross acres including streets and public rights of way, or about 281 acres in parcels. Each alternative proposes an urban land use pattern with variable amounts of commercial and residential uses (see Table 2-2 *Land Use Acres Comparison (Total Parcel Acres by Zone)*). Alternative 1 focuses on commercial, mineral, and industrial uses (combined 87 percent) and less on residential uses (13 percent). Alternative 2 provides a nearly balanced amount of residential (49 percent) and commercial (46 percent) acres with recognition of Kitsap County-purchased property for open space (6 percent). Last, Alternative 3 provides a more mixed use pattern of different commercial and residential intensities (about 75 percent combined) and some single-purpose designations (residential 11 percent, low-intensity waterfront commercial 9 percent) and open space (six percent).

Table 2-2
Land Use Acres Comparison (Total Parcel Acres by Zone)

Zone	Acres	Percent
Alternative 1		
High Intensity Commercial Mixed Use	121.9	43
Mineral Resource	96.3	34
Low Density Residential	35.3	13
Industrial	27.2	10
TOTAL	280.7	100
Alternative 2		
Commercial Corridor	127.8	46
Medium Density Residential	105.4	38
Low Density Residential	31.6	11
Open Space/Recreation	16.0	6
TOTAL	280.7	100
Alternative 3		
Neighborhood Mixed Use	105.4	38
Gorst Mixed Use	103.3	37
Gorst Creek Residential	31.6	11
Low Intensity Waterfront	24.5	9
Open Space/Recreation	16.0	6
TOTAL	280.7	100

Source: Kitsap County 2012; BERK

Alternative 1 Future Land Use

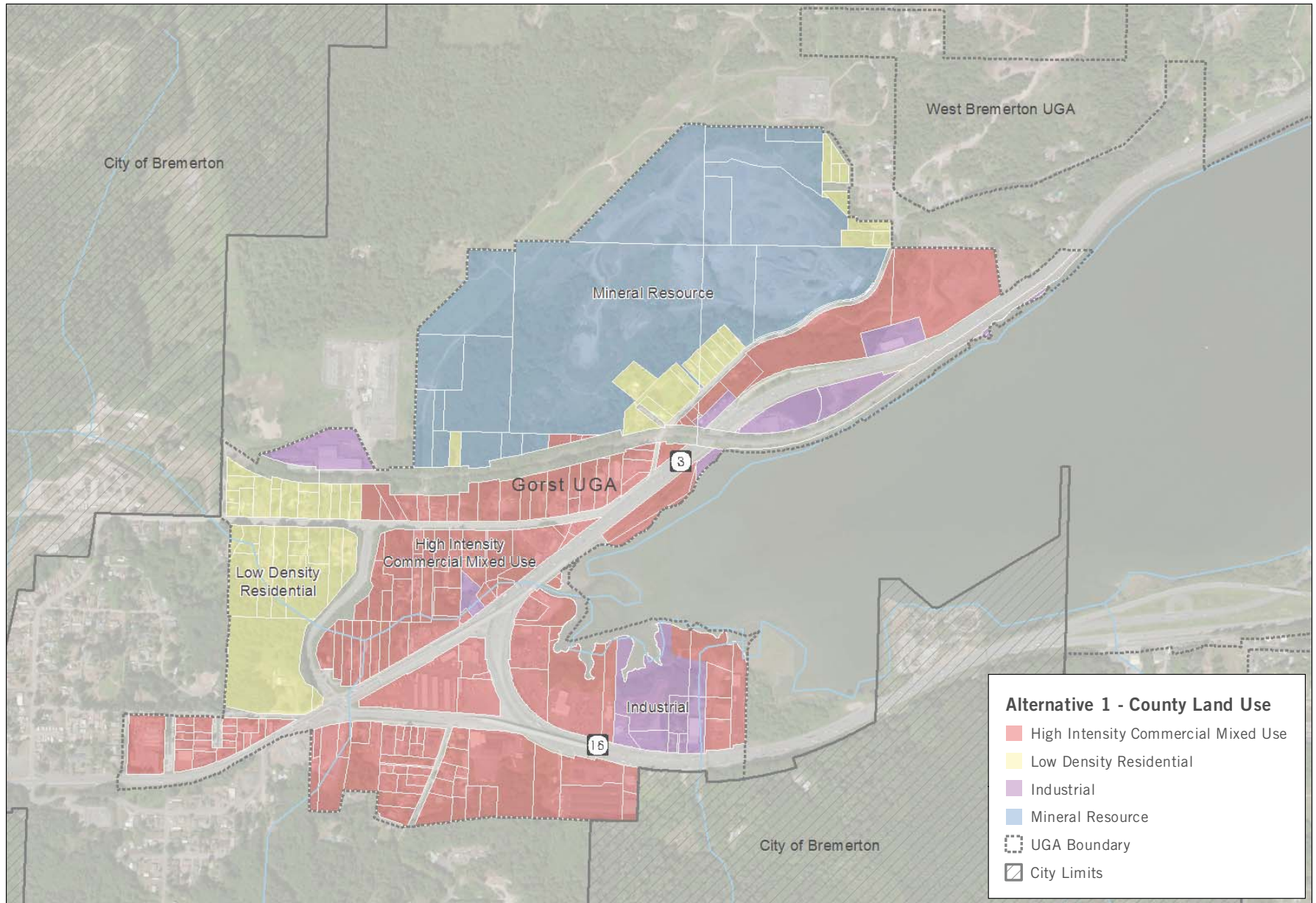
Alternative 1 retains the Kitsap County vision with Gorst being a relatively small highway-oriented commercial and industrial center. The land use plan is shown in Figure 2-4 *Gorst UGA Land Use: Alternative 1 - Kitsap County No Action*. A description of the designations is shown in Table 2-3 *Alternative 1 Land Use Designation Descriptions*. A pie chart showing the amount of land in each designation is provided in Figure 2-5 *Alternative 1 Percentage of Land in Each Land Use Designation*. The current land use designations focus on commercial activities (Urban High Intensity Commercial/Mixed Use). Another large area along Sherman Heights would be retained in mineral resource lands. A smaller area in the western UGA is planned for residential use. A few parcels along the state routes or railroad are planned for industrial use.

Table 2-3
Alternative 1 Land Use Designation Descriptions

	<p>Urban High-Intensity Commercial/Mixed Use</p> <p>This designation primarily focuses on larger commercial centers, including commercial uses that require large sites and draw customers at the community and regional scale. Examples of commercial uses appropriate to this designation include but are not limited to superstores, department stores, automotive parts and sales, home improvement stores, hotels and motels, and restaurants. Mixed use developments incorporating residential units are also appropriate in this designation. Zones that implement the Urban High-Intensity Commercial/Mixed Use designation include: Highway Tourist Commercial, Regional Commercial, and Mixed Use.</p>
	<p>Mineral Resource Overlay</p> <p>The intent of the Mineral Resource Overlay is to protect sand, gravel, and rock deposits identified as significant. Commercial quality deposits should be recognized as non-renewable resources and managed accordingly.</p>
	<p>Urban Industrial</p> <p>This designation includes both industrial and business uses, such as light manufacturing, hi-tech, warehousing, bio-tech, park-like business, 4-year educational institutions, equipment and vehicle repair, as well as heavy industrial activities and those requiring access to major transportation corridors. Zones that implement the Urban Industrial designation include: Business Center, Business Park, Industrial, and Airport.</p>
	<p>Urban Low-Density Residential</p> <p>This designation primarily focuses on single-family dwellings but also may include innovative types such as clustered housing. It also includes regulated environmentally critical areas within the UGAs and other areas identified for low-density urban development. Zones that implement the Urban Low-Density Residential designation include: Urban Restricted Residential, Illahee Greenbelt Zone, Urban Low Residential, and Urban Cluster Residential and Senior Living Homestead.</p>

Source: Kitsap County 2012

FIGURE 2-4 GORST UGA LAND USE: ALTERNATIVE 1 - KITSAP COUNTY NO ACTION



Date: May 2013
Source: Kitsap County, BERK

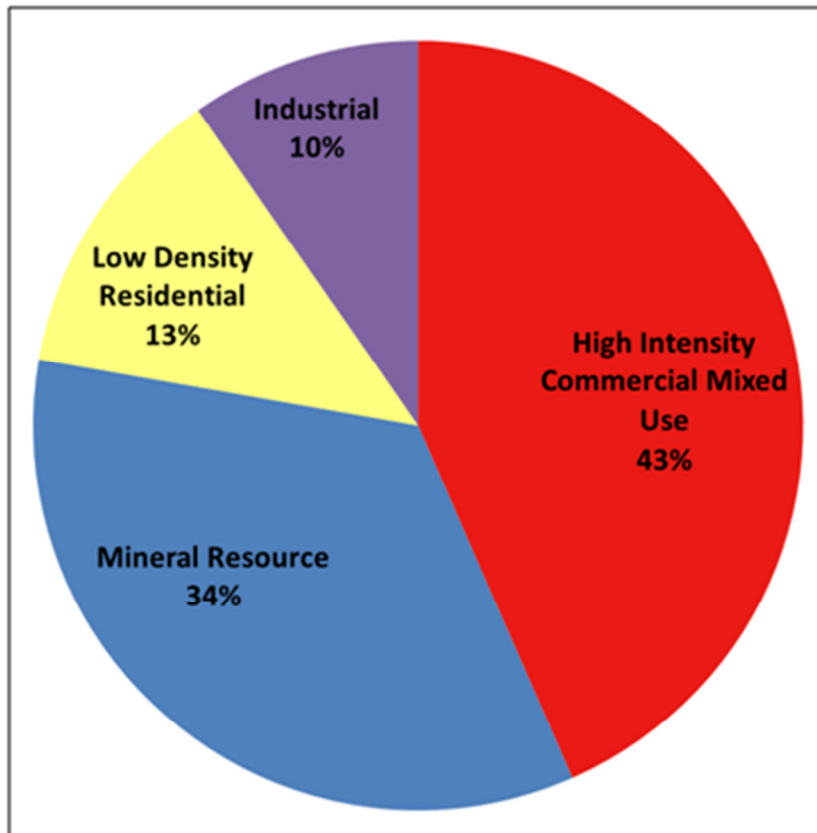


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Figure 2-5
Alternative 1 Percentage of Land in Each Land Use Designation



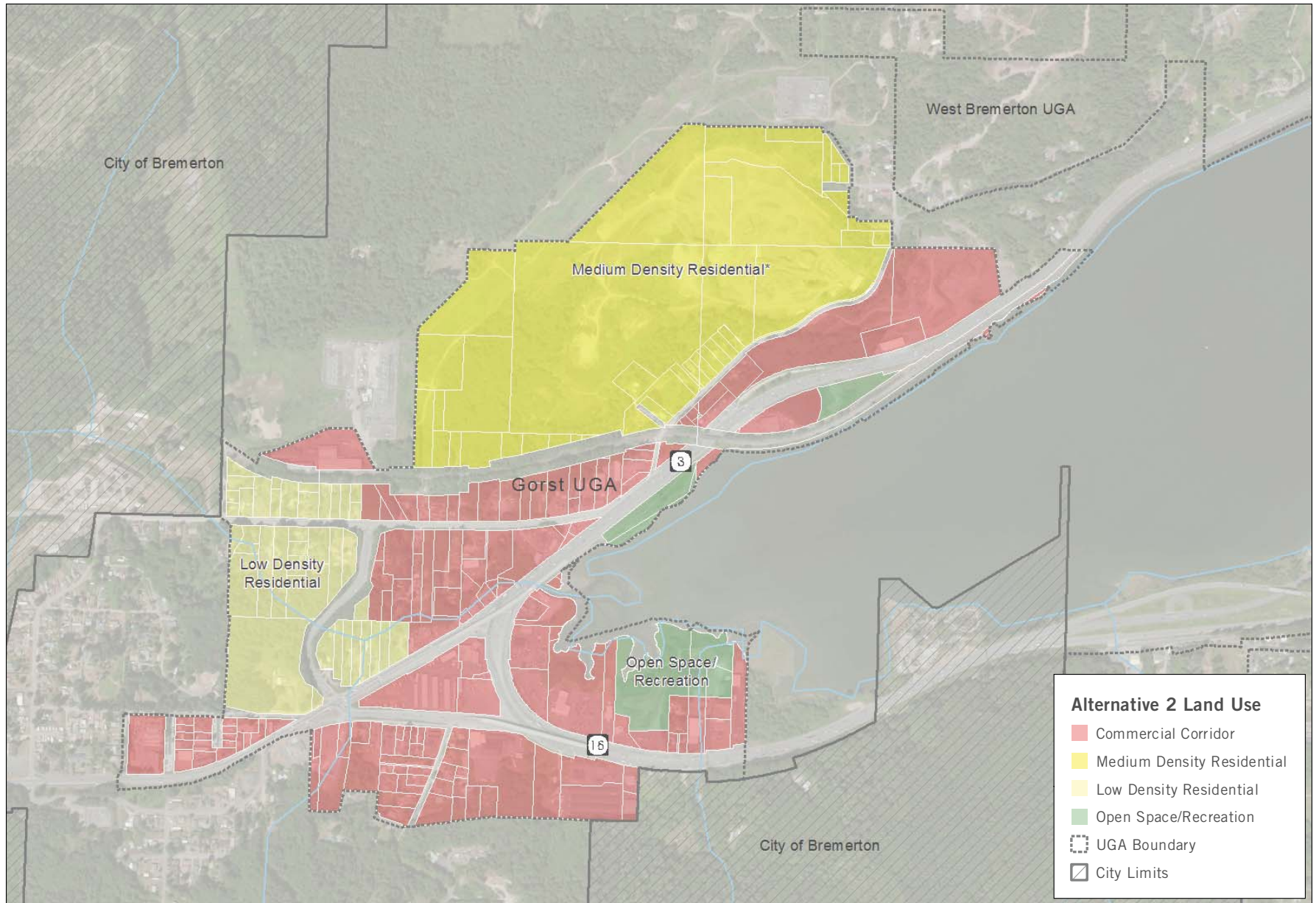
Alternative 2 Future Land Use

Alternative 2 promotes Gorst as a well-designed regional commercial center serving Kitsap County:

Gorst is a regional commercial corridor along the waterfront providing locations for the Bremerton community and Kitsap County residents to shop for major purchases such as autos, home furnishings, and other goods and services. Gateway treatments, boulevard style streetscape improvements, and access improvements invite the community to Gorst and allow convenient travel to regional businesses. Shoreline public access is emphasized along Sinclair Inlet and portions of Gorst Creek connecting to a regional non-motorized trail network. Along the west and north boundaries of the UGA are low and medium density residential neighborhoods and small scale commercial uses providing daily conveniences. The development pattern includes a range of low-scale detached and attached residential choices in traditional and clustered development patterns. A comprehensive watershed plan guides development and provides land use, green infrastructure, and habitat BMPs in the UGA and watershed.

Figure 2-6 Gorst UGA Land Use: Alternative 2 illustrates the land use pattern, and Table 2-4 Alternative 2 Land Use Designation Descriptions provides the land use/zoning categories. Figure 2-7 Alternative 2 Percentage of Land in Each Land Use/Zoning Designation shows the percentage of land in each land use/zoning classification.

FIGURE 2-6 GORST UGA LAND USE: ALTERNATIVE 2



Date: May 2013
Source: Kitsap County, BERK



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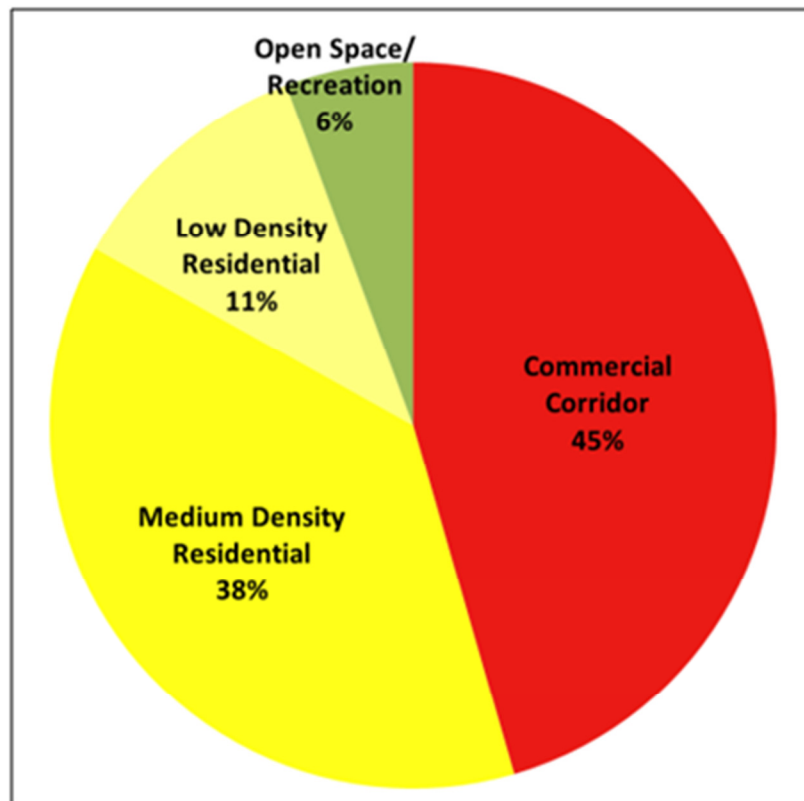
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Table 2-4
Alternative 2 Land Use Designation Descriptions

	<p>Commercial Corridor</p> <p>The commercial corridor designation provides locations for high intensity commercial uses serving the entire community while preserving maritime views, forested areas, and buffering impacts to adjacent residential areas. The corridor accommodates access to businesses by automobile while also creating a pedestrian-friendly, transit-supporting corridor. A planned action would not apply waterward of SR 16 and SR 3, along Sinclair Inlet.</p>
	<p>Medium Density Residential</p> <p>This district promotes a variety of attached and detached low and medium density housing including detached single family, attached single family, cottages, small scale flats, townhomes, and accessory dwelling units. Developments are designed in an environmentally sustainable pattern, such as through clustering, LID techniques, energy conservation, and similar methods.</p>
	<p>Low Density Residential</p> <p>The intent of the low density residential designation is to accommodate single-family housing by infilling at a range of lot sizes consistent with urban growth patterns. Some attached single-family housing may be appropriate when responding to sensitive areas or with innovative design. Residential development at higher densities is encouraged at the edge of designated centers.</p>
	<p>Open Space/Recreation</p> <p>The Open Space/Recreation designation allows for active and passive parks, recreation, and open space facilities. Secondary uses include accessory commercial such as concessions, recreation equipment rental, and other small-scale facilities that support and enhance public access and recreation.</p>

Source: City of Bremerton and Kitsap County, Draft Gorst Subarea Plan, June 2013

Figure 2-7
Alternative 2 Percentage of Land in Each Land Use/Zoning Designation



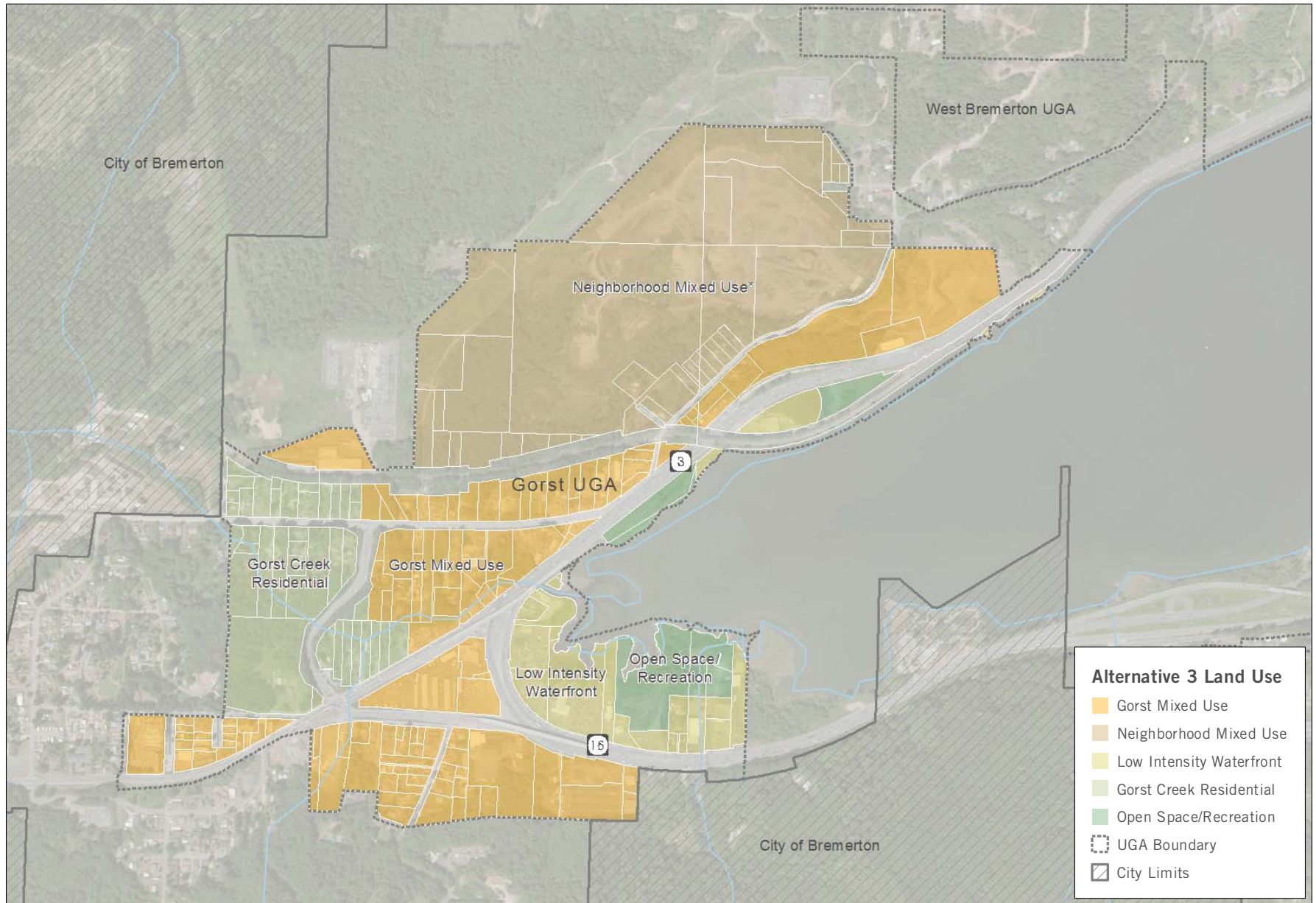
Alternative 3 Future Land Use

Alternative 3 proposes a vision of Gorst as a community offering homes, jobs, and recreation in an environmentally sustainable setting. The alternative promotes a mix of uses and a wider range of residential dwelling options:

As the SKIA grows as an employment center, and demand increases for housing such as along Sherman Heights Road, Gorst evolves into a complete community with places to live, play, shop, and work, in a waterfront setting. Gorst also serves as a community-wide demonstration of low-impact development techniques to create a sustainable, compact and enduring place. Views, cultural resources, critical areas are protected and enhanced through a coordinated watershed development, restoration, and protection plan and BMPs. Along the waterfront a lower intensity land use pattern emerges with commercial uses occurring on smaller impervious footprints interspersed by trails, parks, and reclaimed shoreline habitat. A secondary circulation network improves business access, creates a pedestrian scale, and provides non-motorized access to waterfront properties. Central Gorst allows more intensive regional commercial, office, hotel, and mixed use residential developments. Small-scale mixed use neighborhoods along West Belfair Road and West Frone Road provide gathering places and daily conveniences for Gorst residents as well as medium density housing as part of horizontal and vertical mixed use development patterns. Along Gorst Creek, a restored riparian corridor is created, made possible in part by development incentives such as cottages, small lot single family, medium density residential and mixed use development. A residential neighborhood along Sherman Heights Road provides a range of detached and attached residential choices in clustered patterns and small-scale, neighborhood-serving commercial uses.

The future land use map is shown in Figure 2-8 *Gorst UGA Land Use: Alternative 3* and accompanying designations are shown in Table 2-5 *Alternative 3 Future Land Use Designation Descriptions*. Figure 2-9 *Alternative 3 Percentage of Land Use/Zoning Designations* shows the percentage of each land use/zoning designation associated with Alternative 3.

FIGURE 2-8 GORST UGA LAND USE: ALTERNATIVE 3



Date: May 2013
Source: Kitsap County, BERK



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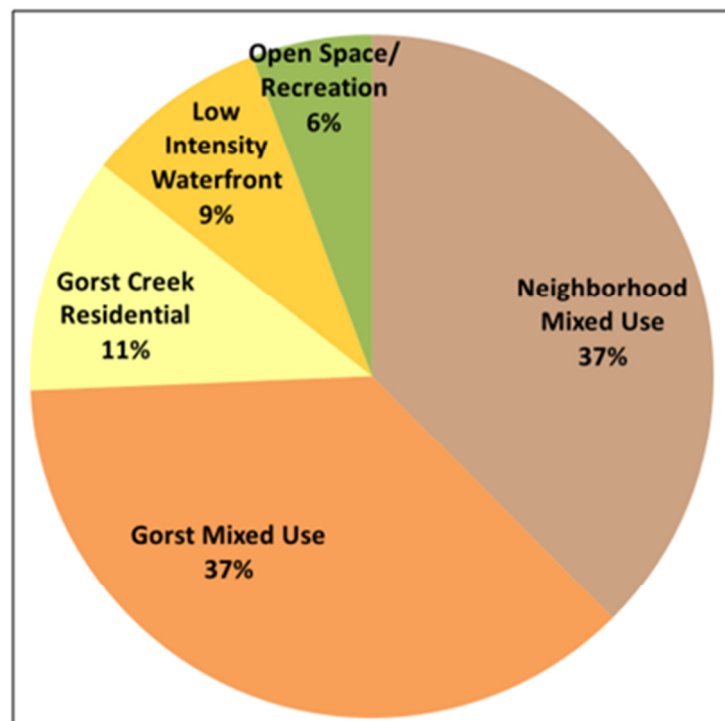
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Table 2-5
Alternative 3 Future Land Use Designation Descriptions

	<p>Low Intensity Waterfront</p> <p>The low intensity waterfront district allows commercial uses to serve the traveling public in a development pattern that reduces impervious surfaces, promotes shoreline reclamation and open space, promotes landscape and streetscape improvements, promotes pedestrian safety and comfort, and improves vehicular access. Commercial uses would occur on smaller impervious footprints interspersed by trails, parks, and reclaimed shoreline habitat. New residential uses are restricted.</p>
	<p>Gorst Mixed Use</p> <p>The Gorst Mixed Use district promotes mixed uses – retail, hotel, office, services, residential – in horizontal or small scale vertical patterns-- and regional commercial uses designed to maximize shoreline views and allow streamside public access where appropriate. A more intensive development pattern is found in Central Gorst and a less intensive pattern is found on Gorst Creek, West Belfair Road, Sam Christopherson Road West, and West Frontage Road/ West Frone Drive.</p>
	<p>Neighborhood Mixed Use</p> <p>This district promotes low and medium density housing including detached single family, attached single family, cottages, townhomes, small scale flats, and accessory dwelling units. Developments are accomplished in an environmentally sustainable pattern, such as clustering, LID techniques, energy conservation, and similar methods. Small scale commercial uses that serve local residences are allowed. Public and private open spaces are also promoted.</p>
	<p>Gorst Creek Residential</p> <p>Gorst Creek Residential district applies to low density residential and large lot residential areas along Gorst Creek, where LID and riparian and wetland zone protection are priorities. Clustered development patterns and incentives for stream restoration are promoted.</p>
	<p>Open Space/Recreation</p> <p>The Open Space/Recreation designation allows for active and passive parks, recreation, and open space facilities. Secondary uses include accessory commercial such as concessions, recreation equipment rental, and other small-scale facilities that support and enhance public access and recreation.</p>

Source: City of Bremerton and Kitsap County, Draft Gorst Subarea Plan, June 2013

Figure 2-9
Alternative 3 Percentage of Land Use/Zoning Designations



Future Growth

As of 2010, there are approximately 222 persons in the Gorst UGA and 1,810 persons in the remainder of the watershed. There are about 237 jobs in the Gorst UGA and roughly 264 jobs in the rest of the watershed, primarily in SKIA.

Excluding the Gorst UGA, which is separately addressed below, the employment and residential growth in the watershed would be from SKIA as well as subdivision of rural residential lots. See Table 2-6 *Watershed Population and Employment 2010 and 2035, Excluding Gorst UGA*.

Table 2-6
Watershed Population and Employment 2010 and 2035, Excluding Gorst UGA

Year	2010	2035
Population	1,810	2,659
Dwellings	742	1,149
Jobs	264	2,305

Note: Estimates are based on transportation analysis zone estimates approximating watershed boundaries, and thus may include greater growth than the exact boundaries of the watershed, particularly related to jobs. Job increases are largely due to traffic model assumptions regarding SKIA growth. Within the portion of SKIA in the watershed, growth would more likely equal about 600 jobs based on the SKIA Subarea Plan Final EIS (2012) which would mean a future job total in the watershed closer to 865 than 2,305. For conservative analysis purposes, the higher total is studied in this Draft EIS.

Source: BERK 2013

With different land use patterns, each alternative would result in a different level of population and employment growth in the Gorst UGA. See Table 2-7 *Growth Comparison by Gorst UGA Alternative*. These growth estimates would be added to the watershed estimates in Table 2-6 *Watershed Population and Employment 2010 and 2035, Excluding Gorst UGA*. Alternative 1 assumes more employment acres and a smaller residential area, resulting in the greatest employment growth and least residential growth. Alternative 2 has a focus on commercial growth in central Gorst and greater land designated for residential growth along Sherman Heights and Gorst Creek, thus resulting in a moderate amount of employment growth and a greater amount of population growth. Last, Alternative 3, with a greater emphasis on mixed use in central Gorst and greater potential for small scale mixed use providing medium density housing has the greatest amount of population and the least amount of job growth.

Table 2-7
Growth Comparison by Gorst UGA Alternative

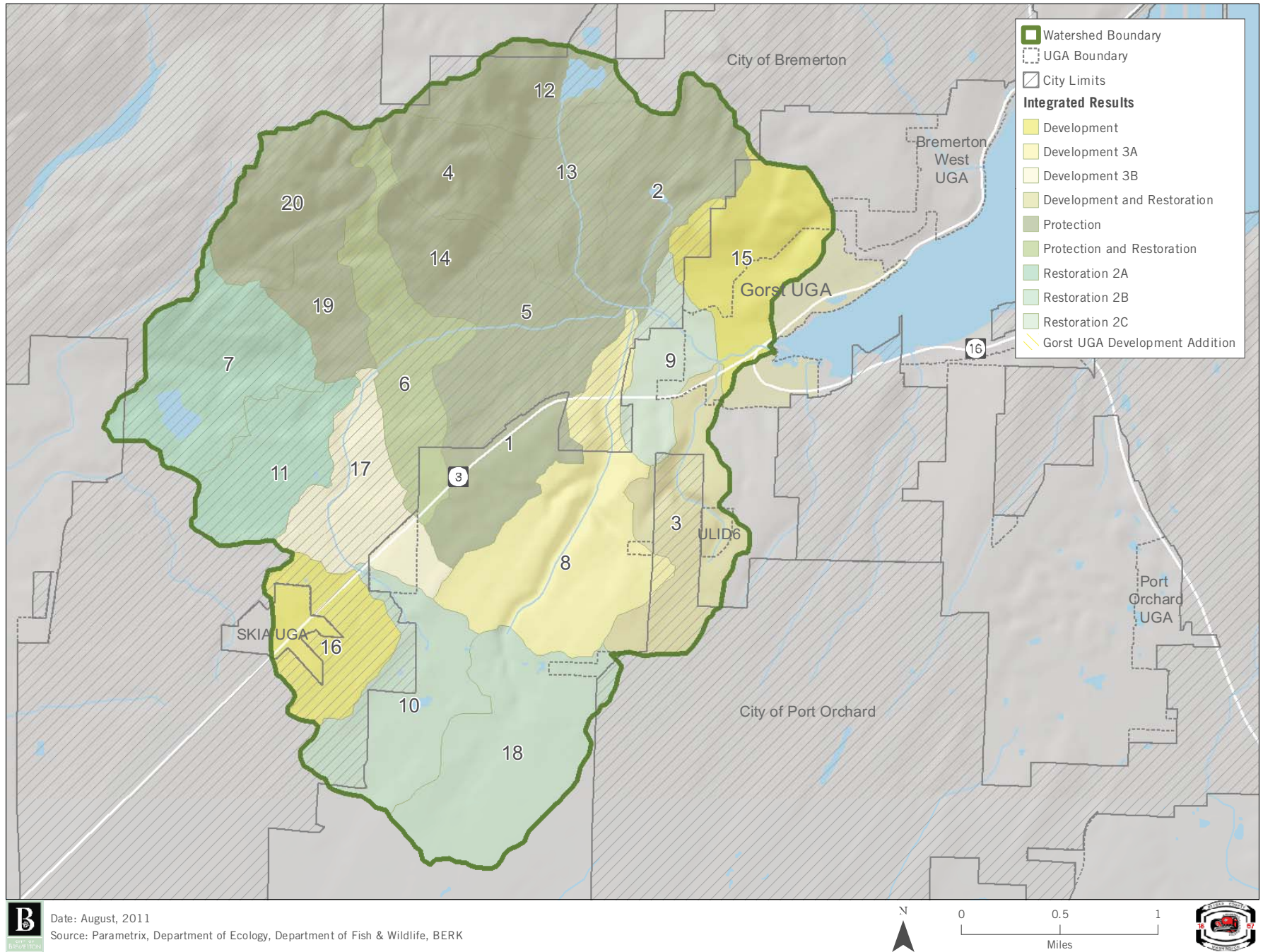
Alternative	Residential Net Developable Acres	Dwellings	Population	Employment Developable Acres	Jobs
Alternative 1	5.9	33	82	34.7	742
Alternative 2	46.9	538	985	22.8	606
Alternative 3	56.7	597	1082	12.6	333

Source: Kitsap County 2012; BERK

Watershed Characterization, Fish Habitat, and Stormwater

The Gorst Creek Watershed Characterization Study analyzes existing conditions of the watershed with respect to water flow and habitat. The Watershed Characterization Study recommendation is to protect the north central portion of the watershed, the tributaries, and the estuary, while allowing for additional growth and development in the south, and southeastern portions of the watershed. See Figure 2-10 *Gorst Watershed Assessment Units: Integrated Results*.

FIGURE 2-10 GORST WATERSHED ASSESSMENT UNITS: INTEGRATED RESULTS



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Based on the Watershed Characterization Study, the Watershed Characterization & Framework Plan and Gorst Subarea Plan associated with Alternatives 2 and 3 include land use, habitat, and stormwater regulation amendments. A summary of the intent of regulations is shown in Table 2-8 *Integrated Watershed Processes and Habitat Results and Management Measures*.

Table 2-8
Integrated Watershed Processes and Habitat Results and Management Measures

AU No.	Integrated Results	Notes and Suggested Management Measures
1	Protection	Important area for groundwater discharge for Gorst Creek; moderate value for habitat due to rural development and roads. Despite lower habitat assessment rating, development should be minimized in this area due to its immediate impact upon groundwater discharge processes (roads, ditches, and impervious surfaces alter discharge patterns) and Gorst Creek flows.
2	Protection	Jarstad Creek has the highest salmon refugia score in watershed, so extra measures are needed to protect water flow processes in this AU. Due to high sediment export potential, logging activities should be limited in this AU. Maintain appropriate zoning for protection.
3	Development and Restoration	Relatively high level of degradation. Not rated by salmon refugia study. More appropriate area for moderate density development provided measures are implemented to reduce erosion and sediment export (adequate stream buffers, setbacks, reduced overland flow through infiltration and vegetation cover).
4	Protection	For headwaters AU, the processes are essentially intact, with high habitat value; given these values and high sediment export potential it is important to maintain forest cover, limit logging activities and maintain appropriate zoning for protection.
5	Protection	Area has some degradation due to roads, but has extensive slope wetlands and groundwater discharge critical to Gorst Creek. High habitat and salmon refuge value indicates that this area should be protected from further degradation. Maintain appropriate zoning for protection.
6	Protection and Restoration	Southern portion of AU has more clearing of forest and should be restored. Maintain appropriate zoning to protect this area.
7	Restoration 2A	High habitat and salmon refugia scores identify this as a higher priority area to undertake restoration actions. The golf course has degraded many of the wetlands and water courses (also on AU11); a comprehensive restoration program should be developed to restore these areas. Maintain zoning to protect open space, rural nature, and increase forest cover.
8	Development 3A	Area of low importance for water flow processes and moderate for habitat; more appropriate area for moderate to higher density development compared to other AUs within the Gorst Creek Watershed. High sediment export potential requires development measures that reduce erosions through adequate buffers and setbacks (from steep slopes) and reduction of overland flow through infiltration and plantings (LID measures). Clustering may be appropriate in this area in order to minimize potential sediment export impacts.
9	Restoration 2C	Though this area has a low score for habitat and salmon refugia, it is a higher priority for restoration due to generally intact upstream processes (northern half of watershed). Channelization, culverts, and reduced riparian cover have degraded stream corridor and discharge processes. A comprehensive program to restore creek corridor should be developed. Effective Impervious surface should be reduced through a stormwater retrofit program.
10	Restoration Area 2B	Low habitat value due to impacts from adjoining residential area but high salmon refugia score. Large area of wetlands that play an important role in regulating downstream flow. Wetlands and streams should be protected and restored, with appropriate buffers provided. This is an appropriate area for moderate density development provided clustering approach is used.

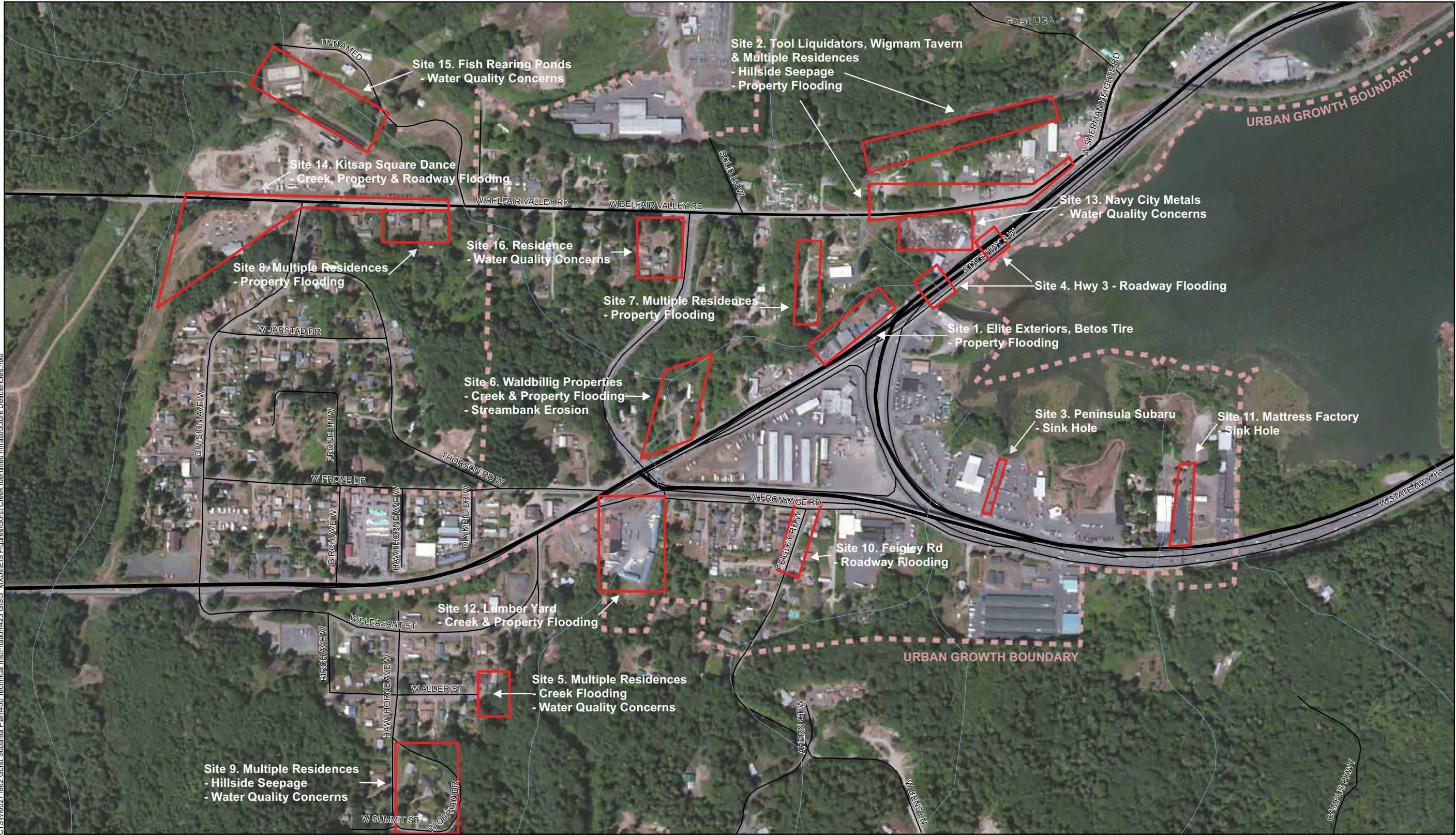
AU No.	Integrated Results	Notes and Suggested Management Measures
11	Restoration Area 2A	High habitat and salmon refugia scores identify this as a priority area to undertake restoration actions. The golf course has degraded many of the wetlands and water courses; a comprehensive restoration program should be developed to restore these areas. Recharge is the key process to restore. Also restore discharge and storage processes.
12	Protection	Same as No. 4 Headwaters AU: processes essentially intact, high habitat value. Maintain forest cover and protective zoning.
13	Protection	Same as No. 4 Headwaters AU: processes essentially intact, high habitat value. Maintain forest cover and protective zoning.
14	Protection	Same as No. 4 Headwaters AU: processes essentially intact, high habitat value. Maintain forest cover and protective zoning.
15	Development	Relatively high level of degradation and low habitat score; more appropriate area for higher density development provided measures are applied to reduce potential sediment export.
16	Development	The western edge of this AU is degraded by airport development. It has a moderately high score for salmon refugia, so the AU stream should be adequately protected (appropriate width buffers). More appropriate area for higher density development within the Gorst Creek Watershed, provided that streams and wetlands have adequate buffer protection.
17	Development Area 3B	Although the overall assessment for water flow indicated “development,” this area should receive a higher degree of protection based on moderate high habitat value. May be an appropriate area for low-to-moderate density development, provided habitat resources (forest, streams, and wetlands) are protected through use of clustering. Landfill in downstream, northern portion of AU has collapsed the culvert-carrying stream, which gives it priority for restoration.
18	Restoration Area 2B	Overall, this AU has a low-to-moderate value for water flow processes and habitat. Appropriate area for moderate density development, provided that existing streams and wetlands receive adequate protection and restoration of wetland storage functions where they have been degraded; wetlands will help control downstream erosion in AU8.
19	Protection	Same as No. 4 Headwaters AU: processes essentially intact, high habitat value. Limit forestry activities given high sediment export potential. Maintain forest cover and protective zoning.
20	Protection	Same as No. 4 Headwaters AU: processes essentially intact, high habitat value. Limit forestry activities given high sediment export potential. Maintain forest cover and protective zoning.

Source: City of Bremerton 2012

In addition, the Watershed Characterization Study has prompted capital planning intended to address stormwater and flooding deficiencies and fish passage barriers. A map of stormwater improvement locations is shown in Figure 2-11 *Gorst Creek Watershed: Existing Drainage Deficiencies*. Where possible regional stormwater solutions can be considered in County and City capital facility plans. Potential improvements on private property would be the responsibility of the private property owner and would be considered at the time of a development application or other property owner initiative.

A map of fish passage barriers and an example proposed recommended improvement along Parish Creek are shown in Figure 2-12 *Gorst Creek Watershed Planning Area: Fish Passage Barriers* and Figure 2-13 *Proposed Fish Passage Barrier Improvement – Parish Creek*, respectively.

FIGURE 2-11 GORST CREEK WATERSHED: EXISTING DRAINAGE DEFICIENCIES



Path: P:\ENV\PROJECTS\W60271862 Gorst Subarea Plan\400 Technical Information\423 GIS3 MXDs\GIS Figures\Gorst Creek Identified Infrastructure Deficiencies.mxd



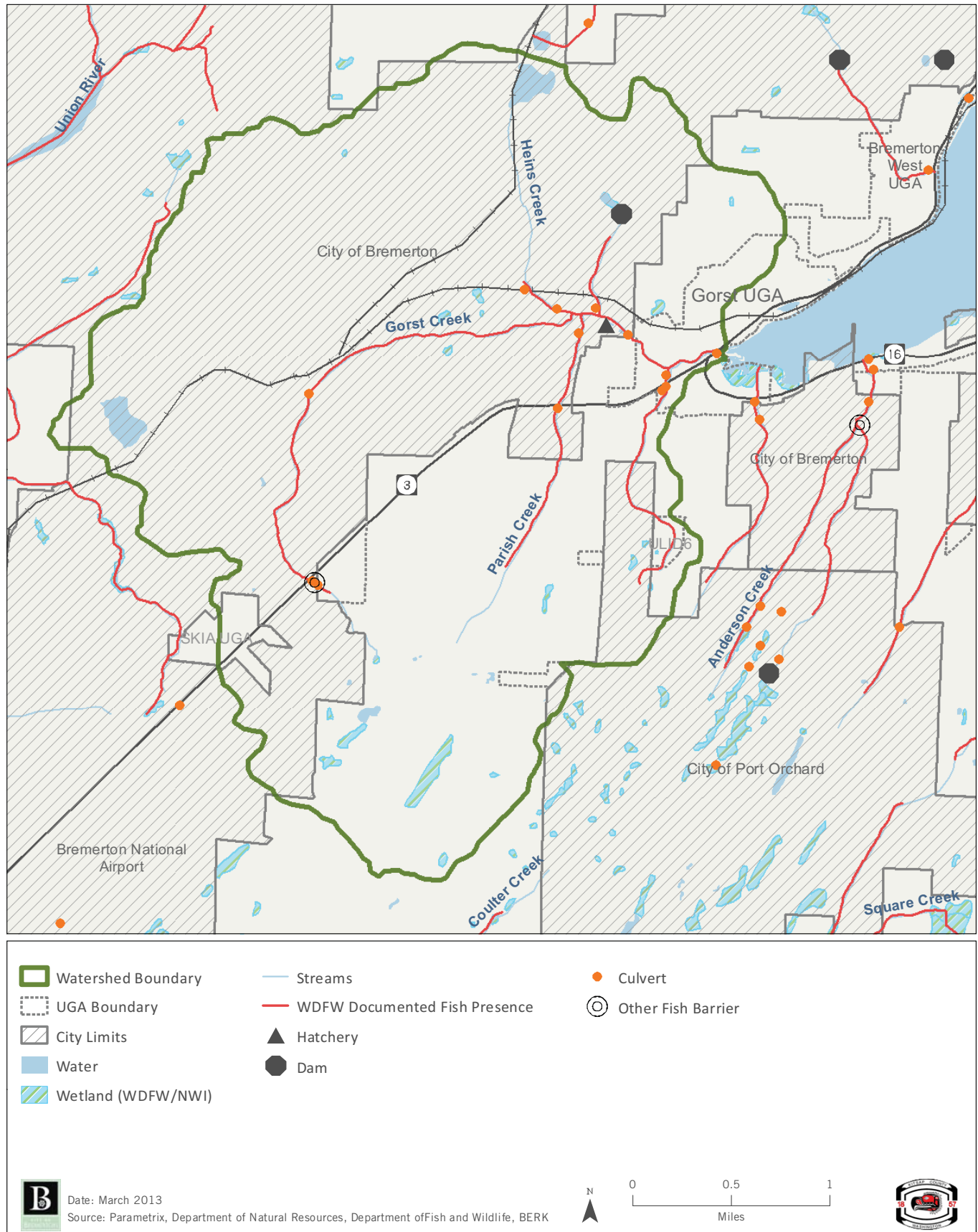
Date: May 2013
Source: AECOM, Department of Ecology, Department of Fish & Wildlife, BERK

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FIGURE 2-12 GORST WATERSHED PLANNING AREA: FISH PASSAGE BARRIERS



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Planned Action

SEPA provides a planned action process to facilitate proposals in UGAs (WAC 197-11-164 to 172). A planned action provides more detailed environmental analysis during an area wide planning stage rather than at the project permit review stage. Designating a planned action streamlines environmental review for development proposals consistent with EIS mitigation measures that are adopted in a planned action ordinance. Planned actions would be allowed if they meet or exceed proposed land use and environmental performance standards. This tool has been used elsewhere by local governments in Washington State, including Bremerton (e.g. SKIA). The City of Bremerton and Kitsap County are considering designating a planned action for the Gorst UGA.³ Some Gorst land use alternatives may vary which areas are included in the planned action (Alternative 2 all areas in UGA except waterward of SR 3 and SR 16; Alternative 3 all lands in the UGA).

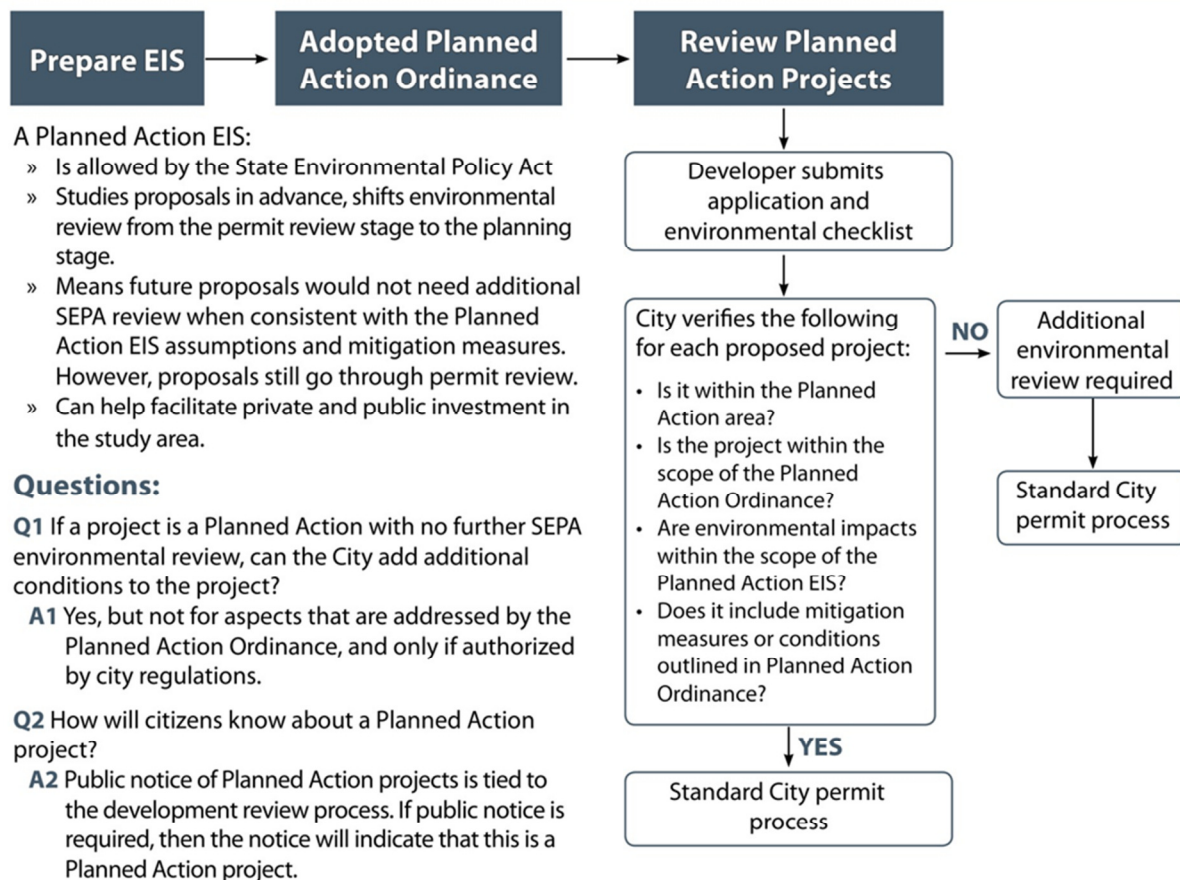
If the planned action ordinance is adopted, the City of Bremerton and Kitsap County would follow the applicable procedures contained in the ordinance to determine if the proposed project impacts are consistent with the Planned Action EIS. When a permit application and environmental checklist are submitted for a project that is being proposed as a planned action project, the City of Bremerton and Kitsap County must first verify the following:

- The project meets the description of any project(s) designated as a planned action by ordinance or resolution.
- The probable significant adverse environmental impacts were adequately addressed in the EIS.
- The project includes any conditions or mitigation measures outlined in the ordinance or resolution.

If the project meets the above requirements, the project qualifies as a planned action project and a SEPA threshold determination is not required. See Figure 2-14 *Planned Action Process*, a flow chart of the Planned Action process. Appendix B *Draft Planned Action Ordinance* contains a draft of the planned action ordinance including the information on the draft process and the parameters used to determine consistency with EIS assumptions.

³ Another option is to have some land use and environmental standards (for example, the Planned Action Ordinance) become effective only upon annexation to encourage annexation, which is a Growth Management goal reflected in Kitsap County's assignment of the UGA to the City.

Figure 2-14 Planned Action Process



2.6 Future Alternatives

The intent of the EIS alternatives is to compare natural and built environment impacts and provide that information to decision makers, citizens, and other agencies. It is anticipated that following the Draft EIS comment period; the City of Bremerton in consultation with the Kitsap County, Tribe and other agency partners would consider public comment and develop a Preferred Alternative for study in the Final EIS. The Preferred Alternative could be a mix and match of different features of each Draft EIS Alternative. The final plan that would ultimately be adopted would not be exactly one of the EIS alternatives, but would fall within the range of the alternatives analyzed in the EIS.

2.7 Benefits and Disadvantages of Delaying a Proposed Action

The Proposal includes the adoption of a Watershed Characterization & Framework Plan, a new Gorst Subarea Plan, and a planned action ordinance for future development in the Gorst UGA. Delaying implementation of the Proposal would delay the potential impacts identified in this Draft EIS, including potential changes to growth and air emissions, land use patterns, changes to visual character, increased investment in transportation and stormwater infrastructure, and increased demand for public services and utilities.

If the Proposal is not adopted, there would be less incentive for environmental restoration along Sinclair Inlet and Gorst Creek. There would be less redevelopment and a longer pace to change to newer stormwater standards that may benefit water quality. Design guidelines associated with the subarea plan would not implemented, and the mixed and haphazard character of development patterns could continue.

2.8 Major Issues to Be Resolved

Adoption of the Gorst Subarea Plan would support development and redevelopment of the area to a more intensive commercial, residential, and mixed use character consistent with the vision of the Gorst Subarea Plan, while at the same time promoting environmental protection and enhancement. Key environmental issues facing decision makers include potential increases in growth and associated air and GHG emissions, conversion of land use patterns, changes to visual character, stormwater and transportation infrastructure investments, and increased demand for public services and utilities.

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3.0 AFFECTED ENVIRONMENT, SIGNIFICANT IMPACTS, AND MITIGATION MEASURES

This chapter describes the affected environment, potential impacts, and mitigation measures for the following environmental topics:

- 3.1. Geology/Soils
- 3. 2. Water Resources
- 3.3. Air Quality
- 3.4. Plants and Animals
- 3.5. Noise
- 3.6. Hazardous Materials
- 3.7. Land Use Patterns
- 3.8. Socio-Economics
- 3.9. Aesthetics
- 3.10. Cultural Resources
- 3.11. Transportation
- 3.12 Public Services
 - 3.12.1 Fire Protection and EMS
 - 3.12.2 Law Enforcement
 - 3.12.3 Schools
 - 3.12.4 Parks, Recreation, and Open Space
 - 3.12.5 Libraries
- 3.13 Utilities
 - 3.13.1 Power
 - 3.13.2 Solid Waste
 - 3.13.3 Water, Wastewater, and Stormwater
 - 3.13.4 Telecommunications
- 3.14 Relationship to Plans and Policies

Following a description of current conditions (affected environment) the analysis compares and contrasts the alternatives and provides mitigation measures for identified impacts. It also summarizes whether there are significant unavoidable adverse impacts.

3.1 Geology/Soils

Affected Environment

GEOLOGY

Watershed

The study area lies within the Puget Trough physiographic province (Franklin and Dyrness 1988). The area was influenced by glacial activity 13,000 to 15,000 years ago. Soil parent material is predominantly glacial till; compacted glacial till is covered by a thin layer of ablation till. It is underlain by sediments deposited during previous glacial or interglacial periods. In the northern portion of the watershed, thin deposits of till occur over basalt bedrock associated with mountain slopes (United States Department of Agriculture [USDA] Soil Conservation Service 1980). In the northern portion of the watershed, a large deposit of recessional outwash consisting of fine-grained sand occurs, which has an important role in the recharge, storage, and discharge of water. The southern portion of the watershed consists primarily of Vashon Till, which has low permeability and low rates of recharge and discharge (Sceva 1957 in City of Bremerton 2012).

The following geologic units have been mapped within the study area (City of Bremerton 2011) (Figure 3.1-1 *Gorst Creek Watershed: Geology*):

- Qa – Alluvium
- Qga – Advance continental glacial outwash, Fraser-age
- Qgo – Continental glacial outwash, Fraser-age
- Qgt – Continental glacial till, Fraser-age
- Qp – Peat deposits
- Qgd – Continental glacial drift, Fraser-age
- Qgu – Glacial drift, undivided
- Qf – Artificial fill, including modified land
- Ev(c) – Basalt flows and flow breccias, Crescent Formation

Gorst UGA

Geology in the northeast portion of the UGA is typified by basalt flows and flow breccias. The remainder of the UGA is typified by continental glacial outwash.

Legend

— Road
 —+— Railroad
 — Stream
 [Green outline] Watershed Boundary
 [Dotted pattern] Urban Growth Area
 [Orange outline] City of Bremerton
 [Red outline] City of Port Orchard
 [Blue wavy lines] Wetland (WDFW/NWI)
 [Blue fill] Waterbody

WA DNR Geologic Unit Polygons

Code and Description

Qa, alluvium	Qp, peat deposits
Qga, advance continental glacial outwash, Fraser-age	Qgd, continental glacial drift, Fraser-age
Qgo, continental glacial outwash, Fraser-age	Qgu, glacial drift, undivided
Qgt, continental glacial till, Fraser-age	Qf, artificial fill, including modified land
	Ev(c), basalt flows and flow breccias, Crescent Formation

Date: May 2013
 Source: Suquamish Tribe, Department of Ecology, Department of Fish & Wildlife, BERK

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GEOLOGIC HAZARDS

Watershed

Geologically Hazardous Areas, as defined by the Kitsap County CAO, and the City of Bremerton CAO, are areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events are difficult locations to site commercial, residential, or industrial development, consistent with public health or safety concerns. Within the Gorst watershed, mapped Geologically Hazardous Areas include numerous moderate hazard areas, which have slopes of 15 to 30 percent and/or other geologic issues, and a few high hazard areas, which have slopes of greater than 30 percent and are unstable (Kitsap County 2007). Characteristics of instability may include unstable soils, groundwater seeps or springs, erosion hazards, or seismic hazards. The moderate hazard areas, or areas of concern, occur predominantly in the northern portions of the watershed, as well as along stream channels in the southern portion of the watershed. The high hazard areas all occur in the southern two-thirds of the watershed, and are associated with steep slopes along Parish Creek, a portion of Gorst Creek, and several unnamed stream channels.

Gorst UGA

Moderate geologic hazard areas cover much of the northeast portion of the Gorst UGA. No high hazard areas have been mapped within the UGA.

SOILS

Watershed

A breakdown of soil types within the study area is presented in Table 3.1-1 *Soil Types in the Gorst Creek Watershed and Gorst UGA, and Their Associated Construction Limitations and Erosion Hazard Potential*. Within the watershed, gravelly loams and sandy loams predominate. Alderwood very gravelly sandy loams and Harstine gravelly sandy loams, which occur on glacial till plains and moraines, are prevalent in the southern half of the watershed. Kilchis very gravelly sandy loams occur over basalt on mountain slopes and Ragnar fine sandy loam occurs on terraces in the northern half of the watershed.

Flooding of streams and associated export of sediment as result of water erosion during rain events have been identified as problems within the watershed that may be exacerbated by future cutting of trees and creation of additional impervious surface. Table 3.1-1 *Soil Types in the Gorst Creek Watershed and Gorst UGA, and Their Associated Construction Limitations and Erosion Hazard Potential* summarizes the erodibility of soils within the watershed. On slopes of less than 15 percent, runoff from Alderwood soils is slight, and the erosion hazard is low. On slopes of 15 to 30 percent, the runoff increases to medium, and the erosion hazard is moderate. Although permeability of Kilchis gravelly sandy loams is moderately rapid, these soils occur on slopes from 15 to 70 percent, therefore runoff is rapid and the erosion hazard is moderate to severe. For Ragnar fine sandy loams, the erosion hazard in flat areas is moderate, increasing to severe at slopes greater than six percent. For Harstine gravelly sandy loams, erosion hazard ranges from slight to moderate, depending on the slope.

Gorst UGA

Within the UGA, previously developed urban land, and Alderwood (urban land-Alderwood complex), Indianola, Kilchis, Ragnar, and Norma soils are most prevalent.

- Alderwood soils occur primarily in relatively flat areas near the Sinclair Inlet along State Route 3 and State Route 16, which already support extensive development. These soils are suited to urban development if community sewer systems are present. The main limitations are the silica-cemented hardpan at a depth of 20 to 40 inches and a seasonal perched water table at a depth of 2.5 to 3 feet.

- Indianola loamy sands occur in the southwest portion of the UGA, and include a large portion of the high intensity development in this area. The soil is easily excavated, and in flat areas can support high density development and on-site sewage disposal systems.
- Kilchis very gravelly sandy loams occur in the hills in the north portion of the UGA, and are mapped as having 30 to 70 percent slopes. They are shallow soils, with depth to basalt bedrock of 16 to 20 inches. The shallow depth to bedrock and steep slopes present severe limitations for development.
- Ragnar fine sandy loams occur in flat areas within the northwest portion of the UGA. These deep, well-drained soils are well suited to urban development.
- Norma fine sandy loams occur in the floodplain of Gorst Creek, and in other low areas in the south half of the UGA. These hydric soils have a high water table and pond runoff, making them poorly suited to development and on-site sewage systems.

Based on the soil survey for the area, approximately 28 percent of the Gorst UGA is mapped as having a slope of greater than 15 percent. In these areas, moderate to steep slopes present challenges to constructability (USDA Soil Conservation Service 1980).

Table 3.1-1
Soil Types in the Gorst Creek Watershed and Gorst UGA, and Their Associated Construction Limitations and Erosion Hazard Potential

Map Unit	Acres in Watershed ¹	Acres in UGA	Constructability of UGA Soils (Limitations for Building and Street Development)	Erodibility/Erosion Hazard
Alderwood Very Gravelly Sandy Loam	1,109	0	Slight to severe, depending on slope	Slight – less than 15 percent slope; moderate – 15 to 30 percent slope
Kilchis Very Gravelly Sandy Loam	1,006	50	Severe (shallow depth to rock)	Moderate to severe (rapid runoff)
Ragnar Fine Sandy Loam	986	33	Slight	Moderate – less than 6 percent slope; severe – greater than 6 percent slope
Harstine Gravelly Sandy Loam	737	25	Moderate to severe (wetness)	Slight – less than 15 percent slope; moderate – 15 to 30 percent slope
Schneider Very Gravelly Loam	356	0	Severe (steep slopes)	Severe (rapid runoff)
Indianola Loamy Sand	332	53	Slight to severe, depending on slope	Slight – less than 6 percent slope; moderate – 6 to 10 percent slope
Kitsap Silt Loam	317	28	Moderate to severe (wetness)	Slight – less than 8 percent slope; moderate – 8 to 15 percent slope; severe – greater than 15 percent slope
Dystric Xerothents	249	4	Severe (steep slopes)	High
Indianola-Kitsap Complex	256	5	See information for Indianola and Kitsap map units.	See information for Indianola and Kitsap map units.
Neilton Gravelly Loamy Sand	255	0	Slight to severe,	Slight

Map Unit	Acres in Watershed ¹	Acres in UGA	Constructability of UGA Soils (Limitations for Building and Street Development) depending on slope	Erodibility/Erosion Hazard
McKenna Gravelly Loam	162	0	Severe (ponding)	None (water is ponded)
Kilchis-Shelton Complex	130	0	Severe (shallow depth to rock, wetness, slope)	Severe (very rapid runoff)
Norma Fine Sandy Loam	119	31	Severe (ponding)	Slight
Urban Land-Alderwood Complex (0 to 8 percent slope)	55	55	Slight to moderate (wetness, cemented pan, slope)	Slight; moderate on slopes (slow runoff)
Water	49	2	NA	NA
Pits	32	32	NA	NA
Shalcar Muck	14	0	Severe (ponding, low strength)	None to slight (water is ponded)
Tacoma Silt Loam	11	11	Severe (floods, wetness)	None

Note: ¹Watershed refers to the entire Gorst Creek Watershed, inclusive of the UGA.

Source: USDA Soil Conservation Service 1980; USDA Natural Resources Conservation Service 2013a,b

Impacts

Impacts Common to All Alternatives Watershed

Under all alternatives, development would occur throughout the Gorst watershed, to varying degrees as allowed by zoning and applicable regulations. As discussed in Section 2.5 *Study Alternatives: Future Growth*, it is assumed that most development outside of city limits and designated UGAs would be associated with residential dwellings, with less than 500 new dwellings constructed over the next 20 years. Creation of impervious surface would result in a long-term loss of soil functions within affected areas, and could lead to increased surface water runoff and erosion of soils in adjacent areas. Removal of trees and other vegetation within these areas could also lead to reduced infiltration and erosion of exposed soils from affected sites. Water erosion of soils by stormwater would be the biggest risk, resulting in movement of soil downslope and downstream, and potential loss of soil from the watershed. In all cases, risks of soil erosion associated with development and other land clearing activities would be greatest on slopes and in areas with highly erodible soils. Additionally, use of heavy equipment for clearing and construction activities could result in compaction of soils. Risks of compaction would vary depending on the physical characteristics of the soil. During construction and operation of new dwellings, there would be risks for localized contamination of soils through releases of fuels and other hazardous materials associated with vehicles and development activities. Stormwater plans, BMPs, and Spill Prevention Control and Countermeasure (SPCC) plans would help minimize these impacts to varying degrees.

Given that geologic hazards and unstable soil conditions occur throughout the watershed, future development would have the potential to impact slope stability. However, because of the challenges to construction presented by slopes, it is expected that development in these areas would be minimal.

It is assumed that under all alternatives, future development projects would receive the appropriate permits, and that buffers, development standards, and other mitigation measures pertaining to slope stability and prevention of erosion would be implemented.

Gorst UGA

Under all alternatives, most impacts to soils would occur within the Gorst UGA, where the majority of planned development would be focused. Within the UGA, development could occur within the 281 parcel acres identified in Table 3.1-1 *Soil Types in the Gorst Creek Watershed and Gorst UGA, and Their Associated Construction Limitations and Erosion Hazard Potential*, although the types of development would vary by alternative. Additionally, it is unlikely that all currently developed areas would be redeveloped within the next 20 to 30 years. Potential impacts associated with construction activities within the UGA would be similar to those described for the watershed, although creation of new impervious surface would be a smaller factor in the UGA. The potential for loss of soil through erosion, soil compaction, and soil contamination would be present, all of which would have the potential to be minimized, to varying degrees by pertinent plans and BMPs.

Planned development within the UGA would potentially result in a long-term loss of soil functions over a small area if currently undeveloped areas are developed in the future. It is expected that the total area of impervious surface could increase within the UGA, leading to increased soil erosion. Future development within the UGA would have the potential to impact slope stability in steep areas.

Alternative 1

Based on the information in Table 2-7 *Growth Comparison by Gorst UGA Alternative*, a total of approximately 41 developable acres within the UGA have been identified under Alternative 1. In addition to these developable parcel acres, some land would be modified in existing or future rights of way or on lands for public purposes. Therefore, in addition to future projects on already developed parcels, sites that currently do not support development would likely be altered. Creation of impervious surface would result in the loss of soils on up to 41 acres, as well as the functions that they provide (e.g., ability to support native plant species and other vegetation, and infiltration of water), and could contribute to increased erosion of soils.

Under this alternative, sand, gravel, and rock deposits would continue to be mined from the area identified with the mineral resources overlay in Figure 3.1-1 *Gorst Creek Watershed: Geology*. This ongoing activity would result in the permanent loss of these mineral resources from the region.

Under this alternative, existing regulations and plans to minimize soil erosion, impacts to steep or unstable slopes, and soil contamination would continue to be tied to permitting for new development/redevelopment projects in the watershed and the UGA (discussed under Applicable Regulations and Commitments in the Mitigation Measures discussion for this section). These regulations and guidelines are effective at minimizing impacts to steep/unstable slopes, preventing contamination of soils, and minimizing loss of soil from construction sites. Additionally, adoption of the LID guidance manual will help guide new development such that the amount of effective impervious surface on a site is reduced. Within the UGA, redevelopment would likely result in an overall reduction in effective impervious surface. On a larger scale, however, shortcomings that have been identified in stormwater management throughout the watershed would continue to have a negative impact on surface water and stormwater flows, leading to ongoing erosion and removal of soil from the watershed.

As the Watershed Characterization & Framework Plan would not be implemented under this alternative, there would be no watershed-level plan for future development identifying protection and restoration zones and associated actions/restrictions to limit flooding, water erosion, and movement of soil. Development within the watershed would continue to be haphazard, and despite existing regulations and guidance, soil erosion within the watershed may increase as a result of new development.

Alternative 2

A total of approximately 70 developable acres have been identified for Alternative 2. In addition to these developable parcel acres, some land would be modified in existing or future rights of way or on lands for public purposes. Therefore new development on currently undeveloped parcels would result in the long-term loss of soils and their functions on up to 70 acres, which is greater than that under Alternative 1. However, this alternative

would include low and medium density residential areas, which would retain some impervious surface for yards associated with dwellings. Additionally, small areas of open space and recreation would be maintained. Therefore, the total loss of soil would be less than the full 70 acres. Creation of new impervious surface could contribute to increased erosion of soils.

Under this alternative, the area that is currently used for mineral resource extraction would be developed into Medium Density Residential with a mix of housing types. This area includes a large moderate geologic hazard area, as well as large coverage of soils with severe limitations for building and street development. Therefore, construction activities in this area could require substantial mitigation, including project design to minimize impacts to soils and geologic resources.

Under this alternative, existing regulations and plans to minimize soil erosion, impacts to steep or unstable slopes, and soil contamination would continue to apply, but may be revised in the future based on the recommendations in the Gorst Stormwater Management Plan, Gorst Subarea Plan, and Gorst Creek Watershed Characterization & Framework Plan, which would be implemented under this alternative. Within the UGA, efforts to minimize impervious surface in developed/redeveloped areas would likely result in an overall reduction in effective impervious surface. On a watershed scale, planned improvements to stormwater facilities, stream restoration, and protection of key recharge/discharge/storage areas, if implemented, would help to minimize the impacts of new development and associated erosion, and would likely result in a reduction in flooding and export of soils from the watershed.

Alternative 3

The area of developable land identified for Alternative 3 is approximately 69 acres, roughly the same as under Alternative 2, but greater than under Alternative 1. In addition to these developable parcel acres, some land would be modified in existing or future rights of way or on lands for public purposes. This alternative includes the same amount of open space as Alternative 2, as well as low intensity waterfront, which reduces impervious surfaces and promotes shoreline reclamation and open space. Therefore some soil functions would be retained within the developable land, much like under Alternative 2.

Under this alternative, the area that is currently used for mineral resource extraction would be developed into Neighborhood Mixed Use. As under Alternative 2, the geologic hazard area and soils with limitations on building and street development would provide challenges to planned development in this area. Construction activities could require substantial mitigation, including project design to minimize impacts to soils and geologic resources.

Under this alternative, the Gorst Stormwater Management Plan, Gorst Subarea Plan, and Gorst Creek Watershed Characterization & Framework Plan would be implemented, as under Alternative 2. Existing regulations and plans to minimize soil erosion, impacts to steep or unstable slopes, and soil contamination would continue to apply, but may be revised in the future based on the recommendations in listed plans, which would be implemented under this alternative. Within the UGA, efforts to minimize impervious surface in developed/redeveloped areas would likely result in an overall reduction in effective impervious surface, particularly along Sinclair Inlet with the Low Intensity Waterfront designation. On a watershed level, successful implementation of the recommendations within these plans would help minimize any potential erosion increases associated with new watershed development, and would likely result in a reduction in flooding and export of soils from the watershed.

Mitigation Measures

Incorporated Plan Features

New plans that would be implemented under Alternatives 2 and 3 include features that would serve as mitigation for potential impacts to soils and geologic resources. Implementing regulations associated with the Gorst Subarea Plan, and Gorst Creek Watershed Characterization & Framework Plan would incorporate the suggested

management measures shown in Table 2-8 *Integrated Watershed Processes and Habitat Results and Management Measures*.

Possible plan features that would serve as mitigation for potential impacts to soil include the following:

- Minimization of new development in certain areas.
- Limiting logging activities and maintain appropriate zoning in areas with high sediment export.
- Implementation of measures to reduce erosion and sediment export in areas identified for future development (e.g., buffers, setbacks from steep slopes, reduction of overland flow through infiltration).
- Restoration of cleared/degraded areas.
- Implementation of stormwater retrofits to reduce impervious surface.

Additionally, capital facility improvements have been recommended for addressing stormwater deficiencies and flooding issues. Implementation of these improvements would help reduce soil erosion and loss of soil from the watershed. Based on policies in the proposed Draft Gorst Subarea Plan and Draft Gorst Creek Watershed Characterization & Framework Plan implementing regulations could include a zero stormwater discharge requirement limiting direct and untreated stormwater and a requirement that future development incorporate a series of LID measures to infiltrate or detain runoff.

Applicable Regulations and Commitments

Kitsap County CAO. Unincorporated portions of the watershed are under the jurisdiction of the Kitsap County CAO. These regulations may require a geologic or geotechnical report to be done to determine whether an area proposed for development is a geologically hazardous area or area of geologic concern. A minimum buffer of 25 feet beyond the top of the slope is required in all geologically hazardous areas, with larger buffers and building/impervious surface setbacks required depending on the site and the degree of the hazard.

City of Bremerton CAO. The majority of the watershed is under the jurisdiction of the City of Bremerton CAO. Additionally, the current Gorst UGA is likely to be under the jurisdiction of the City of Bremerton CAO as a result of annexation within the time period covered by this EIS. All development projects with the potential to affect critical areas in areas under the City of Bremerton's jurisdiction require review for compliance with the CAO. The CAO provides development standards that apply to geologically hazardous area, including buffers between steep slopes and structures/impervious surfaces. Applicants are required to mitigate for development in geologically hazardous areas by incorporating design techniques that minimize impacts to steep or unstable slopes and the risks associated with these areas.

KCC Chapter 12, Stormwater Drainage, and Kitsap County Stormwater Design Manual. Construction within areas under Kitsap County jurisdiction is regulated by KCC Title 12. This section of the KCC requires erosion and sedimentation control measures for minor and major development, with major development requiring an approved erosion and sedimentation control plan. This section of the code also requires that all site development activities comply with the standards, specifications, and requirements of the Stormwater Design Manual. Minimum requirements for major development include stabilization of exposed soils, slope stabilization, controls of off-site erosion, as well as other requirements.

BMC Chapter 15, SWMMWW and LID Guidance Manual. BMC Section 15 provides regulations for stormwater management associated with new development and redevelopment. The code contains minimum requirements for small parcels and large developments, which includes BMPs and other means of controlling erosion and sediment during construction, permanently stabilizing soil during construction, and preparing a stormwater management plan.

The City of Bremerton has adopted the SWMMWW as the guiding criteria for planning, design, and construction of stormwater facilities in Bremerton. The City of Bremerton has also adopted the *LID Guidance Manual* for Kitsap

County. These manuals were adopted in August 2009, and apply to new construction within the City of Bremerton since that time. The SWMMWW provides guidance on measures necessary to control the quantity and quality of stormwater produced by new development and redevelopment. Aspects of stormwater control that pertain to soil erosion include guidance for controlling erosion and sedimentation. The SWMMWW includes appropriate minimum requirements and BMPs, including those for short-term control of stormwater from construction sites and long-term management of stormwater at developed sites. The LID guidance manual provides guidance on selecting and implementing LID stormwater BMPS that reduce the amount of effective impervious surface on a site.

Other Potential Mitigation Measures

No additional mitigation measures are proposed for soil and geologic resources.

Significant Unavoidable Adverse Impacts

Under all of the alternatives, future development would lead to the loss of currently undeveloped soils within the UGA, which will eliminate their ability to support other uses. The area of land that is currently undeveloped but would be available for development ranges from 41 to 70 acres, depending on the alternative, plus land modified in existing or future rights of way or on lands for public purposes. While the total acreage of soil lost is likely to be less than the acreage of developable acres, it would constitute an unavoidable adverse impact.

Under all alternatives, loss of soil from the watershed is likely to continue to occur as a result of flooding and stormwater runoff. Over the long term, these impacts would be greatest under Alternative 1, and lower under Alternatives 2 and 3.

Non-renewable mineral resources would continue to be extracted from the study area on an indefinite basis under Alternative 1, and on an interim basis under Alternatives 2 and 3. This ongoing extraction would constitute a long-term loss of these resources, although the material would be used for commercial purposes as intended by the GMA.

3.2 Water Resources

The following section describes the watershed setting, hydrology, and the ground and surface water features in watershed and Gorst UGA; applicable plans, policies, regulations, and laws pertaining to work in or near waterways and the protection of water quality; and the effects of the project alternatives on water resources. Stormwater is described in Section 3.13.3 *Water, Wastewater, and Stormwater*. Water resources information was collected from the Gorst Creek Watershed Characterization Report (City of Bremerton 2012), Gorst Creek Watershed Inventory and Characterization Technical Memorandum (City of Bremerton 2011), and Kitsap County's 2013-2025 CFP (Kitsap County 2012).

Affected Environment

Watershed

The Gorst watershed is located in the Kitsap Basin (Water Resource Inventory Area [WRIA] 15) and within the 5th field Hydrologic Unit Code (HUC) 1711001901. Streams in the Gorst Watershed drain to Puget Sound and the Sinclair Inlet and are typical lowland type streams with moderate gradients. Most streams originate from lakes, headwater wetlands, or seepage from groundwater discharge. The watershed is approximately 6,000 acres in the southwestern portion of Kitsap County and mostly undeveloped. Approximately 3,000 acres are forested land owned by the City of Bremerton of Bremerton and zoned as CUL. The intent of the CUL zone is to preserve resource-related functions of land, and to protect watersheds and timberlands. Approximately 120 acres are developed (City of Bremerton 2012). A detailed description of land use and zoning is provided in Section 3.7 Land Use Patterns. Although the watershed includes industrial development in the SKIA UGA and scattered rural residence in the Sunnyslope area, most of the development is found in the lower watershed within the Gorst UGA.

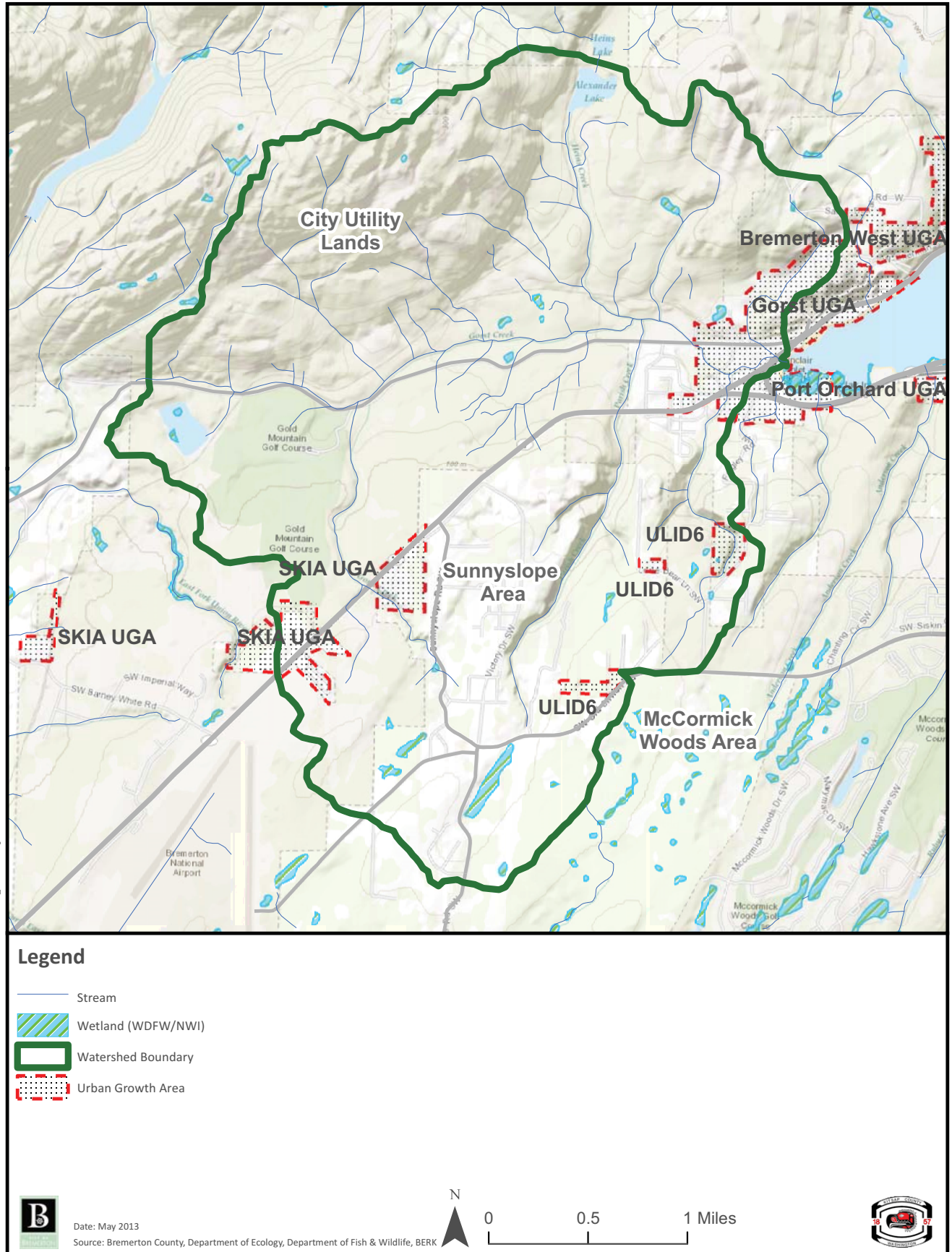
Hydrology and Water Quality

Drainages in the Gorst watershed are relatively smaller in comparison to other watersheds in the region and flows are dependent on precipitation and groundwater contribution, as the drainages do not receive snowmelt from either the Olympic or Cascade Mountains. Major water features in the watershed include two small lakes (Twin and Alexander), several small streams, and an estuary (Sinclair Inlet) (Figure 3.2-1 *Gorst Creek Watershed: Water Resources*). Sinclair Inlet is described in the Gorst UGA section. Gorst Creek is the primary drainage feature for the watershed and had three major tributaries Heins, Jarstad, and Parish creeks.

Gorst Creek is approximately four-miles-long and originates in the Sunnyslope area from a headwater wetland complex (southern portion of the watershed). The headwaters of Gorst Creek are generally flat with a relatively narrow riparian buffer that is constrained by rural residences, Sunnyslope Road SW, and SR 3. The middle reach is undeveloped with a riparian buffer in good condition. The lower reach is in the Gorst UGA and described in the below. The Gorst Creek Salmon Rearing Facility, jointly operated with the Suquamish Tribe, WDFW, and Kitsap Poggie Club, is located approximately 0.75 mile upstream from the mouth of Gorst Creek at Sinclair Inlet (City of Bremerton 2011).

Heins Creek is approximately two miles long and originates from Alexander Lake in the northern portion of the watershed and is relatively straight and drains to Gorst Creek. Heins Lake contributes flow to the Gorst watershed but is part of the larger basin outside of the study area and not described in the Draft EIS. Heins Creek is undeveloped with a riparian buffer that is constrained by a railroad grade. Heins Creek is in good condition (May and Peterson 2003). Jarstad Creek is 1.5-miles-long and also in the north portion of the watershed. The riparian buffer is only disturbed by forest roads and a transmission line corridor. Jarstad Creek has the greatest value for salmon conservation in the watershed (May and Peterson 2003). Parish Creek is 2-miles-long and originates in the southern portion of the watershed in the Sunnyslope area. Parish Creek has a moderately steep gradient and flow north through a ravine eventually draining to Gorst Creek. Parish Creek has flooding issues near the confluence with Gorst Creek related to the culvert under West Belfair Valley Road.

FIGURE 3.2-1 GORST CREEK WATERSHED: WATER RESOURCES



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The major groundwater source in the watershed is the Gorst aquifer. Several wellhead protection areas are scattered throughout the watershed. A large deposit of recessional outwash consisting of fine-grained sand (Sceva 1957) dominates the northern portion of the Gorst Creek Watershed. Recessional outwash typically has excellent properties for the recharge, storage, and discharge of water and as a result supports streams with annual flows sufficient to support a diversity of aquatic life. The southern portion of the watershed consists primarily of Vashon Till, which due to its low permeability has low rates of recharge and discharge (Sceva 1957).

Based on results of the Gorst Creek Watershed Characterization Report (City of Bremerton 2012), the northern half of the watershed has an intact water flow delivery component that is properly functioning. The natural hydrology in the southern half of the watershed is altered by mixed developments resulting more frequent and higher flows (City of Bremerton 2012). Heins, Jarstad, and Parish creeks have the highest potential for sediment transport which could result in an increase in erosion and mass wasting impacting water quality (City of Bremerton 2012).

Washington's Water Quality Assessment lists the status of water quality for a particular location in one of five categories recommended by the EPA and Section 303(d) of the Clean Water Act (CWA). Administered in Washington State, by Ecology, the 303(d) list reports on Category 5 waters, which are impaired waters of the state. Waters placed on the 303(d) list require the preparation of a plan to improve water quality by limiting pollutant loads. Water quality in the Gorst watershed is good with only two creeks (Gorst and Parish) on the 303(d) list (Ecology 2012).

Gorst Creek between rivermile 0 and 1.6 does not meet the water quality standards for dissolved oxygen and was placed in Water Quality Assessment Category 5 and Ecology's 303(d) List of Impaired Waters (Ecology 2012). The bacteria water quality standard in Gorst Creek is currently in the Water Quality Assessment Category 4b. Historically, Gorst Creek has not met fecal coliform standards and was placed in Water Quality Assessment Category 5 by the EPA. Ecology reclassified Gorst Creek as Category 4b in 2004 due to Kitsap County's Pollution Surface and Stormwater Management Program. The KCHD currently monitors water quality in Gorst Creek from a monitoring station located at the mouth of Gorst Creek. Cleanup work in the watershed has helped reduce pollution (City of Bremerton 2012).

Parish Creek between rivermile 0 and 0.7 does not meet the water quality standards for bacteria (exceeded criteria for fecal coliform) and was placed in Water Quality Assessment Category 5 and Ecology's 303(d) List of Impaired Waters (Ecology 2012).

Floodplains and Shoreline

Unlike watersheds with larger river systems that are prone to flooding from rain-on-snow events, flooding in the Gorst watershed are caused by disturbance of natural hydrological patterns caused by development, removal of native riparian, and encroachment on floodplains. The Federal Emergency Management Agency (FEMA) regulations define a floodplain as *"the lowland and relatively flat areas adjoining inland and coastal waters including, at a minimum, that area subject to a one percent or greater chance of flooding in any given year"* (44 CFR 9.4). Floodplains are mapped upstream of the Gorst UGA at the confluence of Gorst, Heins, Jarstad, and Parish Creeks and along Parish Creek (Gorst-Parish floodplain complex) (Figure 3.2-2 *Gorst Creek Watershed: Floodplain and Shoreline*). Based on results of the Gorst Creek Watershed Characterization Report (City of Bremerton 2012), the northern half of the watershed has intact flood storage capacity and is in good condition while the southern watershed has altered hydrology and includes features that drain floodplains and wetlands. Shoreline in the watershed is described in the following Gorst UGA section.

Gorst UGA

The major water features in the Gorst UGA include the previously described Gorst Creek, an unnamed tributary to Gorst Creek, and Sinclair Inlet (Figure 3.2-2 *Gorst Creek Watershed: Floodplain and Shoreline*).

Hydrology and Water Quality

The lower reach of Gorst Creek, Gorst tributary 1, and Gorst tributary 2, in the UGA is channelized with a riparian buffer that is constrained by rural residences and commercial development along SR 3 and SR 16. Water quality in the UGA is moderate with periods of elevated bacteria in Gorst Creek but is improving (City of Bremerton 2011). All waters in the Gorst UGA drain to Sinclair Inlet. Commercial development on the eastside of the highway is built up to the edge of the wetland areas of Sinclair Inlet. Sinclair Inlet has a history of poor water quality with commercial shellfish harvesting closed since the 1960s. Sinclair Inlet contains tidally influenced waters that mix slowly with the more open waters of Puget Sound. Because of its slow mixing rates, shallow depths and proximity to land use activities along the shoreline, Sinclair Inlet is extremely susceptible to pollution. Sinclair Inlet does not meet the water quality standards for mercury and polychlorinated biphenyls (PCB) and is placed in Water Quality Assessment Category 5 and Ecology's 303(d) List of Impaired Waters (Ecology 2012).

Floodplains and Shoreline

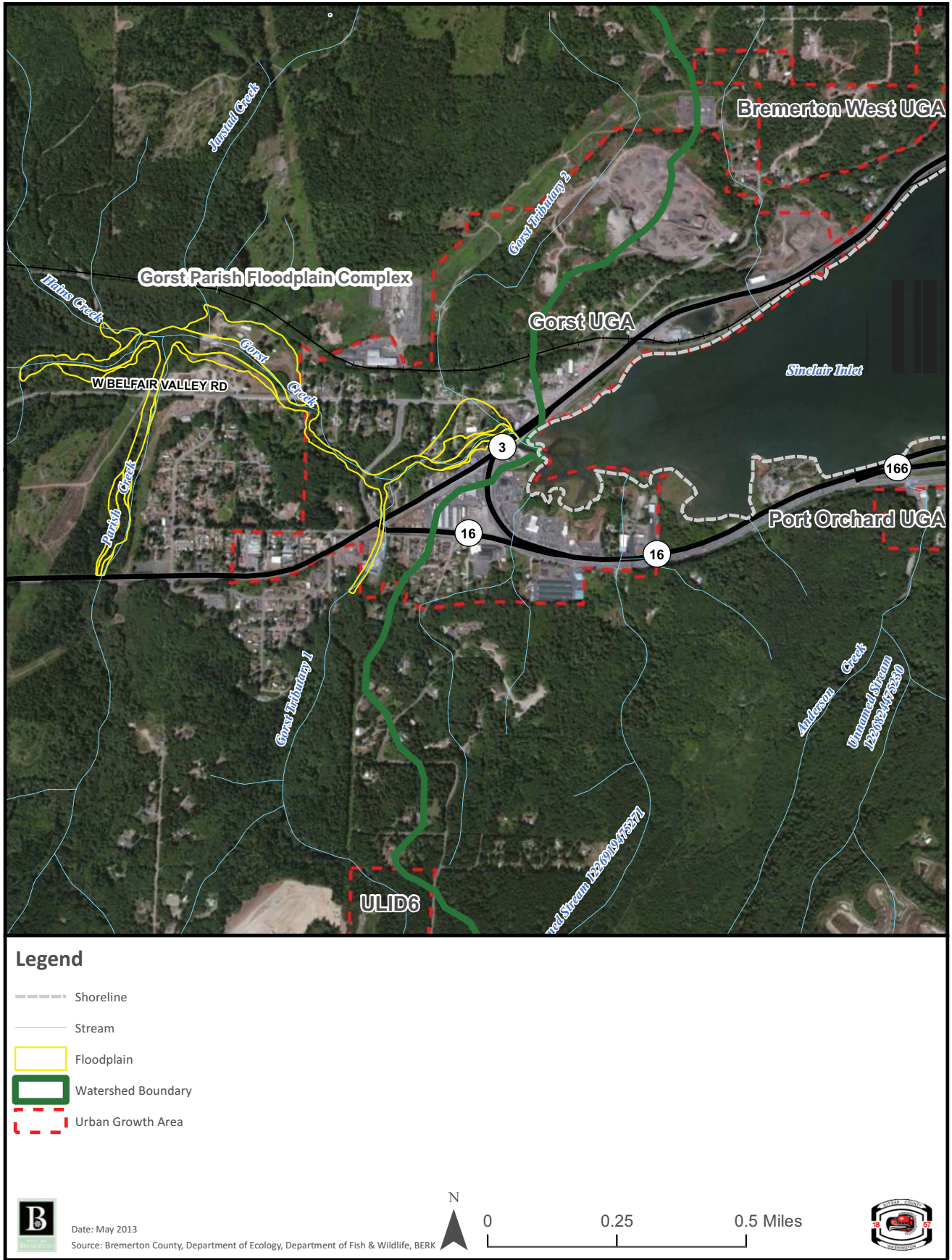
Floodplains are mapped based on FEMA information in the Gorst UGA along Gorst Creek, Gorst tributary 1, Gorst tributary 2, and in the waterfront along the shoreline of Sinclair Inlet (Figure 3.2-2 *Gorst Creek Watershed: Floodplain and Shoreline*). In the Gorst UGA, floodplain connectivity is fragmented by commercial development and SR 3. (FEMA floodplain mapping and its potential effect on development in the County including the Gorst vicinity is also being considered in a separate Kitsap County Alternatives Futures study undergoing review.)

Gorst tributary 2 drains the north portion of the UGA near the mine site. This tributary in combination with hillside seepage contributes to flood of residences and businesses including the Navy City Metals Recycling.

Flooding problems and drainage infrastructure deficiencies are identified at 16 sites in and just outside of Gorst UGA (Figure 3.2-3 *Gorst Identified Infrastructure Existing Drainage Deficiencies*). Sites included Elite Exterior and Betos Tires, development along W. Belfair Valley Road, and Peninsula Subaru. Elite Exterior has frequent flooding when high tides coincide with storm events. Businesses and residences along W. Belfair Valley Road have experienced increased flooding from high groundwater in combination with hill slope seepage and insufficient stormwater conveyance from degraded roadside ditches. Peninsula Subaru has drainage issues associated with undersized stormwater drain pipes and culverts with sink holes and slumps occurring on the property.

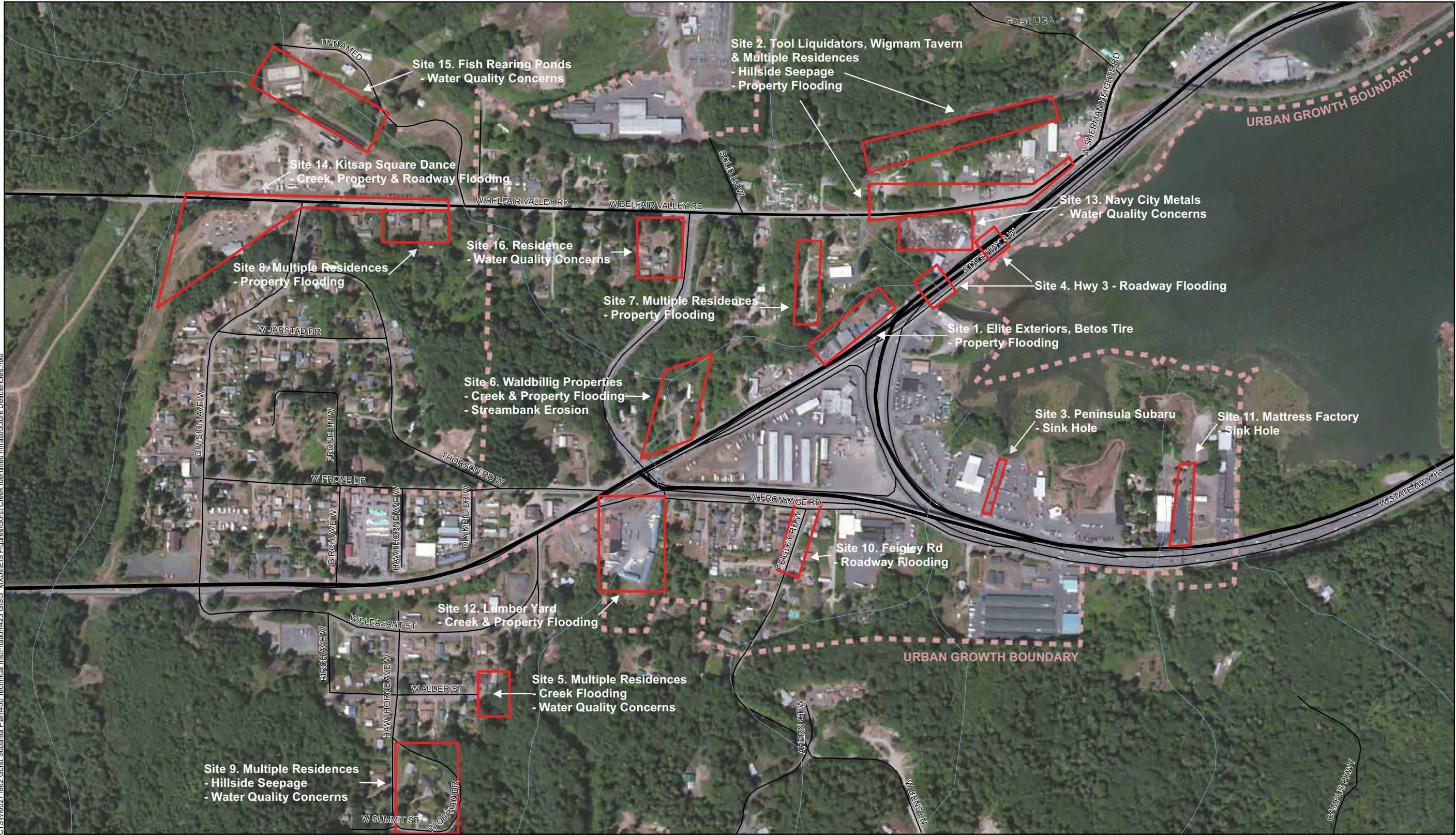
Shorelines regulated under the Shoreline Management include Sinclair Inlet and Gorst Creek. The shoreline jurisdiction extends 200 feet landward of these waters which are mostly developed including riprap banks along Sinclair Inlet.

FIGURE 3.2-2 GORST CREEK WATERSHED: FLOODPLAIN AND SHORELINE



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FIGURE 3.2-3 GORST: IDENTIFIED EXISTING DRAINAGE DEFICIENCIES



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Impacts

This Draft EIS evaluates a No Action Alternative and two action alternatives (Alternative 2 and Alternative 3), as described in Chapters 1 and 2. The No Action Alternative provides a future baseline against which to measure both short-term and long-term impacts of the action alternatives on water resources.

The City of Bremerton is compiling watershed data for models that would identify and prioritize mitigation measures that would restore, enhance, and protect water resources and optimize investment in infrastructure. One of these models is a Hydrological Simulation Program-Fortran (HSPF) Model developed for the Gorst Watershed and based on current land use conditions. The HSPF Model is described in Section 3.13.3 *Water, Wastewater, and Stormwater*. Anticipated economic development and population growth in the Gorst Creek watershed and Gorst UGA may also affect long-term surface water conditions and potentially change peak flows and volumes. Potential changes to peak flows and volumes for the action alternatives are compared for each action alternative relative to the No-Action Alternative.

Impacts Common to All Alternatives

Watershed

Under all project alternatives and as described in Chapter 2.0 *Alternatives*, areas planned land uses outside of the Gorst UGA but within the watershed would remain the same as in adopted plan. These areas include the City of Bremerton's CUL and SKIA, the City of Port Orchard's McCormick Woods, and remaining rural unincorporated Kitsap County lands. In addition, over the next 20 to 30 year jobs would substantially increase from 264 to 2,305 primarily due to economic development in the SKIA. The added jobs in the SKIA area would be subject the SKIA Subarea Plan. Population growth is projected to increase from 1,810 to 2,659. Population growth would likely occur south of SR 3 and east of Parish Creek. Groundwater and the Gorst aquifer would continue to be protected.

One area of concern is the Gorst-Parish floodplain complex that is subject to frequent flooding. Anticipated population growth and subsequent development upstream of this location would likely increase the amount of untreated surface water, peak runoff flows, and sedimentation. Flooding in the Gorst-Parish floodplain complex has been identified as priority and would eventually be addressed. Because economic development and population growth in the watershed would occur under all project alternatives, effect would be similar and considered minor impacts on water resources.

Gorst UGA

Under all alternatives, construction activities within the UGA would have the potential to impact water resources caused by site demolition or construction (water turbidity, debris in the water, etc.), similar to those described in Section 3.1 *Geology/Soils*. Scale and intensity of construction projects may vary slight by alternative and differences are described under each alternative. Overall, construction activities would result in short-term minor impacts on water resources.

Alternative 1

Under Alternative 1, over the next 20 to 30 years, construction, maintenance, and operational impacts on water resources would remain consistent with existing conditions, the Gorst Creek Watershed Characterization & Framework Plan would not be adopted, and a planned action would not be adopted for the Gorst UGA. High density commercial areas would continue to impact hydrology and water quality immediately adjacent to Gorst Creek and Sinclair Inlet. Under Alternative 1, an increase in 742 jobs and a population growth of 82 persons is expected to occur over the next 20 to 30 years. Commercial businesses would expand along the highways and there is a potential for new residential development to occur surrounding the existing mine or west of Sam Christopherson Road. Current regulations recognize the adverse effects of improper water resource management, development in the floodplain, and armoring of streambanks and shorelines and generally seek to prevent these through a variety of site design requirements and construction methods. However, the UGA was previously

developed without these requirements and commercial areas would likely be redeveloped on the previously disturbed impervious surface without water quality treatment and would continue to impact floodplains and the shoreline. Incremental restoration and potential water quality treatment would occur on waters that are 303(d) listed. In addition, environmentally sensitive redevelopment in response to chronic flooding that would be likely addressed through emergency repairs or actions. Overall, Alternative 1 would have moderate impacts on water resources in the UGA.

Alternative 2

Under the Alternative 2 (Gorst is a well-designed regional commercial center), the Watershed Characterization & Framework Plan would be adopted, a regional commercial center along the waterfront would be developed, and clustered Medium Density Residential development would occur on the mine site. Construction activities associated with Alternative 2 could result in minor short-term impacts on water resources. Alternative 2 would allow a moderate increase in employment of 606 jobs and a more substantial increase in residents of 985 persons over the next 20 to 30 years.

The proposed Commercial Corridor development would accommodate new water quality treatment and likely restore segments of channelized streams as part of development requirements or incentives; however due to greater scrutiny of permits in floodplains and due to the listing of fish species, the developability of the Gorst Creek flood plain area for intensive commercial uses is expected to be challenging. The Medium Density Residential area on the bluffs currently undeveloped but used as mining resources/borrow material would impact surface water runoff and alter natural hydrology. However, new designs and development would address potential for flooding, potential need for flow control, and treatment, minimizing impact on hydrology and water quality. In addition development and environmental retrofits along Gorst Creek could address contributing outfalls. Estimates of the natural flow of the stream would need to be assessed to achieve proper hydraulic and aesthetic design. The potential for flood conditions and damage to surrounding property would also need to be determined and addressed.

Under Alternative 2, water resources would have additional protection from zero discharge of direct untreated stormwater to both streams and the estuary and a goal of 100 percent on-site infiltration or detention. The System for Urban Stormwater Treatment and Analysis Integration (SUSTAIN) model, which is described in Section 3.13.3 *Water, Wastewater, and Stormwater* would be used to optimize and prioritize protection zones for water resources.

Overall, Alternative 2 would have a minor effect on water resources from short-term construction related impacts and moderate effects from long-term development continued development of high density commercial areas along the shoreline. The long-term effects of the commercial development may be offset by implementation of the adopted Watershed Characterization & Framework Plan that would ensure stormwater in the watershed would be treated prior to discharge into sensitive waterways or critical areas. The Watershed Characterization & Framework Plan would have a beneficial effect on water resources.

Alternative 3

Under Alternative 3 (Gorst becomes a complete community), the Watershed Characterization & Framework Plan would be adopted, along with LID and stormwater standards. Similar to Alternative 2, construction activities associated with Alternative 3 could result in minor short-term impacts on water resources. Similar to Alternative 2, adoption of the Watershed Characterization & Framework Plan would include a directive for protecting water resource in the UGA. Under Alternative 3, compare to the other alternative would have less job growth at 333 jobs, but the highest population growth at 1,082 persons over the next 20 to 30 years.

The proposed Gorst Mixed Use development would accommodate new water quality treatment and likely restore segments of channelized streams as part of development requirements or incentives; however due to greater

scrutiny of permits in floodplains and due to the listing of fish species, the developability of the Gorst Creek flood plain area for intensive mixed uses is expected to be challenging.

The Low Intensity Waterfront and Open Space/Recreation areas along Sinclair Inlet would accommodate new water quality treatment, reduce impervious surface areas, and provide an adequate buffer to the shoreline. The Neighborhood Mixed Use area on the bluffs currently undeveloped but used as mining resources/borrow material would impact surface water runoff and alter natural hydrology. However, similar to Alternative 2, new designs and development would address potential for flooding, potential need for flow control, and treatment, minimizing impact on hydrology and water quality.

Also similar to Alternative 2, Alternative 3 would establish a zero stormwater discharge policy to both streams in the UGA and the estuary; if implemented this would require 100 percent infiltration or detention. The SUSTAIN model would be used to optimize and prioritize protection zones.

Overall, Alternative 3 would have a minor effect on water resources from both short-term construction related impacts that may involve in-water work and long-term redevelopment of high density commercial areas with mixed use developments. The long-term effects of replacing the existing high density commercial developments with a low intensity waterfront along the shoreline and implementation of the adopted Watershed Characterization & Framework Plan would have a beneficial effect on water resources.

Mitigation Measures

Specific mitigation measures for potential impacts on water resources would be determined during subsequent project-specific environmental review and permitting in the watershed and application of the Planned Action ordinance and permitting in the Gorst UGA. Mitigation includes incorporated plan features, applicable regulations and commitments, and other potential measures.

Incorporated Plan Features

Features of the Watershed Characterization & Framework Plan and Gorst Subarea Plan that serve as mitigation for potential impacts on water resources include the following concepts found in Guiding Principles and Goals and Policies:

- Identify and protect critical areas such as floodplains along Gorst Creek.
- Prioritize areas for restoration that would improve water quality.
- Protect and enhance water quality/quantity.
- Promote shoreline reclamation.

Additionally, capital facility improvements have been recommended to address runoff from impervious surfaces and flood-prone areas.

Applicable Regulations and Commitments

Surface water quality standards are implemented through the CWA Section 401 certifications, water quality modifications, and compliance with the standards in Chapter 90.48 RCW and WAC 173-201A. Applications for water quality related permits include the Joint Aquatic Resources Permit Application (JARPA) process, and the NPDES permits. Applicable regulations and commitments may include the following:

- Federal
 - Clean Water Act
 - Coastal Zone Management Act

- Tribal
 - Tribal consultation or approval is required under federal statutes including the CWA Section 401 Water Quality Certification.
- State
 - Water Pollution Control Act (Chapter 90.48 RCW)
 - Shoreline Management Act (Chapter 90.58 RCW)
 - Coastal Zone Management Act Certification
 - Watershed Planning Law (Chapter 90.82 RCW)
 - Hydraulic Project Approval (WAC 220-110)
 - Aquatic Lands Use Authorization
 - On-Site Sewage Facility Permit
 - NPDES Construction Stormwater Permit
- Local
 - CAO Permit
 - Shoreline Management Permit
 - Floodplain Development Permit
 - BMC
 - KCC

Other Potential Mitigation Measures

Other potential mitigation measures could include the following:

- During construction, future projects will need to comply with all construction-related stormwater requirements, including temporary erosion and sediment control, and development and implementation of a stormwater pollution and spill prevention plan.
- The project-specific design will determine the necessary permanent, long-term water quality treatment requirements, necessary for all vehicle-accessible areas and redevelopments. Large areas of landscaping or lawn, unless strict policies on pesticide and fertilizer use are adopted, will also be subject to water quality treatment requirements.
- No specific water quality treatment method is proposed at this point, but it is likely that treatment would consist of various LID systems to the extent feasible. Additional erosion protection improvements may be needed at project outfalls because of increased peak runoff rates caused by an increase in impervious surface.
- If Gorst Subarea Plan policies and BMPs are implemented with corresponding development regulations there would be incentives for the removal of existing impervious areas and smaller new impervious footprints. Implementation of these types of incentives and standards could result in beneficial effects on water resources.
- The concept of allowing commercial or mixed uses on smaller impervious footprints could be extended to the Gorst Creek corridor and floodplain similar to Low Intensity Waterfront designation, recognizing the convergence of critical areas and difficulties of development in the floodplain. This would replace portions of Commercial Corridor in Alternative 2 and Gorst Mixed Use in Alternative 3.

Significant Unavoidable Adverse Impacts

Under all alternatives, the Gorst Creek watershed and the Gorst UGA would experience additional population and employment growth. Development in the Gorst Creek UGA is anticipated under the alternatives would result in no significant unavoidable adverse impacts on water resources. All alternatives would have a minor effect on water resources from short-term construction related impacts. As previously described, Alternative 1 would have long-term moderate impacts on water resources. Both Alternatives 2 and 3 would provide long-term beneficial effects on water resources from adoption and implementation of the Watershed Characterization & Framework Plan. Alternative 3 provides the greatest ecological benefit by establishing a low intensity waterfront along the shoreline of Sinclair Inlet that would, as redevelopment occurs, partially restore natural hydrology along that portion of the shoreline.

3.3 Air Quality

This section describes the current air quality conditions in the region, existing regulations and policies that govern allowable air pollutant emissions, and existing regulations and policies that have been developed to reduce GHG emissions. Impacts of the alternatives (Alternative 1 - No Action, Alternative 2 – Regional Commercial Center, and Alternative 3 – Complete Community) and the Gorst Watershed Framework Plan are analyzed at a programmatic level. This section also provides a screening-level forecast of GHG emission rates that would be generated by the alternatives and within the Gorst Watershed area.

Current air quality regulations would prevent new developments and commercial facilities within the Gorst study area from generating unacceptable air pollutant emissions that would affect nearby areas during construction or operation. Because all of the alternatives would increase population, commercial space, and industrial space in the Gorst study area above existing conditions, the air pollutant emissions generated within the Gorst study area are expected to increase. Similarly, regional vehicle miles traveled (VMT) by vehicles used by Gorst residents and those who work in Gorst would also increase in the Gorst study area, along with the tailpipe emissions generated by those vehicles. However, the VMT generated by the new homes and businesses in the Gorst study area would be a small fraction of the overall VMT generated within Kitsap County, so it is unlikely that any of the alternatives would significantly affect regional air quality.

Affected Environment

Existing Air Pollution Sources

Typical air pollution sources in the Gorst study area include vehicular traffic, commercial and retail businesses, light industry, and residential wood-burning devices. While many types of pollutant sources are present, the single largest contributor to most criteria pollutant emissions is expected to be derived from on-road vehicles, which contribute the majority of the carbon monoxide (CO), volatile organic compounds (VOCs), and nitrogen dioxide (NO₂). Secondary sources of emissions are derived from commercial and industrial land uses. Additionally, space heating (e.g., gas and diesel heating equipment) and wood-burning appliance emissions contribute to background air quality.

Key Criteria Air Pollutants

The following paragraphs describe the sources and environmental effect of key criteria pollutants (CO, ozone, and particulate matter) considered in this analysis.

CO is a product of incomplete combustion generated by mobile sources, residential wood combustion, and industrial fuel-burning sources. CO is a concern related to on road mobile sources because it is the pollutant emitted in the greatest quantity for which short-term health standards exist. CO is a pollutant whose impact is usually localized, and CO concentrations typically diminish within a short distance of roads. The highest ambient concentrations of CO usually occur near congested roadways and intersections during wintertime periods of air stagnation.

Ozone is a highly reactive form of oxygen created by an atmospheric chemical reaction of nitrogen oxides and VOCs, both of which are emitted directly from industrial and mobile sources. Ozone problems tend to be regional in nature because the atmospheric chemical reactions that produce ozone occur over a period of time, and because, during the delay between emission and ozone formation, ozone precursors can be transported far from their sources. Transportation sources like automobiles and trucks are some of the sources that produce ozone precursors.

Particulate matter is generated by industrial emissions, residential wood combustion, motor vehicle tailpipes, and fugitive dust from roadways and unpaved surfaces. When first regulated, particle pollution was based on “total suspended particulate,” which included all size fractions. As sampling technology has improved and the importance of particle size and chemical composition has become clearer, ambient standards have been revised to

focus on the size fractions thought to be most dangerous to people. At present, there are standards for particulate matter less than 10 micrometers in size (PM₁₀) and particulate matter less than 2.5 micrometers in size (PM_{2.5}), because these sizes of particulate contribute the most to human health effects, regional haze, and acid deposition. The highest ambient concentrations generally occur near the emissions sources, which in the Gorst study area would be motor vehicle tailpipes from SR 3, SR 16, and major roads. PM_{2.5} has a greater impact than PM₁₀ at locations far from the emitting source, because it remains suspended in the atmosphere longer and travels farther.

Air Quality Attainment Status

Based on monitoring information collected over a period of years, the EPA and Ecology designate regions as being attainment or nonattainment areas for regulated air pollutants. Attainment status indicates that air quality in an area meets the National Ambient Air Quality Standards (NAAQS), and nonattainment status indicates that air quality in an area does not meet those standards. If the measured concentrations in a nonattainment area improve so they are consistently below the NAAQS, Ecology and EPA can reclassify the nonattainment area to a maintenance area.

The Gorst study area is currently designated as an attainment area for all criteria air pollutants (ozone, CO, PM₁₀, PM_{2.5}, lead, sulfur dioxide [SO₂], and NO₂). Additionally, the Gorst study area is not located within a maintenance area. In March 2008, the EPA lowered its 8-hour ozone standard from 0.08 parts per million (ppm) to 0.075 ppm to better protect public health. In January 2010, EPA proposed a revision to the 2008 ozone standard, and put all area designations to the 2008 standard on hold. Until the revised standard is adopted, the region is still designated an attainment area for ozone.

Similarly, in 2010, EPA enacted a new, more stringent 1-hour average ambient air quality standard for NO₂. At this time it is not known which regions in the country will be re-designated based on the new standard. Therefore, as of this time, the Gorst study area is still considered an attainment area for NO₂.

Air Toxics Issues

The Gorst study area includes residential, commercial, and light industrial uses that pose no special issues related to air toxics. Although the Gorst study area is not near any major industrial facilities that emit large amounts of toxic air pollutants, SR 3 and SR 16 pass through the Gorst study area, and heavy diesel trucks traveling along the highways have the potential to emit toxic air pollutants. It is expected that existing and future air quality in the Gorst study area adjacent to SR 3 and SR 16 could be affected by moderate concentrations of toxic air pollutants.

According to EPA's National Air Toxics Assessment 2005 database, the existing respiratory cancer risk in the census tracts that includes the Gorst study area is roughly 37×10^{-6} or 37 cancer cases per million population (EPA 2013). This reported respiratory cancer risk is typical of other rural areas in Washington State.

PSRC Transportation Conformity Analysis

Under federal and state regulations, PSRC is required to demonstrate that the Regional Transportation Plan (RTP) or Transportation Improvement Program (TIP) conforms to the State Implementation Plan allowable emissions budget. The State Implementation Plan provides a blueprint of how maintenance and nonattainment areas such as the central Puget Sound region will meet or maintain the NAAQS. The most recent air quality analysis (PSRC 2013) for the 2013–2016 Regional TIP and the long-range RTP, demonstrates that 2040 forecasted regional emissions conform to the State Implementation Plan's allowable emissions budgets.

National Ambient Air Quality Standards

EPA establishes NAAQS and specifies future dates for states to develop and implement plans to achieve these standards. The standards are divided into primary and secondary standards; the former are set to protect human health within an adequate margin of safety, and the latter to protect environmental values, such as plant and animal life. Table 3.3-1 *National and Washington State Ambient Air Quality Standards* lists the NAAQS for six criteria pollutants: CO, ozone, PM₁₀, PM_{2.5}, lead, SO₂, and NO₂.

**Table 3.3-1
National and Washington State Ambient Air Quality Standards**

Pollutant	Federal		State
	Primary	Secondary	
Carbon monoxide (CO)			
8-hour average ^a	9 ppm	No standard	9 ppm
1-hour average ^a	35 ppm	No standard	35 ppm
Ozone			
8-hour average ^b	0.075 ppm	0.075 ppm	0.075 ppm
Total suspended particles (TSP)			
Annual average	No standard	No standard	60 µg/m ³
24-hour average ^c	No standard	No standard	150 µg/m ³
Particulate matter (PM)—PM10			
24-hour average ^c	150 µg/m ³	150 µg/m ³	150 µg/m ³
Particulate matter (PM)—PM2.5			
Annual average	15 µg/m ³	15 µg/m ³	15 µg/m ³
24-hour average ^d	35 µg/m ³	35 µg/m ³	35 µg/m ³
Lead			
Quarterly average	1.5 µg/m ³	1.5 µg/m ³	1.5 µg/m ³
Sulfur dioxide (SO2)			
Annual average	0.03 ppm	No standard	0.02 ppm
24-hour average ^a	0.14 ppm	No standard	0.10 ppm
3-hour average ^a	No standard	0.50 ppm	No standard
1-hour average ^e	No standard	No standard	0.40 ppm
Nitrogen dioxide (NO2)			
Annual average	0.053 ppm	0.053 ppm	0.05 ppm
1-hour average ^f	0.100 ppm	No standard	No standard

ppm = parts per million; µg/m³ = micrograms per cubic meter

Note: Annual standards are never to be exceeded. Short-term standards are not to be exceeded more than once per year unless noted.

^a Not to be exceeded once per year.

^b To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm (effective May 27, 2008).

^c Not to be exceeded more than once per year on average over 3 years.

^d To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³.

^e 0.25 ppm are not to be exceeded more than two times in 7 consecutive days.

^f To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm.

Source: WAC 173-470–475

Transportation Conformity Regulations

Kitsap County is classified as an air quality attainment area; therefore, transportation projects are not subject to state or federal transportation conformity regulations.

National Environmental Policy Act Requirement for Climate Change Analysis

On December 7, 2009, EPA signed the Endangerment and Cause or Contribute findings for GHGs under Section 202(a) of the Clean Air Act. Under the Endangerment Finding, EPA determines that the current and projected

concentrations of the six key well-mixed GHGs—CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations. Under the Cause or Contribute Finding, EPA determines that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG emissions that threaten public health and welfare.

On February 19, 2010, the Council on Environmental Quality issued draft National Environmental Policy Act (NEPA) guidance on the consideration of the effects of climate change and GHG emissions. This guidance advises federal agencies to consider opportunities to reduce GHG emissions caused by federal actions, adapt their actions to climate change impacts throughout the NEPA process, and address these issues in their agency NEPA procedures. Where applicable, the scope of the NEPA analysis should cover the GHG emission effects of a proposed action and alternatives and the relationship of climate change effects to a proposed action or alternatives. However, this guidance document does not set numerical thresholds for what levels of GHG emissions would constitute a significant impact, nor does the guidance document specify what types of mitigation measures should be required by local municipalities.

State Ambient Air Quality Standards

Ecology establishes state ambient air quality standards for the same six criteria air pollutants that are at least as stringent as the national standards; in the case of SO₂, state standards are more stringent. Table 3.3-1 *National and Washington State Ambient Air Quality Standards* lists the state ambient air quality standards for six criteria pollutants, along with the federal standards.

Outdoor Burning

Burning yard waste and land-clearing debris is not allowed at any time in urbanized areas of Kitsap County. The Puget Sound Clean Air Agency (PSCAA) enforces state outdoor burning regulations required by the Chapter 70.94.743 RCW.

State of Washington GHG Requirements

In response to growing worldwide concerns, former Washington State Governor Christine Gregoire issued Executive Order 07-02 in February 2007. The executive order established the following GHG reduction limits (Ecology 2008a):

- Reduce emissions to 1990 levels by 2020, 25 percent below 1990 levels by 2035, and 50 percent below 1990 levels by 2050.
- Increase “green economy jobs” to 25,000. The term “green economy jobs” means the design, manufacture, marketing, and installation of equipment to support sustainable development both within and beyond Washington State.
- Reduce expenditures on fuel imported into Washington State by 20 percent by 2020.

The above GHG reduction goals apply state-wide, but they do not specify any requirements for local government agencies to implement measures to reduce emissions within their local jurisdictions.

The Washington Legislature Chapter 70.235 RCW, Limiting GHG Emissions, into state law. This law codifies the GHG reduction goals of Executive Order 07-02 and specifies them as “limits” rather than “goals.” The new law also adds a fourth requirement to help achieve the GHG reduction targets.

- Decrease the annual per capita VMT 18 percent by 2020, 30 percent by 2035, and 50 percent by 2050.

The state law applies only to actions taken by Washington State agencies and local governments. State regulations on GHG emissions include prerequisites for distribution of capital funds for infrastructure and economic

development projects, where projects receiving funding must be evaluated for consistency with state and federal GHG limits and state VMT goals (RCW 70.235.070).

Ecology issued guidance in 2010 for SEPA reviews related to GHG emissions, for SEPA actions for which a local government agency is the SEPA lead agency (Ecology 2013a). That guidance indicated all SEPA reviews must evaluate GHG emissions. The guidance document presented a range of ways that local agencies could set significance thresholds and calculate GHG emissions and potentially mitigate those emissions. However, the guidance did not stipulate what GHG significance threshold must be used, nor did it specify what level of GHG emission reductions is required under SEPA. The guidance emphasized those decisions must be made by the SEPA lead agency on a case-by-case basis.

Ecology issued revised guidance in June 2011 for SEPA reviews regarding actions where Ecology is the SEPA lead agency (Ecology 2013b). The revised guidance is related to GHG emissions for projects where emissions are presumed not to be significant and outlining measures for mitigation to meet state emissions reduction limits. This guidance is applicable only to projects where Ecology is the lead agency or agency with jurisdiction. The 2011 Ecology guidelines do not specify significance thresholds or mitigation requirements for local governmental actions for which the municipality is the SEPA lead agency. Regardless, they illustrate the importance of local actions to reduce GHG emissions.

In 2011, the Washington State Department of Commerce released an updated *Washington State Energy Strategy* for 2012 (Washington State Department of Commerce 2011), which includes short- and long-term policy options to meet the following goals:

1. Maintain competitive energy prices that are fair and reasonable for consumers and businesses and support Washington's continued economic success.
2. Increase competitiveness by fostering a clean energy economy and jobs through business and workforce development.
3. Meet the state's obligations to reduce GHG emissions.

The *Washington State Energy Strategy* outlines strategies meeting these goals in the categories of transportation efficiency, building efficiency, distributed energy and pricing.

Puget Sound Clean Air Agency Regulations

All construction sites in the Puget Sound region are required to implement rigorous emission controls to minimize fugitive dust and odors during construction, as required by PSCAA Regulation 1, Section 9.15, Fugitive Dust Control Measures.

All industrial and commercial air pollutant sources in the Puget Sound region are required to register with PSCAA. Facilities with substantial emissions are required to obtain a Notice of Construction air quality permit before construction is allowed to begin. The application for this permit requires the facility to install best available control technology to reduce emissions, conduct computer modeling to demonstrate that the facility's emissions will not cause ambient concentrations to exceed the NAAQS limits, and minimize the impacts of odors and toxic air pollutants.

In 2004, PSCAA published its strategy document for climate change, entitled *Roadmap for Climate Protection: Reducing GHG Emissions in Puget Sound* (PSCAA 2004). In this strategy document PSCAA recommended a broad range of GHG reduction measures including regional vehicle trip reduction, building energy efficiency improvements, solid waste reduction, forestry and agriculture practice improvements, and community education. This document also encouraged local municipalities to encourage their own GHG reduction measures; however, it did not propose a SEPA significance threshold for GHG emissions, nor did it require local governments to impose future mitigation measures for future development projects for which the municipality is the SEPA lead agency. Regardless, this document illustrates the importance of local government actions to reduce GHG emissions.

Climate Change in the Kitsap County Energy Efficiency and Conservation Plan

The 2011 Kitsap County Energy Efficiency and Conservation Plan (Kitsap County 2011) includes a list of recommended policies and actions to reduce energy use and encourage renewable energy projects. In addition to achieving greater energy efficiency and energy cost reductions, one of the primary goals of the plan is to reduce GHG emissions.

Climate Change in the City of Bremerton SKIA Subarea Plan

The City of Bremerton's SKIA Subarea Plan applicable to a portion of the western watershed includes development regulations and incentives that are intended to reduce vehicle trips, encourage alternate modes of transportation, increase energy efficiency, and reduce GHG emissions within SKIA.

Methodology

Land Use Values Used for Air Quality and GHG Assessments

Planning in the Gorst Creek Watershed includes a review of two geographies, the Gorst UGA where land use changes are under consideration and the larger Gorst Creek Watershed which would retain current land use plans but which would show some amount of growth, nevertheless. Each portion of the study area is considered in this section.

This analysis considered future land use growth and future emissions increases in the Gorst UGA. The proposed square footage of commercial and industrial space in the Gorst UGA would be higher for the no action alternative (Alternative 1) than under Action Alternatives 2 and 3, whereas population growth is expected to be higher for Alternatives 2 and 3 than under Alternative 1. Table 3.3-2 *Assumed Land Use and Population Growth for GHG Emission Calculations—Gorst UGA* lists the land use values that were used to assess regional VMT) and regional GHG emissions.

Table 3.3-2
Assumed Land Use and Population Growth for GHG Emission Calculations—Gorst UGA

Land Use Type	Existing	Net Increase under Alternatives Compared to Existing Conditions		
		Alternative 1	Alternative 2	Alternative 3
Single-family (dwelling units)	88	33	25	10
Multifamily/Townhomes (dwelling units)	18	0	513	587
Commercial (square feet)	78,000	316,319	286,325	157,375
Light Industrial (square feet)	78,489	76,336	32,128	17,659

Note: Existing dwellings are based on US Census block group household data for 2010. Existing square feet are derived from Employment Security Department numbers of jobs (as provided by PSRC) for 2010, multiplied by 969 square feet per employee for industrial uses and 500 square feet per employee for commercial uses. This matches Kitsap County's Comprehensive Plan assumptions.

Future estimates of growth are based on each alternative proposed land use and zoning as well as a land capacity analysis consistent with Kitsap County's Urban Land Capacity Analysis as updated for the Kitsap County UGA Resizing and Composition Remand in 2012.

In addition to considering growth in the Gorst UGA, this analysis also considered future land use growth and future emissions increases in the Gorst Watershed. Table 3.3-3 *Assumed Land Use and Population Growth for GHG Emission Calculations Gorst Watershed, excluding Gorst UGA* provides land use values that were used to assess regional GHG emissions.

Table 3.3-3
Assumed Land Use and Population Growth for GHG Emission Calculations Gorst Watershed, Excluding Gorst UGA

Land Use Type	Existing	Net Increase 2010-2035 Compared to Existing Conditions
		2035
Single-family (dwelling units)	619	425
Multifamily (dwelling units)	123	(18)
Commercial (square feet)	87,500	862,436
Light Industrial (square feet)	86,241	574,469

Regional VMT Contributing to Regional Tailpipe Emissions

Regional photochemical smog issues in the Puget Sound region are caused largely by tailpipe emissions from cars and trucks traveling on public roads. For this analysis it was assumed the relative amounts of regional tailpipe emissions caused by each alternative would be proportional to the regional VMT caused by each alternative.

For purposes of assessing the potential air quality impacts, the regional VMT generated by the various land use categories within the Gorst UGA for each alternative was estimated using the factors embedded in the King County GHG emissions estimation spreadsheet (King County 2011). These baseline VMT factors were reduced further on a case-by-case basis for each alternative to account for Kitsap County development strategies aimed at pedestrian access and increasing development density. The adjusted VMT factors for the key land use categories of interest in the Gorst UGA are as follows:

- Single-family housing: 64.5 daily VMT per dwelling unit
- Multifamily housing: 44.8 daily VMT per dwelling unit
- Commercial (Office) buildings: 44.28 daily VMT per 1,000 square feet
- Industrial buildings: 19.37 daily VMT per 1,000 square feet

The development-related adjustment factors are described in greater detail later in this section. The procedures for deriving the development-related reduction factors are presented in Appendix C *Air Quality GHG Development Reduction Procedures & Sea Level Rise Information*.

GHG Emissions

For the purposes of this analysis, the GHG emissions are expressed in terms of their increase between future land use if there were no action taken and future proposed land use conditions in the Gorst study area based on the action alternatives. Alternative 1 represents the future no-action scenario that is used as the basis of comparison to evaluate future GHG emissions from the action Alternatives 2 and 3. The emissions estimate for future land use conditions accounts for GHG emissions reductions expected as a result of existing City of Bremerton and Kitsap County land use development goals and policies within each jurisdiction's Comprehensive Plan.

An increase in GHG emissions exceeding 10,000 metric tons per year (future action alternative compared to future no build alternative) was considered to be significant. To evaluate the significance of the estimated GHG emission increases for Alternative 2, the relative future increase compared to the future no-action alternative (Alternative 1) was compared to the Washington state GHG reporting threshold for stationary industrial sources. Washington State GHG reporting rules (WAC 173-441-030) require that industrial facilities with stationary emission units report annual GHG emissions if they exceed 10,000 metric tons CO₂-equivalent per year. This reporting threshold is not directly applicable to the Gorst UGA because the rule regulates only stationary industrial sources; whereas, the estimated GHG emissions for the Gorst UGA calculated for the purposes of this evaluation are from community-

wide sources (not including stationary industrial sources). However, the stationary source reporting threshold is relevant for comparison purposes in demonstrating what may be considered a significant level of annual GHG emissions.

GHG Emissions Calculation Methods: King County GHG Spreadsheet

The GHG emissions spreadsheet developed by King County was used to provide a screening-level estimate of life-cycle “business as usual” emissions, not including any special project-level emissions reduction measures other than the vehicle trip reduction measures inherent to the action alternatives’ land use patterns (King County 2013). The spreadsheet is a screening-level tool that estimates GHG emissions to construct a building, and estimates the life-cycle emissions generated by building occupants over the presumed life of the building. The King County spreadsheet was originally developed for use with project-level SEPA documentation for individual development projects. However, this spreadsheet was also used for this programmatic-level analysis of the Gorst study area because it is the best available screening-level tool to forecast trends in GHG emissions associated with each of the alternatives. The available input data used for the GHG emission calculations was limited to aggregate square footages for commercial and industrial development, and aggregate housing units for single and multiple family housing. Given those limitations in the input data, the King County spreadsheet is considered an adequate screening-level tool for purposes of forecasting GHG emission rates.

The King County spreadsheet uses statewide estimates for vehicle travel, building occupancy, and space heating, and allows the user to enter more site-specific values for key assumptions. For this analysis, a limited number of default factors were adjusted to account for information specific to the study area. Specifically, the following values were adjusted:

- For the analysis of future years the default value for the average fuel economy was increased to 54.5 miles per gallon to reflect EPA’s newly proposed Corporate Average Fuel Economy (CAFE) vehicle mileage standard for 2025. For the analysis of the existing condition the spreadsheet’s default fuel economy of 19.8 miles per gallon was used. Based on that improvement in future fuel economy, the King County spreadsheet’s default value for per-capita GHG emissions was further reduced to 1.79 metric tons CO₂ per capita.
- As noted above, the City of Bremerton and Kitsap County Comprehensive Plans contain goals and policies that encourage greater development density within the UGA, encourage pedestrian and bicycle path connectivity between neighborhoods, and encourage development patterns within the UGA that support transit use. These goals and policies are expected to reduce GHG emissions compared to traditional development by reducing vehicle trips and fuel usage. For this assessment, the percent reductions in vehicle usage and the corresponding GHG emissions reductions for new development were derived based on the Sacramento Metropolitan Air Quality Management District (SMAQMD) document *Recommended Guidance for Land Use Emission Reductions*. The district’s methodology uses a scoring system to estimate GHG emissions reduction for a new development based on a number of development factors (SMAQMD 2010). The methodology estimates GHG reductions only as a result of reduced vehicle trip generation. A 4 percent reduction in VMT and transportation-related GHG emissions was given for the Gorst UGA based on Kitsap County and City of Bremerton-specific development goals and policies.

The spreadsheet assumes the commercial and industrial buildings in Washington State will be occupied for between 58 to 62 years, and estimates life-cycle emissions within that time period. Three types of life-cycle emissions are estimated by the King County spreadsheet: embodied, energy, and transportation emissions.

- Embodied emissions are generated by construction of the building, including extraction, production, and eventual disposal of the building materials used to construct the structure. These do not include embodied emissions during the operating life of the facility to account for consumer productions purchased by residents and workers.

- Energy emissions are generated by space heating and electrical supply to the building during its lifespan. The spreadsheet incorporates energy intensity factors specific to Washington State.
- Transportation emissions include tailpipe emissions generated by on-road vehicles used by building occupants after the building is constructed. For purposes of calculating GHG emissions for this screening-level programmatic analysis all of the forecast commercial space was aggregated into the single land use category “Office”. Additionally, the forecast industrial space was aggregated into the single land use category “Other”. The transportation emissions do not account for vehicles passing through the Gorst study area, unless they are directly associated with the buildings being evaluated. These emissions account for “upstream” emissions during extraction and refining of the fossil fuel used over the lifespan of the building. The transportation emissions for the commercial and industrial land use categories account only for the employees working in that space, but they do not account for the relatively small amount of vehicle travel by delivery trucks carrying goods to or from the buildings. In addition, they do not account for vehicle travel by customers at retail or commercial buildings. The spreadsheet was modified to assume a future fleet-wide fuel economy of 54.5 miles per gallon, consistent with EPA’s newly proposed CAFE vehicle mileage standard for 2025.

“Soil Carbon” GHG Emissions from Permanent Removal of Biomass

The general term “soil carbon GHG emissions” refers to the effect of permanently removing existing vegetation for purposes of constructing new development. This exacerbates global climate change by two mechanisms. First, the existing biomass consisting of above-ground vegetation and below ground root mass is immediately removed and disposed of, which immediately causes the biomass to decay and release carbon dioxide (CO₂) to the atmosphere. Second, the above-ground vegetation that was permanently removed is no longer available to remove CO₂ from the atmosphere during natural photosynthesis.

The “soil carbon” GHG emission rates for each alternative were estimated using the calculation tool developed by Build Carbon Neutral (Build Carbon Neutral 2013). That tool queries the user for the acreage of the vegetation type that is removed, and then displays the annualized GHG emission rate.

Tailpipe Emission Reductions Provided by Development Goals and Policies

Development goals and policies in the Gorst UGA are expected to reduce GHG emissions compared to traditional development by reducing vehicle trips and fuel usage. As described above, for this assessment, the percent reductions in vehicle usage and the corresponding GHG emissions reductions for new development were derived based on the 2010 SMAQMD guidance document. The methodology described in the guidance document estimates GHG reductions only as a result of reduced vehicle trip generation, but it does not attempt to estimate GHG reductions provided by other mitigation measures such as use of recycled building materials, improved thermal insulation, reduced electricity consumption, or reduced waste generation.

Within the Gorst UGA, development goals and policies from the City of Bremerton and Kitsap County Comprehensive Plans were used to develop a development reduction factor for GHG emissions. Details on how the development strategies were used to adjust the transportation-related GHG emissions are provided in Appendix C *Air Quality GHG Development Reduction Procedures & Sea Level Rise Information*. The estimated percentage of emissions reductions compared to future conditions without these development strategies (business as usual) for each alternative was calculated to be four percent (transportation-related GHG emissions were reduced by four percent). Thus, per-capita and per square foot future trip generation and regional VMT values for the alternatives were reduced by four percent compared to existing conditions.

The procedures for deriving the development-related reduction factors are provided in Appendix C *Air Quality GHG Development Reduction Procedures & Sea Level Rise Information*. The development reduction factors applied for this analysis apply only to the land use design features inherent to the general location of the Gorst UGA; they do not attempt to account for additional project-specific design features that might be implemented for individual future developments in the Gorst UGA.

Impacts

Indirect impacts caused by air pollutant emissions from stationary sources and motor vehicle tailpipes are discussed. In addition, indirect and cumulative impacts of the alternatives' contribution to regional growth, travel, and GHG emissions are addressed.

Impacts Common to All Alternatives

This section describes the qualitative air quality issues associated with all alternatives within the Gorst UGA and the Gorst Watershed.

Construction Impacts

During construction, dust from excavation and grading could cause temporary, localized increases in the ambient concentrations of fugitive dust and suspended particulate matter. Construction activity must comply with PSCAA regulations requiring reasonable precautions to minimize dust emissions (Regulation I, Section 9.15). Regardless, construction activity could cause localized fugitive dust impacts at homes and businesses near the construction site.

Construction activities would likely require the use of diesel-powered, heavy trucks and smaller equipment such as generators and compressors. These engines would emit air pollutants that could slightly degrade local air quality in the immediate vicinity of the activity. However, these emissions would be temporary and localized, and the resulting construction tailpipe emissions would likely be far outweighed by emissions from existing traffic around the Gorst study area.

Some construction activities could cause odors detectable to some people in the vicinity of the activity, especially during paving operations using tar and asphalt. Such odors would be short-term and localized. Stationary equipment used for the construction activities must comply with PSCAA regulations requiring the best available measures to control the emissions of odor-bearing air contaminants (Regulation I, Section 9.11). In addition, no slash burning would be permitted in association.

Construction equipment and material hauling could temporarily increase traffic flow on city streets adjacent to a construction area. If construction delays traffic enough to significantly reduce travel speeds in the area, general traffic-related emissions would increase.

Operational Impacts

Emissions from Commercial Operations

The Gorst study area is expected to experience commercial growth. It is likely that new commercial development would occur near either current or future residential property, particularly in areas where mixed-use commercial development could be interspersed with mixed-use residential developments. Unless properly controlled, stationary equipment (such as gas stations), mechanical equipment (such as commercial boilers and heating units), and trucks at loading docks at office and retail buildings could cause air pollution issues at adjacent residential property. However, the new commercial facilities would be required to register their pollutant-emitting equipment with PSCAA (Regulation I and Regulation II). PSCAA requires all commercial facilities to use Best Available Control Technology to minimize emissions. The agency may require applicants with high emissions to conduct an air quality assessment to demonstrate that the proposed emissions would not expose off-site areas to odors or air quality concentrations exceeding regulatory limits. Therefore, it is unlikely that new commercial operations would cause significant air quality issues.

Emissions from Vehicle Travel

Tailpipe emissions from vehicles traveling on public roads would be the major source of air pollutant emissions associated with the growth in the Gorst study area. Potential air quality impacts caused by increased tailpipe emissions are divided into two general categories: CO hot-spots caused by localized emissions at heavily congested intersections and regional photochemical smog caused by combined emissions throughout the Puget Sound region.

Localized Hot-Spot Air Quality Impacts

Development under all studied alternatives would increase vehicle travel on existing public roads. However, it is unlikely that the increased traffic and congestion would cause localized air pollutant concentrations at local intersections to form a hot-spot (i.e., a localized area where air pollutant concentrations exceed NAAQS). PSCAA operates ambient air pollution monitors at some of the most heavily congested intersections in the Puget Sound region, and none of those monitors have indicated exceedances over the past several years. Furthermore, ongoing EPA motor vehicle regulations have provided steady decreases in tailpipe emissions from individual vehicles, and it is possible that those continuing decreases from individual vehicles could more than offset the increase in vehicle traffic. For these reasons, it is unlikely that air quality impacts at local intersections would be significant.

Regional Air Quality Impacts

Although population and vehicle travel would increase in the Gorst study area, the increases in tailpipe emissions for all of the alternatives would be very small relative to the overall regional tailpipe emissions within the Puget Sound air basin. Photochemical smog (the regional haze produced by ozone and fine particles) is caused by regional emissions throughout the Puget Sound region, rather than localized emissions from any individual neighborhood. Photochemical smog was a serious concern in the Puget Sound region before the late 1980s, but federal tailpipe emission regulations have reduced vehicular emissions to the point that the region is currently a designated attainment area for ozone.

Prior to 2007, when the Puget Sound region was designated a nonattainment area or maintenance area for ozone, PSRC was required to periodically forecast regional tailpipe emissions of ozone precursors (nitrogen oxide [NO_x] and VOC). To forecast the contribution of regional tailpipe emissions with regards to regional ozone concentrations, Ecology's State Implementation Plan for ozone previously set allowable emissions budgets for Puget Sound regional transportation emissions, with the understanding that as long as regional emissions were below the allowable budgets then photochemical smog impacts would have been unlikely to resume. Regional transportation emission budgets were set for NO_x and VOCs. Based on the most recent previous air quality conformity analysis conducted by PSRC for ozone, forecasted regional emissions for its 2030 planning year were far below the allowable budgets (PSRC 2007):

- NO_x: 16 percent of budget
- VOCs: 21 percent of budget

Thus, PSRC's 2007 analysis indicated the forecasted Puget Sound regional tailpipe emissions of NO_x and VOC for the 2030 planning year were well below the levels that would have caused an exceedance of the NAAQS. Because the increase in tailpipe emissions in the Gorst study area for the alternatives is very small compared to the overall regional tailpipe emissions (refer to Table 3.3-5 *Gorst UGA Contribution to Forecast 2035 Puget Sound Regional VMT*) in the Puget Sound and because the region is currently designated an attainment area, it is concluded that none of the alternatives would result in a significant impact on regional air quality.

Mobile Source Air Toxics

Future development might require future improvements to existing roadways. When a street is widened and, as a result, moves closer to receptors, the localized level of mobile source air toxics emissions could be higher, but this could be offset due to reductions in congestion (which are associated with lower mobile source air toxics emissions). Furthermore, on a regional basis, EPA's vehicle and fuel regulations (coupled with ongoing future fleet turnover) will over time cause substantial reductions that will cause region-wide mobile source air toxics levels to be significantly lower than today in most cases.

Local and Regional GHG Emissions

As described later in this section, all of the alternatives would increase localized GHG emissions within the Gorst UGA as a result of localized increases in population and employment. Total gross GHG emissions for Washington

State were estimated to exceed 101,000,000 metric tons CO₂-equivalent in 2008 (Ecology 2010b). By comparison, the increase in GHG emissions associated with all of the alternatives would be a very small fraction of total GHG emissions within Washington State; therefore, GHG impacts caused by increased development in the Gorst UGA would not be significant.

As listed in Table 3.3-4 *Comparison of Annual GHG Emissions in the Gorst Watershed*, GHG emissions in the Gorst Watershed will increase by 2035. In comparison to state-wide annual GHG emissions, the relatively small increase in GHG emissions within the Gorst Watershed by 2035 is not considered significant.

Table 3.3-4
Comparison of Annual GHG Emissions in the Gorst Watershed, Excluding the Gorst UGA

GHG Emission Estimates	Average Annual GHG Emissions During 60-Year Project Lifetime (metric tons CO ₂ -equivalent per year)	
	Existing	Increase by 2035
	23,055	4,756

Note: The GHG emissions increase in the Gorst Watershed in 2035 (compared to existing conditions) is based on future continuation of the no action alternative and therefore is not compared to any significance thresholds.

Global Climate Change

As quantified in later sections, for all alternatives, future increases in population and employment would result in higher GHG emissions in the Gorst UGA than are emitted under existing conditions. These emissions would contribute to global GHG atmospheric concentrations, but would be a very small fraction of the worldwide GHG emissions. By themselves, none of the alternatives would cause discernible changes to global climate change. However, increased worldwide GHG emissions are expected to cause global climate change, and the effects will likely impact the Gorst study area and the Pacific Northwest region. Local impacts are expected to include changes in seasonal temperatures, seasonal precipitation patterns, or local seawater rise (UWCIG 2012). Based on research conducted by the University of Washington Climate Impacts Group and the Washington Department of Ecology sea level is expected to rise within the Puget Sound between 3 and 22 inches by 2050 and between 6 and 50 inches by 2100 (UWCIG, et al 2008). Some images showing how the range of sea level rise could theoretically affect the Sinclair Inlet are found in Appendix C *Air Quality GHG Development Reduction Procedures & Sea Level Rise Information*.

Alternative 1

The direct and indirect impacts caused by construction emissions, localized stationary source emissions, localized CO hot-spots, and regional tailpipe emissions would be the same as described under Impacts Common to All Alternatives.

Contribution to Regional Air Pollutant Emissions

Population growth and daily VMT can be used as indicators of future transportation-related emissions. Table 3.3-5 *Gorst UGA Contribution to Forecast 2035 Puget Sound Regional VMT* shows the future contribution of regional VMT from the Gorst UGA compared to Kitsap County. The VMT generated by each alternative would increase compared to existing conditions. Alternative 1 would produce 29,067 daily VMT, which would contribute less than one percent of the Kitsap County regional VMT forecast for 2035. The forecasted VMT from the Gorst UGA for Alternative 1 is only a small fraction of the Kitsap County regional totals; therefore, this alternative would not result in a significant impact on regional air quality.

Table 3.3-5
Gorst UGA Contribution to Forecast 2035 Puget Sound Regional VMT

	Alternative 1	Alternative 2	Alternative 3
Gorst study area daily VMT ¹	29,067	49,350	45,707
Kitsap County 2035 daily VMT ²	6,602,656	6,615,322	6,604,458
Contribution to Kitsap County 2035 VMT	0.4 percent	0.7 percent	0.7 percent

Note: ¹Daily VMT is calculated based on default values from King County GHG spreadsheet, scaled down to account for local development goals and policies: 64.5 VMT per dwelling unit for single-family housing; 44.8 VMT per dwelling unit for multifamily housing; 44.28 VMT per 1,000 square foot for commercial space; and 19.37 VMT per 1,000 square foot for industrial space.

²Kitsap County VMT totals for 2035 (Kitsap County 2013b).

Calculated GHG Emissions

For the purposes of this analysis, the GHG emissions are expressed in terms of their increase between current conditions and future proposed land use conditions in the Gorst study area. The emissions estimate for future land use conditions accounts for GHG emissions reductions expected as a result of local development policies and goals.

Table 3.3-2 *Assumed Land Use and Population Growth for GHG Emission Calculations - Gorst UGA* lists the projected Gorst UGA land uses that were used for calculating GHG emissions for each alternative. The values listed under “existing” represent current land use. The values listed for each alternative represent the net increase compared to existing conditions.

As listed in Table 3.3-6 *Comparison of Annual GHG – Gorst UGA*, Alternative 1 would increase GHG emissions in the Gorst UGA.

Table 3.3-6
Comparison of Annual GHG Emissions – Gorst UGA

GHG Emission Estimates	Average Annual GHG Emissions During 60-Year Project Lifetime (metric tons CO ₂ -equivalent per year)		
	Alternative 1	Alternative 2	Alternative 3
Existing Emissions	6,374	6,374	6,374
GHG Increases Compared to Existing Conditions			
Emission Increase Within Gorst UGA (Alternative Minus Existing)	7,474	14,371	12,922
GHG Increases Compared to Alternative 1 (Future No Action)			
Emission Increase Within Gorst UGA (Action Alternative Minus Alternative 1)	N/A	6,897	5,448
“Soil Carbon” GHG Emissions From Land Disturbance and Removal of Biomass			
Soil Carbon GHG Emissions Based on Removal of Existing Vegetation	120	237	237

Total gross GHG emissions for Washington State were estimated to exceed 101,000,000 metric tons CO₂-equivalent in 2008 (Ecology 2010b). In comparison to state-wide annual GHG emissions, the relatively small increase in GHG emissions within the Gorst UGA associated with Alternative 1 is not considered to be significant.

Alternative 2

The direct and indirect impacts caused by construction emissions, localized stationary source emissions, localized CO hot-spots, and regional tailpipe emissions would be the same as described under Impacts Common to All Alternatives.

Construction Emissions, Commercial Sources, and Air Toxics

Under Alternative 2, the Gorst UGA is expected to experience greater population growth and less employment growth than under Alternative 1 (no action); therefore, development under Alternative 2 would result in a greater increase in localized air pollutant emissions from construction activities and regional tailpipe emissions from vehicle travel. However, this alternative would result in a smaller increase in commercial activities. Regardless, air quality impacts from construction activities, commercial operations, and mobile source air toxics would be similar to those described under Impacts Common to All Alternatives.

Emissions from Vehicle Travel

As shown in Table 3.3-5 *Gorst UGA Contribution to Forecast 2035 Puget Sound Regional VMT*, the forecasted VMT for Alternative 2 is slightly higher than the forecasted values for Alternative 1. However, the Gorst UGA VMT forecast as a result of this alternative is inconsequential compared to the Kitsap County VMT and its implied impact on regional emissions and photochemical smog. Therefore, regional air quality impacts caused by population growth and transportation emissions in the Gorst UGA would not be significant under Alternative 2.

GHG Emissions

The annual GHG emissions for Alternative 2 are calculated based on the future land use listed in Table 3.3-2 *Assumed Land Use and Population Growth for GHG Emission Calculations - Gorst UGA* and the development reduction described previously. Table 3.3-6 *Comparison of Annual GHG Emissions - Gorst UGA* lists the life-cycle GHG emissions increases caused by future development in the Gorst UGA under each alternative. Alternative 2 would provide more residential growth than Alternative 1 in the Gorst UGA. Therefore, it would increase localized GHG emissions within the Gorst UGA compared to Alternative 1. The future GHG emission increases within the Gorst UGA for Alternative 2 would be the highest of any studied alternative, though close to Alternative 3.

The increase of future GHG emissions in the Gorst UGA for Alternative 2 (above what future GHG emissions are estimated for the No Action Alternative 1) is only 6,897 metric tons CO₂-equivalent per year which is less than the 10,000 metric tons CO₂-equivalent per year reporting threshold for stationary sources. Therefore, this evaluation demonstrates that GHG emission increases caused by increased development in the Gorst UGA (associated with Alternative 2) would not be significant.

Additionally, in comparison to state-wide annual GHG emissions (101,000,000 metric tons CO₂-equivalent in 2008), the relatively small increase in GHG emissions within the Gorst UGA associated with Alternative 2 is not considered to be significant.

“Soil Carbon” GHG Emissions from Biomass Removal

GHG emissions associated with soil disturbance and biomass removal was calculated based on the total acreage of disturbed land that is anticipated. As noted above, impacts associated with land disturbance would be greatest for Alternatives 2 and 3 (117 acres of permanent land disturbance, causing an annualized GHG emission rate of 237 metric tons CO₂-equivalent per year). This relatively small contribution to GHG emissions by biomass removal is much lower than the contribution from future operational activity. For Alternative 3 the annualized GHG emission rate caused by biomass removal is 237 metric tons per year, while Table 3.3-6 *Comparison of Annual GHG Emissions - Gorst UGA* shows the increased operational GHG emission rate is 12,922 metric tons per year. Therefore, the GHG emissions caused by biomass removal are not considered significant.

Alternative 3

The direct and indirect impacts caused by construction emissions, localized stationary source emissions, localized CO hot-spots, and regional tailpipe emissions would be the same as described under Impacts Common to All Alternatives.

Construction Emissions, Commercial Sources, and Air Toxics

Under Alternative 3, the Gorst UGA is expected to experience greater population growth and less employment growth than under Alternative 1. Development under this alternative would result in a greater increase in localized air pollutant emissions from construction activities and regional tailpipe emissions from vehicle travel. However, this alternative would result in a smaller increase in commercial activities compared to Alternative 1. Regardless, air quality impacts from construction activities, commercial operations, and mobile source air toxics would be similar to those described under Impacts Common to All Alternatives.

Emissions from Vehicle Travel

As shown in Table 3.3-5 *Gorst UGA Contribution to Forecast 2035 Puget Sound Regional VMT*, the forecasted VMT for Alternative 3 is higher than the forecasted values for Alternative 1. However, the net increases in VMT forecast as a result of this alternative are inconsequential compared to the Kitsap County VMT forecast for 2035 and its implied impact on regional emissions and photochemical smog. Therefore, regional air quality impacts caused by population growth and transportation emissions in the Gorst UGA (associated with Alternative 3) would not be significant.

GHG Emissions

The annual GHG emissions for Alternative 3 are calculated based on the future land use listed in Table 3.3-2 *Assumed Land Use and Population Growth for GHG Emission Calculations - Gorst UGA* and the development reduction described previously. Table 3.3-6 *Comparison of Annual GHG Emissions - Gorst UGA* lists the life-cycle GHG emissions increases caused by future development in the Gorst UGA under each alternative. The future GHG emission increases within the Gorst UGA for Alternative 3 would be higher than the GHG emission increases resulting from Alternative 1, but less than the GHG emission increases resulting from Alternative 2.

Alternative 3 would provide more residential growth in the Gorst UGA than Alternative 1. Therefore, it would increase localized GHG emissions within the Gorst UGA compared to Alternative 1. The increase of future GHG emissions in the Gorst UGA for Alternative 3 (above what future GHG emissions are estimated for the No Action Alternative 1) is only 5,448 metric tons CO₂-equivalent per year which is less than the 10,000 metric tons CO₂-equivalent per year reporting threshold for stationary sources. Therefore, this evaluation demonstrates that GHG impacts caused by increased development in the Gorst UGA (associated with Alternative 3) would not be significant.

Additionally, in comparison to state-wide annual GHG emissions (101,000,000 metric tons CO₂-equivalent in 2008), the relatively small increase in GHG emissions within the Gorst UGA associated with Alternative 3 is not considered to be significant.

“Soil Carbon” GHG Emissions From Biomass Removal

GHG emissions associated with soil disturbance and biomass removal was calculated based on the total acreage of disturbed land that is anticipated. As noted above, impacts associated with land disturbance would be greatest for Alternatives 2 and 3 (117 acres of permanent land disturbance, causing an annualized GHG emission rate of 237 metric tons CO₂-equivalent per year). This relatively small contribution to GHG emissions by biomass removal is much lower than the contribution from future operational activity. For Alternative 3 the annualized GHG emission rate caused by biomass removal is 237 metric tons per year, while Table 3.3-6 *Comparison of Annual GHG Emissions - Gorst UGA* shows the increased operational GHG emission rate is 12,922 metric tons per year. Therefore, the GHG emissions caused by biomass removal are not considered significant.

Indirect/Cumulative Impacts

Development facilitated by the alternatives would result in indirect effects. For example, additional people and vehicles in the Gorst study area could lead to a greater concentration of pollutants that could adversely affect air quality.

Every alternative would slightly increase regional VMT, which would contribute to tailpipe emissions throughout the Puget Sound region. When added to the forecast population and economic growth throughout the region, the increased emissions caused by development in the Gorst study area could slightly contribute to future worsening of air regional quality.

Future development within the Gorst study area would also contribute to worldwide emissions of GHG, which would contribute to potential future effects caused by global climate change (e.g., changes in seasonal temperature, seasonal precipitation, and local seawater rise).

Mitigation Measures

Incorporated Plan Feature

The Gorst Subarea Plan includes policies promoting compact development as well as a policy on adapting to sea level rise. It also includes policies promoting incentives for increased heights and densities, increased landscaping, and energy reduction that could encourage GHG reduction.

Kitsap County Comprehensive Plan

The Gorst UGA and portions of the Gorst Watershed are located within unincorporated Kitsap County. The Land Use and Transportation elements of the Kitsap County Comprehensive Plan include a number of goals and policies that could contribute to reducing GHG emissions, including:

- **LAND USE GOAL 6:** Encourage and reinforce development patterns within UGAs that are distinct from those in rural areas:
 - Policy LU-26. Encourage compact development patterns within UGAs, allowing for efficiencies in transportation and utilities, as well as public and capital facilities.
 - Policy LU-28. Encourage development patterns in UGAs that support pedestrian connectivity between neighborhoods and community destinations where possible.
 - Policy LU-29. Encourage development patterns in UGAs that support and encourage transit use, such as in and around more intensive nodes of mixed use development along major transportation corridors, and major employment centers.
- **LAND USE GOAL 14:** Provide residential areas with convenient access to transportation, urban amenities, and goods and services:
 - Policy LU-62. Encourage non-motorized and pedestrian linkages in UGAs.
 - Policy LU-64. Provide density incentives in the UGA to encourage the provision of significant open space, community amenities, transportation-oriented planning and high quality design.
 - Policy LU-65. Encourage development in residential zones to occur in a manner that results in the design and construction of an interconnected system of pedestrian and bicycle trails linking residential neighborhoods with open spaces, recreational areas, transportation corridors and retail and employment opportunities.
- **LAND USE GOAL 15:** Focus most commercial growth within the UGAs where most of the Kitsap County's future population growth will be guided and where urban public services and facilities will be provided:
 - Policy LU-69. Create a new Mixed Use zone, which focuses on pedestrian-friendly urban development, to be applied within UGAs.
- **LAND USE GOAL 18:** Encourage an attractively designed commercial land use pattern:
 - Policy LU-87. Encourage commercial areas to be compact to encourage pedestrian and non-motorized travel and transit use.

- Policy LU-88 Encourage mixed use development that contributes to a compact, pedestrian-oriented land use pattern at selected locations within the urban area.
- **LAND USE GOAL 21:** Ensure compatibility of industrial uses with neighboring areas.
 - Policy LU-111. Provide development regulations that contain minimum performance standards for noise, vibration, smoke and particulate matter, odors, heat and glare and other aspects as appropriate, which shall address potential environmental impacts and ensure compatibility with adjacent land uses including residential neighborhoods.
- **TRANSPORTATION GOAL 4:** Provide the public with the opportunity to make choices among alternative modes of travel:
 - Policy T-11. Provide a transportation system that allows people to get to and from their destination in an acceptable time period via alternative mode options.
 - Policy T-12. Support and encourage high occupancy vehicle (HOV) and transit use.
- **TRANSPORTATION GOAL 10:** Coordinate land use and transportation planning to help manage growth:
 - Policy T-36. Encourage Transit Oriented Development (TOD) that supports compact growth by designating higher density zones near ferry terminals and near transit stations that generate pedestrian activity.
 - Policy T-39. Increase the percentage of Kitsap County residents located within reasonable walking distance of designated transit stops.
 - Policy T-40. Encourage the location of development to minimize vehicle miles of travel.
- **TRANSPORTATION GOAL 11:** Where appropriate, designate and encourage mixed use, high density uses, and TOD to reduce reliance on the single occupancy vehicle (SOV):
 - Policy T-42. Develop and implement transit-supportive design standards and facilities for all residential, commercial and institutional developments.
 - Policy T-43. Encourage pedestrian linkages between parking lots and adjacent land uses.
- **TRANSPORTATION GOAL 12:** Promote High Capacity Transit to the greatest extent feasible as an alternative to the SOV:
 - Policy T-44. Design roadways classified as minor arterial or higher to accommodate transit vehicles.
 - Policy T-45. Coordinate with Kitsap Transit to develop a transit supportive transportation system.
 - Policy T-52. Maintain the Kitsap County Commute Trip Reduction (CTR) program and make every effort to reduce Kitsap County employee SOV trips.
 - Policy T-54. Increase the percentage of residents who can reach neighborhood retail centers using transit, and who can reach major retail shopping centers without excessive transit/transfer delay.
- **TRANSPORTATION GOAL 14:** Maximize the opportunity for non-motorized travel, including development of greenways that are safe for all ages:
 - Policy T-63. Require the provision of accessible bicycle/pedestrian facilities within the roadway system of new developments.
- **TRANSPORTATION GOAL 15:** Build a greenways network of non-motorized on-road commuter trails and off-road recreational trails, within and outside of road rights-of-way that interconnect open spaces, urban areas, communities, and recreational areas.
 - Policy T-66. Develop a system of non-motorized transportation facilities.

- **TRANSPORTATION GOAL 17:** Create a continuous non-motorized transportation system that connects neighborhoods and integrates on- and off-road facilities:
 - Policy T-69. Where future bicycle and/or pedestrian facilities are planned in corridors in which future Kitsap County roadway improvement projects (both new construction and rehabilitation projects) are planned, include the bicycle/pedestrian facilities as part of the roadway project.
- **TRANSPORTATION GOAL 18:** Develop a system of non-motorized transportation facilities that are constructed primarily within the right-of-way of existing and proposed public streets or roads and that provide safe transportation between a variety of regional, inter-community and local county destinations for bicyclists and pedestrians:
 - Policy T-72. Designate a system of pedestrian/bicycle facilities.
 - Policy T-73. Assign top priority to the implementation of bicycle facilities and/or pedestrian facilities designated in the Kitsap County Bicycle Facilities Plan.

Bremerton Comprehensive Plan

Portions of the Gorst Watershed are located within the City of Bremerton. Additionally, it is anticipated that the City of Bremerton will eventually annex the Gorst UGA. The Land Use and Transportation elements of the City of Bremerton Comprehensive Plan include a number of goals and policies that could contribute to reducing GHG emissions, including:

- **LAND USE GOAL LU1:** Identify and enhance distinctive neighborhoods, communities, and centers throughout the city:
 - Policy LU1L. Encourage residential designs with an orientation towards social interaction, as opposed to the automobile.
- **LAND USE GOAL LU2:** Integrate an open space system into the land use pattern that increases the amount of open space, protects Bremerton's natural resources, and provides a source of beauty and enjoyment for all residents:
 - Policy LU2D. In order to facilitate a linked system of open space; integrate parks, schools, trails, and other open space features in a wide variety of land use designations.
- **LAND USE GOAL LU3:** Create an environment that will promote growth:
 - Policy LU3C. Encourage increased density with development incentives and zoning flexibility.
- **LAND USE GOAL LU4:** Provide for walkability throughout Centers and neighborhoods:
 - Policy LU4A. Improve pedestrian access to commercial and community services within Centers and neighborhoods.
 - Policy LU4B. Develop pedestrian connections between residential areas and neighborhood services.
 - Policy LU4C. Ensure land use designations and designs that support walkability within neighborhoods and the mobility needs of the community.
 - Policy LU4D. Ensure street design and orientation that encourage pedestrian and bicycle use.
- **LAND USE GOAL LU9:** Create a framework for the initial implementation of Centers:
 - Policy LU9A. Design standards and/or guidelines should be developed that assure pedestrian oriented mixed-use design in Centers.
 - Policy LU9H. Non-motorized transportation links with surrounding neighborhoods should be encouraged and existing pathways preserved.

- **LAND USE GOAL LU12:** Support community-wide access to amenities and services:
 - Policy LU12B. Provide recreational space and trails for pedestrians and bicyclists between communities, Centers, and neighborhoods.
- **TRANSPORTATION GOAL T1:** Encourage the development of an integrated multi-modal transportation system, that provides a variety of convenient transportation choices to improve the movement of people, goods, and freight:
 - Policy T1A. Require new development and redevelopment to incorporate transit, pedestrian, and non-motorized transportation measures during the development review process.
- **TRANSPORTATION GOAL T3:** Develop and maintain a transportation system that respects the natural environment, including the quality of Bremerton air, water and natural habitats:
 - Policy T3B. Encourage transit providers and organizations with large fleets of vehicles to utilize “green” fuel and reduce emissions/air pollution.
- **TRANSPORTATION GOAL T7:** Develop Travel Demand Management (TDM) strategies to minimize the need for additional transportation infrastructure and expenditure:
 - Policy T7A. Continue to coordinate with local employers to implement CTR plans and programs.
- **TRANSPORTATION GOAL T11:** Encourage transportation agencies, especially public transit, to operate and maintain local/regional services and facilities that reduce the need for single occupant vehicles and support the needs of transit-dependent users:
 - Policy T11D. Support efforts to expand usage and infrastructure for mass transportation.
 - Policy T11E. Encourage the use of public transit by bicyclists and pedestrians.
- **TRANSPORTATION GOAL T12:** Provide a transportation system that effectively serves the needs of and encourages pedestrian, bicycle and other non-motorized travel:
 - Policy T12A. Devise a non-motorized transportation plan.
 - Policy T12B. Ensure that designated Centers are walkable, and encourage connectivity.
 - Policy T12C. Maintain existing and create new engineered bike lanes.
 - Policy T12D. Adopt street standards which require bike lanes on identified bike routes.

Applicable Regulations and Commitments

- **NAAQS:** As described above in NAAQS, EPA establishes NAAQS and specifies future dates for states to develop and implement plans to achieve these standards.
- **State Ambient Air Quality Standards:** Ecology establishes state ambient air quality standards for the same six pollutants that are at least as stringent as the national standards; in the case of SO₂, state standards are more stringent. Table 3.3-1 *National and Washington State Ambient Air Quality Standards* lists the state ambient air quality standards for six criteria pollutants.
- **Outdoor Burning:** Burning yard waste and land-clearing debris is not allowed at any time in urbanized areas of Kitsap County. PSCAA enforces state outdoor burning regulations required by the Washington Clean Air Act at RCW 70.94.743.

- **Puget Sound Clean Air Agency Regulations:** All construction sites in the Puget Sound region are required to implement rigorous emission controls to minimize fugitive dust and odors during construction, as required by PSCAA Regulation 1, Section 9.15, Fugitive Dust Control Measures. All industrial and commercial air pollutant sources in the Puget Sound region are required to register with PSCAA. Facilities with substantial emissions are required to obtain a Notice of Construction air quality permit before construction is allowed to begin.
- **State of Washington GHG Laws:** As described above in State of Washington GHG Requirements, Washington enacted a new law establishing GHG reduction limits.
- **City of Bremerton SKIA Subarea Plan:** A subarea plan for SKIA was adopted in 2012. A portion of the Gorst Watershed is located within the SKIA subarea. The SKIA subarea plan contains development incentives and requirements to ensure sustainable development and reduce GHG emissions, including:
 - **CTR.** Once total new employment within SKIA has exceeded 2,000 new employees (resulting from actions permitted under the Planned Action Ordinance), all employers with 50 or more employees shall be required to participate in the CTR Program.
 - **Bicycle Facilities.** Bicycle parking shall be provided at 10 percent of the required automobile spaces.
 - **Neighborhood Electric Vehicles.** Neighborhood Electric Vehicles and Electric Golf Carts shall be allowed on all pedestrian pathways within SKIA that are constructed to the standards contained in Section C.5.050. Neighborhood Electric vehicles shall also be allowed on all public roadways in SKIA where their use is not otherwise prohibited by state or local law (e.g. roadways with a maximum speed limit of 25 miles per hour or less are suitable).
 - **Non-Motorized Facilities.** The trail system in SKIA is intended to form a loop, making non-motorized connections throughout the entire Subarea.
 - **Energy-Efficient Lighting.** Light emitting diode (LED) lighting is encouraged. To the greatest extent feasible, all light fixtures and bulbs should meet the requirements for certification by the ENERGY STAR program.
- **Kitsap County Energy Efficiency and Conservation Plan:** In 2011, the Kitsap County developed an Energy Efficiency and Conservation Plan, which is focused on achieving greater energy efficiency and reducing GHG emissions. The plan outlines a list of recommendations that once implemented would serve to increase energy efficiency and reduce GHGs. A summary of some of the key recommendations are provided as follows:
 - **Building Design.** Incorporate energy efficiency standards into planning and design for any new construction, renovation project, or lease agreements.
 - **Operations and Maintenance.** Adopt an energy conservation policy setting clear goals and guidelines for maximizing the efficiency of building operations.
 - **External Energy Use.** Survey all parking lot and external building lights and identify retrofit opportunities.
 - **Transportation and Fleets.** Establish goals to increase fuel efficiency and the use of alternative fuels for the county fleet. Enhance the CTR program and associated employee training to reduce fuel use and emissions.
 - **Renewable Energy.** Identify potential opportunities for renewable energy projects on existing and future county buildings. Identify and acquire sources of renewable energy and/or fuel for county operations.
- **Kitsap County Initiatives:** Kitsap County has already pursued a number of local projects related to energy efficiency and climate change including the following shown in Table 3.3-7 *Kitsap County Climate Change Responsive Projects*.

**Table 3.3-7
Kitsap County Climate Change Responsive Projects**

Transportation	Buildings	Infrastructure	Policies/Other
Hybrid vehicles purchased	Building Retrofits	LED Pedestrian Display Retrofits	Using Space Heaters in Kitsap County Facilities
Install Diesel Oxidation Catalysts on Kitsap County Dump Trucks	Solar Hot Water Collector Systems Installed	LED Traffic Signal Retrofits	Home Energy Assessment Incentives
Vehicle Take Home Policy	High efficiency boiler system	Computer Room/Server Energy Efficiency Improvements	Energy Efficiency Loan Program for Homeowners
Vehicle Anti-idling and Fuel Conservation	Energy Efficient Lighting Retrofits	Solar Powered Trash Compactor Installation	Development of Kitsap County Energy Plan
Telecommuting for Employees	HVAC retrofits	Grant Funds Available for Kitsap County Home Builders Association Weatherization	

Source: Kitsap County 2013a

Other Potential Mitigation Measures

Construction Emission Control

Kitsap County and the City of Bremerton should require all construction contractors to implement air quality control plans for construction activities in the Gorst study area. Kitsap County and the City of Bremerton should require all future developers to prepare a dust control plan that commits the construction crews to implement all reasonable control measures described in the *Associated General Contractors of Washington's Guide to Handling Fugitive Dust from Construction Projects*. Copies of that guidance document are distributed by PSCAA. The air quality control plans should include BMPs to control fugitive dust and odors emitted by diesel construction equipment.

The following BMPs would be used to control fugitive dust.

- Use water sprays or other non-toxic dust control methods on unpaved roadways.
- Minimize vehicle speed while traveling on unpaved surfaces.
- Prevent track-out of mud onto public streets.
- Cover soil piles when practical.
- Minimize work during periods of high winds when practical.

The following mitigation measures should be used to minimize air quality and odor issues caused by tailpipe emissions.

- Maintain the engines of construction equipment according to manufacturers' specifications.
- Minimize idling of equipment while the equipment is not in use.

If there is heavy traffic during some periods of the day, scheduling haul traffic during off-peak times (e.g., between 9:00 a.m. and 4:00 p.m.) would have the least effect on traffic and would minimize indirect increases in traffic related emissions.

Burning of slash or demolition debris will not be permitted without express approval from PSCAA. No slash burning is anticipated for any construction projects in the Gorst study area.

GHG Reduction Measures

Washington State has established GHG reductions with 2020 (1990 levels), 2035 (20 percent reduction below 1990) and 2050 (50 percent reduction below 1990) limits and adopted requirements for capital investments, an energy strategy, and VMT reduction targets. However, neither Ecology nor EPA has adopted numerical GHG emissions standards, GHG reduction requirements, or numerical GHG significance thresholds that direct local government land use development actions. It is the City of Bremerton's and Kitsap County's responsibility to implement its GHG reduction requirements for new developments.

As noted above, development requirements within the SKIA Subarea Plan will help to mitigate GHG impacts within a portion of the Gorst Creek Watershed. Additionally, Kitsap County has established an Energy Efficiency and Conservation Plan that outlines energy conservation and GHG emissions reduction measures, some of which could potentially reduce GHG impacts within the Gorst study area. Also, Kitsap County has already implemented many initiatives (as described above) that have increased energy efficiency and are aimed at reducing climate change impacts. As part of the pending planned action ordinance under consideration, the Kitsap County and the City of Bremerton could require or encourage future developers to implement additional trip-reduction measures and energy conservation measures that could provide even greater GHG reductions. GHG emissions reductions could be provided by using building design and construction methods to use recycled construction materials, reduce space heating and electricity usage, incorporate renewable energy sources and reduce water consumption and waste generation.

Table 3.3-8 *Potential GHG Reduction Mitigation Measures* lists a variety of mitigation measures that could reduce GHG emissions caused by transportation facilities, building construction, space heating, and electricity usage (Ecology 2008). The table lists potential GHG reduction measures and indicates where the emission reductions might occur.

Kitsap County and the City of Bremerton could require development applicants to consider the reduction measures shown in Table 3.3-8 *Potential GHG Reduction Mitigation Measures* for their projects. Kitsap County and the City of Bremerton can incorporate potential GHG reduction measures through its goals, policies, or regulations, including the proposed Planned Action Ordinance.

Table 3.3-8
Potential GHG Reduction Mitigation Measures

Reduction Measures	Comments
Site Design	
Retain and enhance vegetated open spaces.	Retains or increases sequestration by plants.
Plant trees and vegetation near structures to shade buildings.	Reduces on-site fuel combustion emissions and purchased electricity, and enhances carbon sinks.
Minimize building footprint.	Reduces on-site fuel combustion emissions and purchased electricity consumption, materials used, maintenance, land disturbance, and direct construction emissions.
Design water efficient landscaping.	Minimizes water consumption, purchased energy, and upstream emissions from water management.
Minimize energy use through building orientation.	Reduces on-site fuel combustion emissions and purchased electricity consumption.
Building Design and Operations	
Apply LEED standards (or equivalent) for design and operations.	Reduces on-site fuel combustion emissions and off-site/indirect purchased electricity, water use, waste disposal.
Purchase Energy Star equipment and appliances for public agency use.	Reduces on-site fuel combustion emissions and purchased electricity consumption.
Incorporate on-site renewable energy production, including installation of photovoltaic cells or other solar options.	Reduces on-site fuel combustion emissions and purchased electricity consumption.
Design street lights to use energy-efficient bulbs and fixtures.	Reduces purchased electricity.
Construct “green roofs” and use high-albedo roofing materials.	Reduces on-site fuel combustion emissions and purchased electricity consumption.
Install high-efficiency HVAC systems.	Minimizes fuel combustion and purchased electricity consumption.
Eliminate or reduce use of refrigerants in HVAC systems.	Reduces fugitive emissions. Compare refrigerant usage before/after to determine GHG reduction.
Maximize interior day lighting through floor plates, increased building perimeter and use of skylights, celestories, and light wells.	Increases natural/day lighting initiatives and reduces purchased electrical energy consumption.
Incorporate energy efficiency technology such as super insulation motion sensors for lighting and climate-control-efficient, directed exterior lighting.	Reduces fuel combustion and purchased electricity consumption.
Use water-conserving fixtures that surpass building code requirements.	Reduces water consumption.

Reduction Measures	Comments
Reuse gray water and/or collect and reuse rainwater.	Reduces water consumption with its indirect upstream electricity requirements.
Use recycled building materials and products.	Reduces extraction of purchased materials, possibly reduces transportation of materials, encourages recycling and reduction of solid waste disposal.
Use building materials that are extracted and/or manufactured within the region.	Reduces transportation of purchased materials.
Use rapidly renewable building materials.	Reduces emissions from extraction of purchased materials.
Conduct third-party building commissioning to ensure energy performance.	Reduces fuel combustion and purchased electricity consumption.
Track energy performance of building and develop strategy to maintain efficiency.	Reduces fuel combustion and purchased electricity consumption.
Transportation	
Size parking capacity to not exceed local parking requirements and, where possible, seek reductions in parking supply through special permits or waivers or Gorst-specific parking standards or incentives.	Reduced parking discourages auto-dependent travel, encouraging alternative modes such as transit, walking, and biking. Reduces direct and indirect VMT.
Develop and implement a marketing/information program that includes posting and distribution of ridesharing/transit information.	Reduces direct and indirect VMT.
Subsidize transit passes. Reduce employee trips during peak periods through alternative work schedules, telecommuting, and/or flex time. Provide a guaranteed-ride-home program.	Reduces employee VMT.
Provide bicycle storage and showers/changing rooms.	Reduces employee VMT.
Use traffic signalization and coordination to improve traffic flow and support pedestrian and bicycle safety.	Reduces transportation emissions and VMT.
Apply advanced technology systems and management strategies to improve operational efficiency of local streets.	Reduces emissions from transportation by minimizing idling and maximizing transportation routes/systems for fuel efficiency.
Develop shuttle systems around business district parking garages to reduce congestion and create shorter commutes.	Reduces idling fuel emissions and direct and indirect VMT.

LEED = Leadership in Energy and Environmental Design; HVAC = heating, ventilation, and air-conditioning

Source: Ecology 2008b

In addition to the representative GHG reduction mitigation measures listed in Table 3.3-8 *Potential GHG Reduction Mitigation Measures*, additional vehicle trip reduction measures and land-use-related GHG reduction measures have been published by various air quality agencies. For example, Table 3.3-9 *SMAQMD Recommended Measures for Land Use Emission Reductions* lists the emission reduction measures developed by SMAQMD, 2010. The table lists SMAQMD's estimated "mitigation points" value, where each point value corresponds to the percent reduction in emissions. For example, a mitigation point value of 1.0 corresponds to a one percent reduction in land-use-related emissions. SMAQMD developed this table to quantify reductions in criteria pollutant emissions, but the listed measures would also generally reduce GHG emissions.

**Table 3.3-9
SMAQMD Recommended Measures for Land Use Emission Reductions**

Measure Number	Title	Description	Mitigation Points
Bicycle/Pedestrian/Transit Measures			
1	Bike parking	Non-residential projects provide plentiful short-term and long-term bicycle parking facilities to meet peak season maximum demand.	0.625
2	End of trip facilities	Non-residential projects provide "end-of-trip" facilities including showers, lockers, and changing space.	0.625
3	Bike parking at multi-unit residential	Long-term bicycle parking is provided at apartment complexes or condominiums without garages.	0.625
4	Proximity to bike path/bike lanes	Entire project is located within 1/2 mile of an existing Class I or Class II bike lane and project design includes a comparable network that connects the project uses to the existing offsite facility.	0.625
5	Pedestrian network	The project provides a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site.	1.0
6	Pedestrian barriers minimized	Site design and building placement minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, berms, landscaping, and slopes between residential and non-residential uses that impede bicycle or pedestrian circulation are eliminated.	1.0
7	Bus shelter for existing transit service	Bus or Streetcar service provides headways of one hour or less for stops within 1/4 mile; project provides safe and convenient bicycle/pedestrian access to transit stop(s) and provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting).	0.25-1.0
8	Bus shelter for planned transit service	Project provides transit stops with safe and convenient bicycle/pedestrian access. Project provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting) in anticipation of future transit service.	0.25
9	Traffic calming	Project design includes pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements. Roadways are designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips by featuring traffic calming features.	0.25-1.0
Parking Measures			
10a	Paid parking	Employee and/or customer paid parking system	1.0-7.2

Measure Number	Title	Description	Mitigation Points
10b	Parking cash out	Employer provides employees with a choice of forgoing subsidized parking for a cash payment equivalent to the cost of the parking space to the employer.	0.6-4.5
11	Minimum parking	Provide minimum amount of parking required. Special review of parking required.	0.1-6.0
12	Parking reduction beyond code	Provide parking reduction less than code. Special review of parking required. Recommend a Shared Parking strategy.	0.1-12
13	Pedestrian pathway through parking	Provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances.	0.5
14	Off street parking	Parking facilities are not adjacent to street frontage.	0.1-1.5
Site Design Measures			
15	Office/Mixed-use density	Project provides high density office or mixed-use proximate to transit.	0.1-2.0
16	Orientation to existing transit, bikeway, or pedestrian corridor	Project is oriented towards existing transit, bicycle, or pedestrian corridor. Setback distance is minimized.	0.5
17	Orientation toward planned transit, bikeway, or pedestrian corridor	Project is oriented towards planned transit, bicycle, or pedestrian corridor. Setback distance is minimized.	0.25
18	Residential density	Project provides high-density residential development.	1.0-12
19	Street grid	Multiple and direct street routing (grid style).	1.0
20	Neighborhood electric vehicle access	Make physical development consistent with requirements for neighborhood electric vehicles.	0.5-1.5
21	Affordable housing component	Residential development projects of 5 or more dwelling units provide a deed-restricted low-income housing component on-site (as defined in Ch 22.35 of Sacramento County Ordinance Code) [Developers who pay into In-Lieu Fee Programs are not considered eligible to receive credit for this measure].	0.6-4.0
Mixed-use Measures			
22	Urban mixed-use	Development of projects predominantly characterized by properties on which various uses, such as office, commercial, institutional, and residential, are combined in a single building or on a single site in an integrated development project with functional interrelationships and a coherent physical design.	3.0-9.0
23	Suburban mixed-use	Have at least three of the following on site and/or offsite within ¼ mile: Residential Development, Retail Development, Park, Open Space, or Office.	3.0
24	Other mixed-use	All residential units are within ¼ mile of parks, schools or other civic uses.	1.0

Measure Number	Title	Description	Mitigation Points
Building Component Measures			
25	No fireplace	Project does not feature fireplaces or wood burning stoves.	1.0
26	Reserved for future measure		
27	Energy Star roof	Install Energy Star labeled roof materials.	0.5-1.0
28	Onsite renewable energy system	Project provides onsite renewable energy system(s).	1.0-3.0
30	Solar orientation	Orient 75 or more percent of homes and/or buildings to face either north or south (within 30 degrees of N/S).	0.5
31	Non-roof surfaces	Provide shade (within 5 years) and/or use light-colored/high-albedo materials (reflectance of at least 0.3) and/or open grid pavement for at least 30 percent of the site's non-roof impervious surfaces, including parking lots, walkways, plazas, etc.; OR place a minimum of 50 percent of parking spaces underground or covered by structured parking; OR use an open-grid pavement system (less than 50 percent impervious) for a minimum of 50 percent of the parking lot area. Unshaded parking lot areas, driveways, fire lanes, and other paved areas have a minimum albedo of .3 or greater.	1.0
32	Green roof	Install a vegetated roof that covers at least 50 percent of roof area.	0.5
TDM and Miscellaneous Measures			
33	Transportation Management Association membership	Include permanent TMA membership and funding requirement. Funding to be provided by Community Facilities District or Kitsap County Service Area or other non-revocable funding mechanism.	5.0
34	Electric lawnmower	Provide a complimentary electric lawnmower to each residential buyer.	1.0
99	Other	Other proposed strategies, in consultation with project lead agency and SMAQMD.	To Be Determined

Adaptation to Climate Change Impacts

Portions of the Gorst UGA may be susceptible to future sea level rise due to its close proximity to Sinclair Inlet. Based on research conducted by the University of Washington Climate Impacts Group and the Washington Department of Ecology sea level is expected to rise within the Puget Sound between three and 22 inches by 2050 and between six and 50 inches by 2100 (UW CIG et al 2008). The Kitsap County and City of Bremerton should consider adaptation strategies to mitigate future sea level rise impacts within the Gorst UGA. The Center for Science in the Earth Systems developed an adaptation guidebook for local, regional, and state governments to use while preparing for impacts associated with climate change (CSES 2007). Guidebook planning recommendations for local jurisdictions include:

- Building a climate change preparedness team
- Identifying planning areas relevant to climate change
- Conducting a climate change vulnerability assessment
- Conducting a climate change risk assessment

- Set preparedness goals and develop a preparedness plan

The Kitsap County and City of Bremerton should consider developing goals, policies, and revising code on a programmatic level to mitigate for potential sea level rise impacts, such as:

- Impacts associated with flooding (e.g. verify proposal is above the flood zone)
- Impacts to transportation corridors
- Impacts on utilities

For any City of Bremerton or Kitsap County-funded infrastructure projects or any private development projects between SR 3 and Sinclair Inlet, a sea-level rise adaptation analysis should be required.

Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts on regional or local air quality are anticipated. Temporary, localized dust and odor impacts could occur during the construction activities. The regulations and mitigation measures described above are adequate to mitigate any adverse impacts anticipated to occur as a result of Gorst study area growth increases.

3.4 Plants and Animals

Affected Environment

Watershed

The Gorst Creek Watershed provides habitat for terrestrial and aquatic plant and animal species. It includes various terrestrial habitats, the marine nearshore habitat of the Puget Sound (including estuarine wetlands), freshwater wetlands, and stream channels. Figure 3.4-1 *Gorst Creek Watershed: Land Cover* shows the land cover types and undeveloped/developed land that occur within the watershed, based on USGS land cover mapping data. Table 3.4-1 *Land Cover Types within the Gorst Creek Watershed and the Gorst UGA* summarizes this information for the watershed and the UGA.

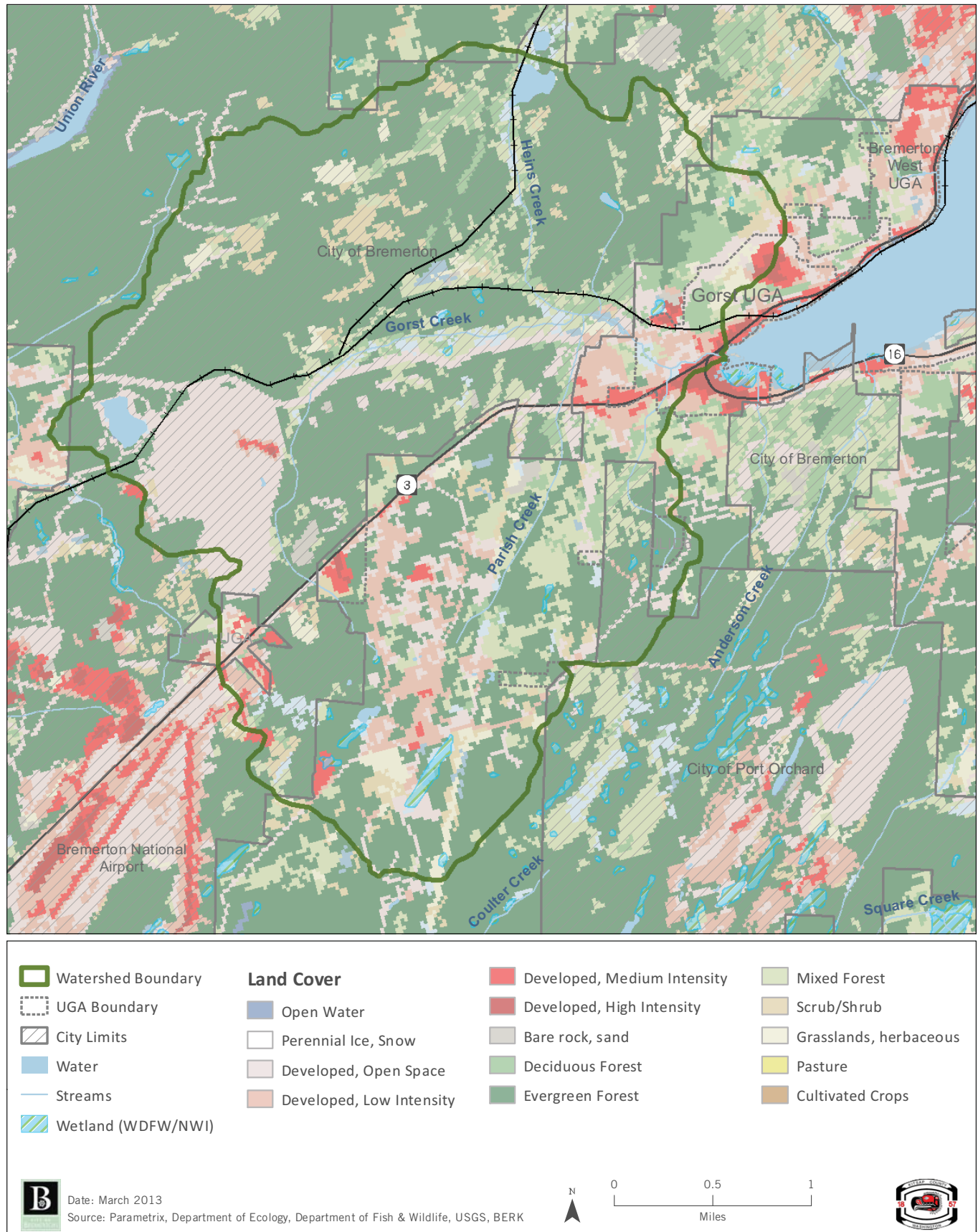
Table 3.4-1
Land Cover Types within the Gorst Creek Watershed and the Gorst UGA

Land Cover Type	Acreage in Watershed ¹	Acreage in UGA
Evergreen Forest	3,381	4
Mixed Forest	638	23
Deciduous Forest	290	33
Shrubland	211	1
Grasslands, herbaceous	161	21
Woody Wetlands	95	9
Emergent, Herbaceous Wetlands	42	14
Bare Rock	34	4
Open Water	13	0
Total Undeveloped	4,865	109
Developed, Open Space	788	50
Developed, Low Intensity	335	58
Developed, Medium Intensity	129	63
Developed, High Intensity	55	48
Total Developed	1,307	219
Total	6,172	328

Note: ¹Watershed refers to the entire Gorst Creek Watershed, inclusive of the UGA.

Source: USGS Land Cover Data (Homer et al. 2007)

FIGURE 3.4-1 GORST CREEK WATERSHED: LAND COVER



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Priority Habitats and Species

Generally, undeveloped land cover categories provide wildlife habitat of various quality, while developed categories provide limited wildlife habitat. Evergreen and mixed forests make up the largest component of land cover within the watershed boundary. Approximately 3,000 acres within the watershed are forested land owned by the City of Bremerton.

According to fish and wildlife habitat assessments completed for the Gorst Creek Watershed Characterization Report (City of Bremerton 2012), the most important fish and wildlife habitats in the Gorst Creek Watershed are:

- The streams that support anadromous fish species
- The Gorst Creek estuary that supports waterfowl, shorebirds, and juvenile salmon
- The large contiguous area of forest on the north side of the watershed that is owned and managed by the City of Bremerton

Freshwater Habitats – Gorst Creek and its tributaries provide important habitat and refugia for fish populations, including salmon and other anadromous species. Gorst Creek is inhabited by chinook, chum, and coho salmon, steelhead trout, and cutthroat trout. Based on the 2003 Kitsap Salmonid Refugia Report (May and Peterson 2003 in City of Bremerton 2012), Gorst Creek is a class C salmonid refugia, which means that it has been altered from natural conditions and does not fully support native salmonid populations. Among tributaries to Gorst Creek, Jarstad Creek has the greatest value for salmonid conservation. Heins Creek and portions of Gorst Creek also had a relatively high salmonid conservation value, while Parish Creek and Lower Gorst Creek had a relatively low value. Without the influence of the Gorst Creek Fish Hatchery, portions of the watershed would likely classify as Class B refugia, and the watershed has the potential to contribute to the recovery of federally listed salmonid species. Table 3.4-2 *Occurrence of Anadromous Fish Species in the Gorst Creek Watershed* summarizes documented use of freshwater habitats within the watershed by anadromous fish species.

Table 3.4-2
Occurrence of Anadromous Fish Species in the Gorst Creek Watershed

Species	Location	Habitat Provided
Fall Chinook salmon	Gorst Creek	Spawning, juvenile rearing
	Heins Creek	Spawning
	Parish Creek	Spawning
Coho salmon	Gorst Creek	Spawning, presence/migration
	Heins Creek	Spawning
	Parish Creek	Spawning, Presence/migration
	Jarstad Creek	Presence/migration
	Unnamed Stream 1226919475271	Presence/migration
Fall Chum Salmon	Gorst Creek	Spawning
	Heins Creek	Spawning
	Parish Creek	Presence/migration
	Jarstad Creek	Presence/migration
	Unnamed Stream 1226919475271	Presence/migration
Resident cutthroat trout	Gorst Creek	Presence
	Parish Creek	Presence

	Jarstad Creek	Presence
	Unnamed Stream 1227026475270	Presence
	Unnamed Stream 1226919475271	Presence
Winter steelhead trout	Gorst Creek	Spawning, presence/migration
	Parish Creek	Presence/migration
	Jarstad Creek	Presence/migration

Sources: WDFW 2013a, b

Terrestrial Habitats – The study area is located within the western hemlock (*Tsuga heterophylla*) zone (Franklin and Dyrness 1988). In native forests, Douglas-fir, bigleaf maple, Pacific madrone, vine maple, western hemlock, and western redcedar are the predominant tree species. Forest understory species include western swordfern, Oregon grape, salal, and Pacific rhododendron. The evergreen forests that make up the vast majority of the watershed land cover would be expected to support these plant species. The Gorst Creek watershed is expected to provide habitat for a variety of terrestrial forest-dwelling wildlife. The forested areas are likely to support an abundance of large and small mammals, birds, reptiles, and amphibians.

In the Gorst Creek Watershed, high value terrestrial wildlife habitats occur in the forested areas north and northwest of the Gorst UGA, where there is a low edge-to-area ratio and a low density of paved roads, and which has not been platted for development. South of the UGA, forested areas also provide relatively high value wildlife habitat, although there is a higher edge-to-area ratio and a higher paved-road density, and the large areas have been subdivided into five- and two-acre parcels.

The forested area that comprises the north and central portion of the Gorst Creek Watershed is publicly owned, and lies within a contiguous area that also contains the Green Mountain and Tahuya State Forest. Taken together, this area comprises the largest open-space block in the Puget Trough Ecoregion of the Puget Sound Basin.

The forests on the north side of the Gorst Creek Watershed are especially valuable from a wildlife standpoint for three reasons:

- They are protected in public ownership, and occur in the aforementioned large open-space block.
- They cover nearly half of the watershed, and therefore have a beneficial effect on freshwater habitats that support anadromous fish species.
- They help to sustain water flow and water quality processes within the watershed, and contribute to the overall quality of habitats in the Gorst Creek Estuary.

Wetlands - Wetlands within the study area have been mapped by Kitsap County based on National Wetlands Inventory Data and other data sources. Mapped wetland coverage within the Gorst Creek Watershed is approximately 110 acres. This acreage is comprised of freshwater forested/shrub wetlands, emergent wetlands, ponds, and other open water habitats. The largest of these are Alexander Lake in the northern portion of the watershed, an emergent estuarine intertidal wetland associated with Sinclair Inlet, and open water and scrub-shrub habitats associated with Twin Lake in the eastern portion of the wetland. Additionally, portions of the large estuarine/marine wetland complex associated with Sinclair Inlet are outside but adjacent to the watershed.

Marine Nearshore Habitat – The estuary at the mouth of Gorst Creek contains intertidal wetlands and salt marsh that support concentrations of shorebirds and waterfowl, including migratory species. This area is known to support a bald eagle nest and territory, and is likely used by great blue herons as foraging habitat. Glaucous-winged gulls are very common.

Marine mammals that reside in Puget Sound may utilize the Sinclair Inlet adjacent to the Gorst UGA. Harbor seals, Dall's porpoises, river otters, harbor porpoises, southern resident killer whale, Minke whales, California and northern sea lions, and gray whales may be found within the Sinclair Inlet during portions of the year

A variety of marine fauna occur in the Sinclair Inlet, including oysters, clams, crabs, mussels, scallops, octopus, and numerous species of fish, including various salmonids, surf smelt, English sole, rock sole, and starry flounder (National Park Service 2011). The Sinclair Inlet provides rearing habitat for juvenile Chinook salmon. The Gorst Creek Hatchery has a large influence on the estuary, and hatchery fish make up 40 to 100 percent of the juvenile Chinook in the estuary, depending on the season. In Sinclair Inlet, juvenile Chinook salmon are most abundant near the mouth of Gorst Creek (Fresh et al. 2006 in City of Bremerton 2012).

Based on habitat assessments, the shoreline along the Gorst Creek Estuary, the shoreline has a relatively high biological index score, particular for segments that support shorebirds, waterfowl, and salt marsh vegetation. However, the Sinclair Inlet received a relatively low score on the condition of its marine nearshore salmon habitat in the 2003 Kitsap Salmonid Refugia Report (May and Peterson 2003). This assessment considered fish habitat, riparian condition, and watershed factors.

The Gorst Creek estuary is a shallow estuary in which little tidal energy or exchange occurs. Based on an assessment of drift cells, the Puget Sound Nearshore Ecosystem Restoration Project made an "enhance low" recommendation for beaches and embayments within the estuary (Cereghino et al 2012). This recommendation indicates that critical ecosystem functions should be improved, but substantive restoration of ecosystem processes is unlikely. Estuary functions that could be improved by enhancement actions include habitat for salmonids, shellfish, and waterfowl.

Special Status Species

Plants

Based on data from the Washington Natural Heritage Program, no historical or current occurrences of rare plant species populations or endangered ecosystems have been mapped within the Gorst Creek watershed (Washington Natural Heritage Program 2013).

Wildlife

Table 3.4-3 *Special Status Species that May Be Found in or Near the Gorst Creek Watershed* provides a complete list of Wildlife with a special conservation status that may be found in the Gorst Creek watershed, based on information compiled from the U.S. Fish and Wildlife Service (for Kitsap County), WDFW priority habitats and species (specific to study area), WDFW SalmonScape, and the National Oceanic and Atmospheric Administration (NOAA) Fisheries Northwest Regional Office. Some of the species listed in this are not known to presently occur within the watershed but may have occurred there in the past. Additionally, some of the marine species listed in this table may be only occasional visitors to the area.

Table 3.4-3
Special Status Species that May Be Found in or Near the Gorst Creek Watershed

Common Name	Scientific Name	State Status	Federal Status
Reptiles and Amphibians			
Green Sea Turtle	<i>Chelonia mydas</i>	--	E
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>	--	E
Loggerhead Sea Turtle	<i>Caretta caretta</i>	--	T
Northwestern pond turtle	<i>Emys marmorata marmorata</i>	E	SC
Olive Ridley Sea Turtle	<i>Lepidochelys olivacea</i>	--	E

Common Name	Scientific Name	State Status	Federal Status
Tailed frog	<i>Ascaphus truei</i>	M	SC
Western toad	<i>Bufo boreas</i>	C	SC
Birds			
Bald eagle	<i>Haliaeetus leucocephalus</i>	S	SC
Marbled murrelet	<i>Brachyramphus marmoratus</i>	T	T
Northern goshawk	<i>Accipiter gentilis</i>	C	SC
Peregrine falcon	<i>Falco peregrinus</i>	S	SC
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	C	C
Purple martin	<i>Progne subis</i>	C	--
Mammals			
Humpback whale	<i>Megaptera novaeangliae</i>	E	E
Long-eared myotis	<i>Myotis evotis</i>	--	SC
Long-legged myotis	<i>Myotis volans</i>	--	SC
Northern sea otter	<i>Enhydra lutris kenyoni</i>	E	SC
Pacific Townsend's big-eared bat	<i>Corynorhinus townsendii marmorata</i>	C	SC
Southern Resident Killer Whale	<i>Orcinus orca</i>	E	E
Steller sea lion	<i>Eumetopias jubatus</i>	T	T
Fish			
Bocaccio (Georgia Basin DPS)	<i>Sebastes paucispinis</i>	C	E
Bull trout (Coastal-Puget Sound DPS)	<i>Salvelinus confluentus</i>	C	T
Canary rockfish (Georgia Basin DPS)	<i>Sebastes pinniger</i>	C	T
Chinook salmon (Puget Sound ESU)	<i>Oncorhynchus tshawytscha</i>	C	T
Chum salmon (Puget Sound/ Strait of Georgia ESU)	<i>Oncorhynchus keta</i>	C	--
Coho salmon (Puget Sound/ Georgia Basin ESU)	<i>Oncorhynchus kisutch</i>	C	SC
Eulachon (Southern DPS)	<i>Taleichthys pacificus</i>	C	T
Pacific lamprey	<i>Lampetra tridentata</i>	M	SC
River lamprey	<i>Lampetra ayresi</i>	C	SC
Steelhead Trout	<i>Oncorhynchus mykiss</i>	--	T
Yelloweye rockfish (Georgia Basin DPS)	<i>Sebastes ruberimus</i>	C	T

State Status: S = Sensitive, C = Candidate for listing; M = Monitored

Federal Status: SC = Species of Concern

DPS = Distinct Population Segment; ESU = Evolutionary Significant Unit

Source: NOAA Fisheries 2013, U.S. Fish and Wildlife Service 2012, WDFW 2013a, b

Reptiles and Amphibians

Sensitive amphibians are associated with wetlands and riparian areas, and may be found in these habitats within the study area. Tailed frogs are associated with cold, clear, fast-flowing streams in mature forests. Northwestern pond turtles are associated with ponds and lakes, but may winter on land. Only four populations of this subspecies are known to occur in Washington State, none of which are in the study area. The western toad occurs in a variety of terrestrial habitats, but is often found near water bodies. Western toads typically breed in habitats with open water, including wetlands, ponds, lakes, reservoir coves, and off-channel river areas (Washington Natural Heritage Program 2009).

The sea turtles listed in Table 3.4-3 *Special Status Species that May Be Found in or Near the Gorst Creek Watershed* occur in marine waters, occasionally off the coast of Washington, and have been included because these species could make their way into the Puget Sound. However, these species breed in warmer waters much further south, and are unlikely to occur in the Sinclair Inlet, even occasionally.

Birds

All migratory birds are protected under the Migratory Bird Treaty Act. Bald and Golden eagles are also protected by the Bald and Golden Eagle Protection Act. Numerous bird species protected by these two acts are likely to occur within the Gorst Watershed. Additionally, several sensitive bird species occur in the area.

Bald Eagle – A bald eagle nest has been mapped just outside the watershed boundary, near the south shore of Sinclair inlet. Its associated territory, as mapped by WDFW, is located throughout the west end of the estuary. Almost the entire shoreline of the Sinclair Inlet within the watershed is mapped as bald eagle nest buffer.

Marbled Murrelet – Marbled murrelets are generally found in nearshore waters (within about three miles of shore) near their nesting sites (USFWS 2009). They feed in nearshore marine waters and use older stands near the coastline for nesting. The Gorst Creek Watershed is located within Zone 1 of potential marbled murrelet nesting habitat, which extends approximately 40 miles from the coast. Marbled murrelets are listed as threatened at both the federal and state level. Critical habitat for the species has not been mapped within the Gorst Creek Watershed.

Northern Goshawk – Northern goshawks occur in all forested regions of Washington, and are likely to be found in forested habitats within the watershed, but has largely been extirpated from urbanized landscapes and to some degree moderately developed areas and areas with intensive timber management. Goshawks generally prefer to nest in mature or old forest habitats with a high density of large trees (Desimone and Hayes 2003).

Peregrine Falcon – Peregrine falcons occur year-round in Washington as either nesting or migrating individuals. Within coastal areas, peregrine falcons typically nest and roost on cliffs, although in urban areas they rarely nest on tall buildings, bridges, and vegetated slopes (Hayes and Buchanan 2002). There are no mapped nesting areas for this species in the Gorst Watershed.

Yellow-Billed Cuckoo – Yellow billed cuckoos are unlikely to occur in the Gorst Creek Watershed. They are officially considered extirpated in Washington, although occasional sightings occur. None of the recent sightings of this species has been in Kitsap County. Historical nesting habitat in Washington State is along wooded rivers (Seattle Audubon Society 2013).

Purple Martin – Purple martins nest and forage in open land near water, and can be found in developed areas, along waterfronts, and in fields, wetlands, and clearings. They are fairly common in the Puget Trough area during May through August (Seattle Audubon Society 2013). The Kitsap Audubon society has installed purple martin nesting boxes at various locations in Kitsap County.

Terrestrial Mammals

Three sensitive species of bat potentially occur within the Gorst Creek Watershed: long-eared myotis, long-legged myotis, and Pacific Townsend's big-eared bat. These bat species occur in a variety of habitats, including forests and riparian wetlands that are found in the Gorst Creek Watershed. They roost in a variety of places, including trees, caves, and built structures (Woodruff and Ferguson 2005). All three species are likely to be found in the watershed.

Marine Mammals

Marine mammals that occur in Puget Sound may make their way into the Sinclair Inlet. These include sea otters and various seals, sea lions, porpoises, and whales. All marine mammals are protected under the Marine Mammal Protection Act of 1972, which prohibits (with certain exceptions) the "take" of marine mammals in U.S. waters. Commonly occurring marine mammals in Puget Sound include Pacific harbor seal, California sea lion, Steller sea lion, northern elephant seal, Southern Resident killer whale, harbor and Dall's porpoises, and Minke and Gray whales.

Humpback Whale – humpback whales typically occur at higher latitudes in the summer and lower latitudes in the winter. While humpback whales were seen very rarely in Puget Sound through the late, 1990s, sightings of this species have increased in recent decades, although they are still infrequent (Falcone et al. 2005). Therefore this endangered species could potentially occur occasionally in Sinclair Inlet.

Northern Sea Otter – Northern sea otters are predominantly a coastal species, occurring along the northern Washington coast and into the Strait of Juan de Fuca. There is minimal evidence for historic occurrence of northern sea otters in Puget Sound, and recent sightings of the species in Puget Sound have been of isolated individuals, near Olympia (Lance et al. 2004). Therefore, this species is unlikely to occur in Sinclair Inlet.

Southern Resident Killer Whale – the Southern Resident DPS of killer whale, which is listed as endangered at the federal and state level, resides in the inland waterways of Washington, including the Puget Sound, from spring to fall (Ford et al. 2000, Krahn et al. 2002). This species is likely to be found in Sinclair Inlet, which is designated critical habitat for the species.

Steller Sea Lion – Steller sea lions reside year-round along the outer coast of Washington, and are associated with a variety of terrestrial and marine habitats (National Marine Fisheries Service 2008). The species also occurs in the Puget Sound. No Steller sea lion rookeries occur in Washington, however, they may haul out on jetties, offshore rocks, and coastal islands. Occasionally, they haulout on navigation buoys in Puget Sound (WDFW 2000).

Fish

Chinook Salmon. Fall Chinook salmon occur in portions of Gorst Creek, Heins Creek, and Parish Creek, as well as in the Sinclair Inlet. Gorst Creek provides known spawning and juvenile rearing habitat, and Heins and Parish creeks provide known spawning habitat (WDFW 2013a). These stretches of stream are mapped as critical habitat for Chinook salmon. Juvenile fish originating in the Gorst Creek Hatchery comprise a large proportion of juvenile salmon in the study area, although fish from wild stocks are also present. Juvenile salmon from 14 different watersheds and as far away as the Fraser River in Canada have been documented in the Sinclair Inlet. Designated critical habitat for Chinook salmon occurs within the Gorst UGA, in portions of Gorst Creek, Parish Creek, and Heins Creek

Steelhead Trout. Winter steelhead are ocean-maturing fish that spawn in freshwater systems between November and April. Spawning habitat consists of gravel substrates free of excessive silt (NOAA Fisheries Office of Protected Resources 2013). Steelhead trout occur in portions of Gorst Creek, Parish Creek, and Jarstad Creek, as well as the Sinclair Inlet. Spawning has been documented in Gorst Creek. In January, 2013, the National Marine Fisheries Service proposed designating critical habitat for Puget Sound steelhead, which is currently federally listed as a threatened species, in portions of Gorst, Parish, and Heins creeks within the watershed.

Chum and Coho Salmon. Chum and Coho salmon ESUs within the watershed are candidates for listing at the state level. Both species occur in Gorst Creek, Heins Creek, Parish Creek, Jarstad Creek, and Unnamed Stream 1226919475271. Gorst Creek and Heins Creek provide spawning habitat for chum and coho salmon, and Parish Creek provides spawning habitat for coho salmon.

Rockfish. Rockfishes are bottom and mid-water dwelling fish that occur in various coastal water habitats. Bocaccio, yelloweye rockfish, and canary rockfish have all been federally listed under ESA. Bocaccio are very rare in Puget Sound, and are most frequently found in areas lacking hard substrates. In the past, they were most commonly caught in the South Puget Sound. Yelloweye rockfish often occur in areas with high relief and complex rocky habitats. They are distributed throughout the Strait of Georgia, but are less frequently observed in Puget Sound. Canary rockfish are associated with the various rocky and coarse habitats throughout Puget Sound (NMFS 2009). All three of these species could potentially make their way into Sinclair Inlet.

Pacific and River Lamprey. Pacific lampreys occur in most large rivers and streams along the coast and the Strait of Juan de Fuca, through Puget Sound, with a distribution similar to that of salmon and steelhead. River lampreys occur in rivers and streams along the coast from the mouth of the Columbia River to the mouth of the Hoh River, throughout Puget Sound, and in the Lake Washington Basin. Both species use riffle and side channel habitats for spawning and rearing, and good water quality is essential for rearing (U.S. Fish and Wildlife Service 2013).

Gorst UGA

Freshwater Habitats – Freshwater habitats in the UGA include Gorst Creek and two unnamed tributaries, as well as two unnamed streams that drain to the Sinclair Inlet. A discussion of Gorst Creek and its tributaries is provided in the discussion for the watershed. The freshwater habitats in the Gorst UGA have been degraded by urban development in this area, and four fish passage barriers have been identified, one culvert on Gorst Creek, and three culverts on an unnamed tributary stream.

Terrestrial Habitats – Based on USGS land cover data and as shown in Table 3.4-1 *Land Cover Types within the Gorst Creek Watershed and the Gorst UGA*, roughly two thirds of the land area within the UGA is developed and a third is undeveloped. The majority of the Gorst UGA supports residential, commercial, and industrial land uses, and is therefore assumed to have little to no habitat value for native species. These areas may support landscaped areas, native and non-native trees, shrubs and forbs, grass, and various other plants commonly found in urban areas. It is expected that these areas would support some common urban wildlife species, such as black rat, Norway rat, house mouse, raccoon, opossum, European starling, glaucous-winged gull, house finch, house sparrow, and rock dove.

A portion of the area within the UGA that currently supports mineral resource extraction is undeveloped open space, including deciduous forests with connections to high value habitats to the north. These areas are likely to be used by a variety of forest-dwelling species.

Wetlands – The only mapped wetlands within the Gorst UGA are those associated with the estuarine/marine wetland complex at the Sinclair Inlet, and the manmade open water habitat between SR 3 and the Navy railroad.

Marine Nearshore Habitat – The marine nearshore habitats in and adjacent to the Gorst UGA and their associated wildlife species were discussed previously for the Gorst Creek watershed.

Priority Habitats and Special Status Species

Plants

Based on data from the Washington Natural Heritage Program, no historical or current occurrences of rare plant species populations or endangered ecosystems have been mapped within the Gorst UGA (Washington Natural Heritage Program 2013).

Wildlife

Table 3.4-3 *Special Status Species that May Be Found in or Near the Gorst Creek Watershed* summarizes the special status for Kitsap County, and that are likely to be found in or near the Gorst Creek watershed. Given the lack of undeveloped and undisturbed land in the UGA, many of the forest- and freshwater wetland-dwelling species listed in Table 3.4-3 *Special Status Species that May Be Found in or Near the Gorst Creek Watershed* are unlikely to be found within the UGA. Sensitive species that use Sinclair Inlet, freshwater streams, and estuarine wetland habitats are likely to be found within the UGA. Bald eagles are known to use the area around Sinclair Inlet. All of the marine species listed in Table 3.4-3 *Special Status Species that May Be Found in or Near the Gorst Creek Watershed* that are likely to occur in Puget Sound could occur in Sinclair Inlet adjacent to the UGA. Additionally, all of the marine and anadromous species listed in the table occur (or potentially occur) in aquatic habitats in or adjacent to the UGA.

Impacts**IMPACTS COMMON TO ALL ALTERNATIVES**

Under all alternatives, the City of Bremerton and Kitsap County CAOs and Shoreline Master Programs include regulations that have been developed to protect sensitive species and habitats. These regulations are discussed later in this section under Applicable Regulations and Commitments, as well as in Section 3.14 *Relationship to Plans and Policies*. The City of Bremerton and Kitsap County regulations differ, particularly in terms of buffers that apply to development near shorelines within the UGA. Additionally, proposed Shoreline Master Programs will alter some existing regulations, once adopted. The Gorst UGA, once annexed, will switch from Kitsap County jurisdiction to City of Bremerton jurisdiction. Therefore, it is important to understand which regulations will apply, and how they differ from current regulations. In order to provide a better context for the Plants and Animals effects analysis, the differences in City of Bremerton and County regulations, as they apply to fish and wildlife and their habitats, are highlighted here.

For terrestrial species, regulations pertaining to fish and wildlife habitat conservation areas apply. Under both the City of Bremerton and Kitsap County CAOs, Habitat Management Plans (HMPs) are required for development for wildlife habitat conservation areas associated with federally and state listed endangered, threatened, and sensitive species, as well as for some areas associated with state listed candidate and monitored species and other important terrestrial habitat areas. HMPs are used to determine appropriate buffers on a project-by-project basis, as well as other measures to protect sensitive species and habitats. Therefore, the City of Bremerton and Kitsap County regulations are similar in regards to protection of terrestrial wildlife species and habitats. Regulatory requirements that protect these species would be very similar after annexation of the UGA.

For wetlands and aquatic habitats (and their associated species), there are some differences in the City of Bremerton and Kitsap County regulations as far as standard and reduced buffer widths. These differences have been summarized in Table 3.14-3 *Bremerton and Kitsap County Shoreline, Stream, and Wetland Buffer Comparison*. Currently, the CAO regulations apply to wetlands and streams. They are very similar in terms of standard buffers, and range from 35 to 150 feet for City of Bremerton-regulated streams, and from 50 to 150 feet for Kitsap County-Regulated streams. Under both CAOs, buffers for Category I and II wetlands are the same (200 feet and 100 feet, respectively), but the buffers for Category III and IV wetlands are slightly smaller under Kitsap County regulations than City of Bremerton regulations. Building setbacks of 15 feet are required under Kitsap County CAO regulations but not the City of Bremerton CAO regulations (see Table 3.14-3 *Bremerton and Kitsap County Shoreline, Stream, and Wetland Buffer Comparison*). In the case of wetlands, annexation of the UGA to the City of Bremerton would result in slightly larger buffers (20 to 25 feet) for Category III and IV wetlands, although building setbacks would not be required. Buffer averaging would continue to be allowed for reduction of wetland buffers in certain areas.

The greatest differences in regulatory protections for aquatic habitats are found when comparing the proposed Kitsap County Shoreline Master Program to the Proposed City of Bremerton Shoreline Master Program. In both

cases the proposed Shoreline Master Program would override the current CAO regulations that pertain to streams. Kitsap County standard buffers for streams are 200 feet, with 15-foot setbacks, building setbacks. Once the UGA is annexed to the City of Bremerton, greater marine shoreline buffers and reduced shoreline stream buffers would apply. The Proposed City of Bremerton standard buffers under the Shoreline Master Program range from 50 feet for commercial uses to 175 feet for Urban Conservancy Land (Table 3.14-3 *Bremerton and Kitsap County Shoreline, Stream, and Wetland Buffer Comparison*). Some buffer reductions would be allowed, and 15-foot setbacks would continue to apply. Therefore, for freshwater aquatic habitats within the UGA, regulatory buffers would be reduced for shoreline-designated streams (i.e., Gorst Creek). For marine habitats (i.e., Sinclair Inlet), regulatory buffers for Urban Conservancy area would increase after annexation, from 100 feet to 175 feet, except where parallel designations apply in which case buffer would extend to the edge of the Urban Conservancy designation (approximately 100 feet). It should be noted that both the City and County Shoreline Master Program proposals were the subject of cumulative impact analyses that demonstrated no-net-loss of shoreline ecological function. The City's buffers particularly on Gorst Creek recognize current degraded conditions. The County's buffer on shoreline streams such as Gorst Creek is uniform at 200 feet regardless of conditions, but there are allowances to reduce the buffer with enhancements.

The Draft Subarea Plan for the Gorst UGA under Alternatives 2 and 3 includes a policy promoting adequate and equivalent standards for stream and shoreline protection. Appendix D *Shoreline Buffer Comparison & Options* provides a review of several Gorst Creek shoreline management options, including proposed City standards, proposed County standards, and alternative standards that blend proposed City and County standards with Watershed Characterization results and BMPs.

Watershed

Under all alternatives, development would occur throughout the watershed, primarily in the urban and suburban areas associated with the Gorst UGA (described in its own section below) and the SKIA Subarea Plan. Most development outside these areas would be residential dwellings, with an estimate that less than 500 new dwellings would be constructed over the next 20 to 30 years. New construction in rural areas would result in removal of terrestrial habitats, which could injure and/or displace common species of wildlife. Migratory birds could be affected, particularly by construction that occurs during the breeding season. Under all alternatives, regulations to protect sensitive species would help prevent impacts to these species during the construction process. Depending on where it occurs, new construction in the watershed could also affect wildlife habitat connectivity through fragmentation or interruption of existing wildlife corridors.

Noise associated with construction activities in the watershed would likely disturb terrestrial wildlife species, particularly in rural areas where baseline noise levels are low. Noise disturbance would constitute a short-term impact, lasting only as long as the construction activities, with lower levels of noise associated with residential uses once construction is completed. Wildlife could adapt to the noise or leave the area. The greatest risk for adverse effects would be during breeding periods, when noise could impact nesting/breeding success.

Construction activities adjacent to stream channels, other bodies of water, and wetlands would have the potential to affect these habitats and the species that occur in them, including listed and sensitive fish species. Additionally, stormwater runoff from the developed sites could potentially impact aquatic habitats, including the creeks listed in Table 3.4-2 *Occurrence of Anadromous Fish Species in the Gorst Creek Watershed* that support salmon species. As discussed elsewhere in this Draft EIS (primarily Section 3.2 *Water Resources*), flooding and sedimentation into surface water systems as a result of inadequate stormwater infiltration are currently impacting aquatic habitats within the watershed. Sedimentation and turbidity associated are primary contributors to the degradation of salmonid habitat (Bash et al. 2001). High levels of turbidity can reduce feeding efficiency and food availability, clog gillrakers, and erode gill filaments of salmonids (Bruton 1985; Gregory 1993). Clearing of trees and development activities within the watershed could lead to an exacerbation of these issues, potentially further degrading aquatic habitats and reducing the likelihood that these habitats would be able to provide suitable habitat for aquatic species, including listed Chinook salmon, steelhead trout, and other anadromous species. Stormwater Plans, BMPs,

and SPCC plans would help minimize impacts to aquatic habitat and the species that they support as a result of construction activities.

Gorst UGA

Under all alternatives, development of the remaining privately held open space within the Gorst UGA is planned or likely to occur. Such development would decrease the amount of vegetated area, including areas with wildlife habitat value, such as the block of forestland on the mine property. This reduction in wildlife habitat would remove populations of some common wildlife species, or force them to move to undeveloped areas nearby. In some cases, newly developed areas would support urban wildlife species such as rats, raccoons, and gray squirrels. It is anticipated that some migratory birds would be impacted as a result of loss of undeveloped habitat, particularly for activities that occur during the breeding season.

In areas that are currently developed, noise associated with future redevelopment activities in the UGA would likely disturb wildlife to some degree, although it is likely that existing populations are acclimated to urban noises and would be able to tolerate some degree of noise disturbance. These noise effects would be short term, lasting only for the duration of construction activities in a given location. Some habitat removal could occur, even on developed sites, but in most cases these sites would receive new landscaping that provides the same level of wildlife habitat value. In certain areas, construction activities could disturb wildlife in nearby undeveloped areas, potentially causing some stress to individuals or interfering with nesting or breeding for a limited number of animals. These effects would be minimized to baseline levels once the construction is completed. Terrestrial sensitive species and their habitats within the UGA, such as the bald eagle territory along the shoreline of the Sinclair Inlet and the osprey nest near Alexander Lake should be protected from long-term harm, and disturbance to these species minimized, under applicable CAO regulations. However, some disturbance to these species is likely to occur as a result of nearby construction work.

Construction activities adjacent to stream channels, other bodies of water, and wetlands would have the potential to affect these habitats and the species that occur in them, including listed and sensitive fish species. Additionally, stormwater runoff from the developed sites could potentially impact aquatic habitats, including the creeks listed in Table 3.4-3 *Special Status Species that May Be Found in or Near the Gorst Creek Watershed* that support salmon species, and Sinclair Inlet, which supports numerous sensitive anadromous and marine species. As discussed for the watershed, stormwater plans, BMPs, and SPCC plans would help minimize impacts to aquatic habitats to varying degrees.

Alternative 1

Under this alternative, undeveloped land on approximately 41 acres in parcels, or less than one percent of the total area of the Gorst watershed, would be developed in the future; additionally, existing or future rights of way and lands for public purposes would be disturbed. All of this development would happen within the UGA, where a minimal amount of high quality wildlife habitat occurs. Over some of this acreage, habitat for certain species, such as forest dwellers, would be lost permanently, and over some of this acreage, urban wildlife habitat would be replaced with similar habitat. No open space/recreation is formally designated under this alternative. Existing regulations should be suitable for preventing impacts to sensitive terrestrial habitats and species from development activities. In the case of wetlands, appropriate mitigation could be used to compensate for some of the unavoidable development impacts.

Creation of new impervious surface in the UGA could occur under this alternative, which would exacerbate water quality issues associated with stormwater. However, adoption of the LID guidance manual would help guide new development such that the amount of effective impervious surface on a site is reduced. Therefore, redevelopment would likely result in an overall reduction in impervious surface. However, the existing stormwater issues would not otherwise be addressed, and associated water quality impacts would continue to affect aquatic species, including listed salmonid species, in the streams within the watershed and UGA.

Under this alternative, all existing barriers to fish passage would continue to prevent movement of fish upstream within the watershed.

With annexation of the Gorst UGA, City of Bremerton regulations pertaining to aquatic habitats would apply. As described in Section 3.14 *Relationship to Plans and Policies*, City of Bremerton buffer standards are smaller along Gorst Creek than Kitsap County's standard buffers. Under Alternative 1, the Gorst Subarea Plan, which includes additional protective measures recognized with the shift from Kitsap County to City of Bremerton shoreline regulation, would not be implemented. Therefore BMPs proposed in the Subarea Plan would not apply and would not promote buffer enhancement.

Alternative 2

Under this alternative, approximately 70 acres, or one percent of the total area of the Gorst watershed, would be developed in the future; additionally, existing or future rights of way and lands for public purposes would be disturbed. Therefore, the amount of existing wildlife habitat that would be impacted either through permanent loss, permanent modification to more urban wildlife habitat, or short-term loss and eventual replacement with habitat of similar value, would be nearly double that under Alternative 1. The total impacted acreage would remain very small, however. Under this alternative, sensitive terrestrial and wetland species and habitats would generally be protected from impacts associated with development within the UGA by applicable CAO regulations. The Draft Gorst Subarea Plan includes a policy that promotes compatible and equivalent environmental regulations. Since the City of Bremerton and Kitsap County regulations pertaining to terrestrial and wetland species and habitats are currently very similar, it is expected that the new regulations would be similar to those that are currently in place under the CAOs, and that these would continue to protect sensitive terrestrial and wetland species and habitats.

Alternative 2 includes 16 acres of land zoned as Open Space/Recreation within the UGA. Parks, recreation areas, and other open spaces would be expected to provide more wildlife habitat and a wider variety of wildlife species than the commercial and industrial areas it would be replacing. Because this area would be surrounded by commercial development, it is likely to have a large component of urban wildlife species.

Under Alternative 2, the Gorst UGA would shift from Kitsap County to City of Bremerton regulatory oversight, as discussed earlier in this section. Buffer distances under the proposed City of Bremerton Shoreline Master Program would be less for Gorst Creek than those under the Kitsap County Shoreline Master Program recognizing current degraded creek conditions, but the proposed Gorst Creek Watershed Characterization & Framework Plan and Gorst Subarea Plan policies would promote recommended BMPs from the Watershed Characterization Study. Policies promote minimization of new impervious surface associated with development, such as retention of vegetation and enhancement of degraded areas to offset increases in impervious surfaces. If these policies are implemented with similar regulations this would help minimize potential impacts to Gorst Creek and the aquatic species it supports associated with reduced standard buffers. Additionally, the final Subarea Plan addressing a preferred alternative could incorporate one of the shoreline buffer options in this Draft EIS Appendix D *Shoreline Buffer Comparison & Options* or another similar option to provide for compatibility of standards.

At a watershed scale, the new Stormwater Management Plan, Watershed Characterization & Framework Plan, and Gorst Subarea Plan would include efforts to minimize impervious surface in developed/redeveloped areas, improve stormwater facilities, restore degraded stream channels, and protect key recharge/discharge/storage areas. All of these features would benefit aquatic species within the watershed and UGA by reducing impacts to water quality.

The following zoning and BMPs would have the following benefits to wildlife and their habitats within the watershed:

- Zoning actions that minimize certain types of development in key areas would help improve groundwater recharge and flows in streams that provide habitat for sensitive fish species.
- Limiting logging and maintaining forest cover in certain areas would help protect water flows and minimize sediment export.

- Restoration of certain areas would improve currently degraded habitat values in these areas.
- Stormwater system improvements would reduce flooding and overland flows and associated sedimentation and transport of pollutants from developed areas into fish-bearing stream channels.
- Improvements to fish passage barriers along Parish Creek would potentially increase the amount of suitable habitat for salmon and other fish that are found within this stream.

These proposed amendments would provide beneficial impacts to wildlife and their habitats at the watershed level. In addition to addressing future development and potential impacts from a landscape-scale perspective, planned restoration actions could potentially improve existing degraded habitats.

Alternative 3

Under this alternative, approximately 69 acres, or 1 percent of the total area of the Gorst watershed, would be developed in the future; additionally, existing or future rights of way and lands for public purposes would be disturbed. Therefore, the amount of existing wildlife habitat that would be impacted by development activities in the UGA would be nearly the same as that under Alternative 2, and nearly double that under Alternative 1. The total impacted acreage would remain very small, however.

Like Alternative 2, Alternative 3 includes 16 acres of land zoned as Open Space/Recreation within the UGA. Additionally, the area surrounding this open space would be zoned as Low Intensity Waterfront, rather than the commercial zoning under Alternative 2; while it would allow commercial uses, the pattern would have smaller amounts of impervious area and there would be incentives for shoreline reclamation. Therefore, out of the three alternatives, this zoning would potentially result in the highest quality wildlife habitat within the southeast portion of the UGA. However, it is expected that urban wildlife and common species would still predominate.

Like under Alternative 2, the Gorst Creek Watershed Characterization & Framework Plan and Gorst Subarea Plan would be implemented under Alternative 3. In addition stormwater improvement projects would be identified and implemented. Draft policies promote compatible shoreline regulations and minimization of impervious surfaces, sedimentation, and stormwater runoff associated with future development in order to minimize associated impacts to habitats and species in Gorst Creek, including listed salmonids. Additionally, the final Subarea Plan addressing a preferred alternative could incorporate one of the shoreline buffer options in this Draft EIS Appendix D *Shoreline Buffer Comparison & Options* or another similar option to provide for compatibility of standards.

As the Shoreline Master Program, Watershed Characterization & Framework Plan, Gorst Subarea Plan and improvements to stormwater facilities would be implemented under this alternative, effects to fish and wildlife associated with implementing the plan would be similar to those discussed for Alternative 2. At a landscape scale, protection of fish and wildlife habitats and populations within the watershed would be greater than under Alternative 1. Additionally, some of the proposed policies and plans would have the potential to improve existing degraded habitats. Aquatic species, including listed salmon and steelhead, would receive the greatest amount of benefit from actions under the proposed plans.

Mitigation Measures

Incorporated Plan Features

New plans that would be implemented under Alternatives 2 and 3 include features that would serve as mitigation for impacts to plants and animals within the study area. Regulation amendments would incorporate the suggested management measures shown in Table 2-8 *Integrated Watershed Processes and Habitat Results and Management Measures*.

Possible plan features that would serve as mitigation for potential impacts to plants and animals include the policies and BMPs that address:

- Minimizing new development and maintaining forest cover in areas that have high wildlife habitat value.

- Maintaining appropriate zoning to protect areas with high wildlife habitat value.
- Restoring areas with high habitat value or a high potential to provide salmon refugia.
- Implementing measures to reduce erosion and sediment export in areas identified for future development (e.g., buffers, setbacks from steep slopes, reduction of overland flow through infiltration).

Capital facility improvements may include removal or repair of culverts and other fish passage blockages that restrict the movement of fish upstream. Other improvements would address stormwater deficiencies and flooding issues, which would help reduce associated water quality impacts and improve aquatic habitats.

Applicable Regulations and Commitments

City of Bremerton Comprehensive Plan – Environment Chapter. The City of Bremerton’s Comprehensive Plan addresses wetlands, marine resources, wildlife habitat conservation areas and corridors, streams, riparian areas, and other important wildlife habitats. The plan includes goals and policies pertaining to conservation of critical areas and non-renewable resources, open space, marine protected areas, native wildlife habitats and other wildlife features within the City of Bremerton. The goals and policies in the plan provide direction to individuals and policy makers about how the City of Bremerton’s environmental resources should be treated.

Kitsap County Comprehensive Plan – Natural Systems Chapter. The Kitsap County’s Comprehensive Plan guides non-regulatory efforts to enhance natural resources, including habitat/open space planning, salmon recovery, and water resources planning. Goals of these efforts include protecting the ecological integrity of aquatic habitats and wetlands, and protecting and restoring fish and wildlife habitat, including priority habitats for sensitive species.

Kitsap County CAO. The County CAO includes regulations to protect wetlands and Fish and Wildlife Habitat Conservation Areas. Wetlands are regulated based on their category. New development requires a wetland delineation report, a mitigation report, and erosion and sedimentation control measures, as required under regulations pertaining to stormwater management. Wetland buffers are determined based on wetland category, and a building or impervious surface setback line of 15 feet is required from the edge of any wetland buffer. Additional regulations pertain to roads, utilities, and stormwater discharges, and other aspects of development.

Fish and Wildlife Habitat Conservation Areas are areas that support regulated fish or wildlife species habitats, which are typically identified by known point locations of species (e.g., a nest or den), habitat areas, or both. They include certain categories of streams, saltwater shorelines, certain lakes, habitats for federal and/or state listed species, habitat areas targeted for preservation by federal, state, and/or local governments, areas that contain habitats and species of local importance, and important habitats for state-listed candidate and monitored species. Kitsap County development standards require buffers and building setbacks in order to protect these important wildlife habitats. For development within wildlife habitat conservation areas, a habitat management plan may be required.

City of Bremerton CAO. The City of Bremerton CAO provides development standards for protecting wetlands that are similar to those provided in the Kitsap County CAO. Wetlands are rated using the same system, although standard buffers may be different. Compensatory mitigation for alterations to wetlands is required to achieve equivalent or greater biologic functions.

The City of Bremerton CAO defines Fish and Wildlife Habitat Conservation Areas as areas necessary for maintaining species in suitable habitats within their natural geographic distribution, so that isolated subpopulations are not created. They include areas with which federally or state listed or sensitive species have a primary association, priority habitats and species of local importance, streams and watercourses used by juvenile salmonids, habitat of species essential to the juvenile salmonid diet, commercial and recreational shellfish areas, kelp and eelgrass beds, sand lance spawning habitat, herring and smelt spawning areas, ponds under 20 acres, Waters of the State, water bodies planted with game fish by a governmental or tribal entity, state natural area preserves and natural resource conservation areas, and land essential for preserving connections between habitat blocks and open spaces. The

City of Bremerton CAO requires a habitat management plan for development in or adjacent to certain wildlife habitat conservation areas in order to protect state and federally listed and sensitive species, bald eagles, and anadromous fish. Building setbacks and buffers are determined based on the type of habitat conservation area, and additional development standards provide further protection to wildlife habitat.

Kitsap County Shoreline Master Program. Kitsap County Shoreline Master Program, KCC Title 22, is a comprehensive shoreline land-use plan that includes policies and regulations for use and development of the shoreline; it has been recently amended by the County and is awaiting Ecology approval. The program includes regulations specific to a variety of land use activities. The general policies of these regulations include, but are not limited to, minimizing effects to water quality, preserving estuaries and wetlands, and maintaining aquatic plants and animals in a healthy condition.

City of Bremerton Shoreline Master Program. The City of Bremerton Shoreline Master Program was developed in accordance with RCW 90.58.020, which stipulates that shorelines of the state must be developed in a way that will promote and enhance public interest, while also protecting against adverse effects to terrestrial vegetation and wildlife, as well as aquatic habitats and species. A draft Shoreline Master Program has been approved by the City of Bremerton but is currently awaiting approval by Ecology. Shorelines of the state within the Gorst watershed include Sinclair Inlet and Gorst Creek. Standards and regulations within the Shoreline Master Program that pertain to plants and animals include building setbacks and buffers for wetlands and shorelines within the shoreline jurisdiction that supersede those in the CAO, conservation of vegetation near shorelines, and mitigation requirements.

Other Regulations. Federal regulations that pertain to the protection of plants and animals and their habitat include the Endangered Species Act, CWA, Migratory Bird Treaty Act, and the Marine Mammal Protection Act.

Other Potential Mitigation Measures

The following potential mitigation measures apply to terrestrial species and habitats.

- Consider wildlife corridors and connectivity when designing and permitting new developments within the Gorst Creek Watershed.
- Implement clearing of vegetation and construction activities outside the breeding period for sensitive bird species and migratory birds, as feasible.
- Consider applying common shoreline standards, such as one of the shoreline buffer options in this Draft EIS Appendix D *Shoreline Buffer Comparison & Options* or another similar option to provide for compatibility of shoreline buffer standards, particularly for Gorst Creek.

Significant Unavoidable Adverse Impacts

Most of the forested watershed is owned by the City of Bremerton and managed for very limited forestry and utility activities (see Section 3.14 *Relationship to Plans and Policies*). As such, large scale changes to wildlife habitat there are not anticipated under any alternative. One area designated for protection in the Watershed Characterization Study south of SR 3 (Assessment Unit 1) is zoned for Rural Residential uses by Kitsap County. Under Alternative 1, no added protective measures are considered and there could be a loss of forest cover that could displace wildlife. Under Alternatives 2 and 3, added measures such as LID requirements and clustering could mitigate that potential impact.

New impervious surfaces and cutting of trees would occur under all the alternatives particularly in the Gorst UGA but also on Rural Residential lands in the watershed, contributing to stormwater runoff, flooding, and sedimentation of surface water resources, which would impact aquatic species that occur within the watershed and UGA. These impacts would be greatest under Alternative 1, but reduced under Alternatives 2 and 3 as capital improvements to the stormwater system and BMPs to reduce erosion and sediment export would be implemented.

3.5 Noise

This section characterizes the noise environment in the study area, and addresses the potential changes in the noise environment that could occur from implementation of the project alternatives.

Affected Environment

The affected environment includes noise sensitive receptors, noise sources, and existing ambient noise levels in the study area. This section also provides a brief description of sound, noise, and noise terminology.

Sound and Noise Fundamentals

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment.

Decibels (dB) and Frequency

In its most basic form, a continuous sound can be described by its frequency or wavelength (pitch) and its amplitude (loudness). Frequency is expressed in cycles per second, or hertz. Frequencies are heard as the pitch or tone of sound. High-pitched sounds produce high frequencies; low-pitched sounds produce low frequencies. Sound pressure amplitude is measured in micro-Pascals (mPa). Sound pressure amplitudes for different kinds of noise environments can range from 20 to 100,000,000 mPa. Because this huge range of values is cumbersome and difficult to use, a logarithmic scale is used to describe sound pressure level in terms of dB. The threshold of hearing for young people is about 0 dB, which corresponds to 20 mPa.

As dB are measured on a logarithmic scale that quantifies sound intensity, similar to the Richter scale used for earthquake magnitudes, dB cannot be added or subtracted through ordinary arithmetic. A doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3-dB; a halving of the energy would result in a 3 dB decrease. In way of example, if an air conditioner produces a sound pressure level of 85 dB at 50 feet, two air conditioners at the same distance would produce 88 dB—not 170 dB.

Perception of Noise at the Receiver and A-Weighting

The human ear is not equally sensitive to all frequencies within the sound

spectrum. To accommodate this phenomenon, the A-scale, which approximates the frequency response of the average young ear when listening to most ordinary everyday sounds, was devised. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the A-scale sound levels of those sounds. Therefore, the “A-weighted” noise scale is used for measurements and standards involving the human perception of noise. Noise levels using A-weighted measurements are written dB(A) or dBA. Table 3.5-1 *Typical Noise Levels* shows the relationship of various noise levels to commonly experienced noise events.

Table 3.5-1
Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 meters (1,000 feet)	--100--	
Gas Lawn Mower at 1 meter (3 feet)	--90--	
Diesel Truck at 15 meters (50 feet), at 80 km/hr (50 mph)	--80--	Food Blender at 1 meter (3 feet) Garbage Disposal at 1 meter (3 feet)
Noisy Urban Area, Daytime	--70--	Vacuum Cleaner at 3 meters (10 feet)

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Gas Lawn Mower at 30 meters (100 feet)		
Commercial Area Heavy Traffic at 90 meters (300 feet)	--60--	Normal Speech at 1 meter (3 feet)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans 2009

Human perception of noise has no simple correlation with acoustical energy. The perception of noise is not linear in terms of dBA or in terms of acoustical energy. Two noise sources do not “sound twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive changes of three dBA, increase or decrease; that a change of five dBA is readily perceptible; and that an increase (decrease) of 10 dBA sounds twice (half) as loud.

Noise Propagation

From the source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on the important factors described in the following discussion.

Geometric spreading from point and line sources: Sound from a small localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates or drops off at a rate of six dBA for each doubling of the distance. The movement of the vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The sound level attenuates or drops off at a rate of three dBA per doubling of distance for line sources (Crocker et al. 2007).

Ground absorption: Hard sites (i.e., sites with a reflective surface between the source and the receiver, such as parking lots or smooth bodies of water) receive no excess ground attenuation, and the changes in noise levels with distance (drop-off rate) are simply the geometric spreading of the source. Soft sites are sites that have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees and receive an excess ground attenuation value of 1.5 dBA per doubling of distance (Crocker et al. 2007).

Atmospheric effects: Wind speed will bend the path of sound to “focus” it on the downwind side and make a “shadow” on the upwind side of the source. At short distances, up to 164 feet, the wind has minor influence on the measured sound level. For longer distances, the wind effect becomes appreciably greater. Temperature gradients create effects similar to those of wind gradients, except that they are uniform in all directions from the source. On a sunny day with no wind, temperature decreases with altitude, giving a shadow effect for sound. On a clear night, temperature may increase with altitude, focusing sound on the ground surface (Caltrans 2009).

Shielding by natural and man-made features, noise barriers, diffraction, and reflection: A large object in the path between a noise source and a receiver can significantly attenuate noise levels at that receiver location. The amount of attenuation provided by this “shielding” depends on the size of the object and the frequencies of the noise levels. Natural terrain features such as hills and dense woods, as well as fabricated features such as buildings and walls, can significantly alter noise levels.

Noise Descriptors

The intensity of environmental noise fluctuates over time, and several different descriptors of time-averaged noise levels are used. The selection of a proper noise descriptor for a specific source depends on the spatial and temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors used in this report to describe environmental noise are defined below.

- L_{max} (Maximum Noise Level): The highest A-weighted integrated noise level occurring during a specific period of time.
- L_{min} (Minimum Noise Level): The lowest A-weighted integrated noise level during a specific period of time.
- Peak: The highest weighted or unweighted instantaneous peak-to-peak value occurring during a measurement period.
- L_n (Statistical Descriptor): The noise level exceeded n percent of a specific period of time, generally accepted as an hourly statistic. An L_{10} would be the noise level exceeded 10 percent of the measurement period.
- L_{eq} (Equivalent Noise Level): The energy mean (average) noise level. The steady-state sound level that, in a specified period of time, contains the same acoustical energy as a varying sound level over the same time period.
- L_{dn} (Day-Night Noise Level): The 24-hour L_{eq} with a 10-dBA “penalty” applied during nighttime noise-sensitive hours, 10:00 p.m. through 7:00 a.m. The L_{dn} attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.

AMBIENT NOISE ENVIRONMENT

The ambient noise environment includes noise sensitive receivers, noise sources, and noise levels within the study area. Unincorporated portions of the watershed are under the jurisdiction of Kitsap County. KCC Chapter 10.28 (Noise) establishes noise levels and durations of noise crossing property boundaries within unincorporated Kitsap County. The majority of the watershed is currently under the jurisdiction of the City of Bremerton. In addition, the Gorst UGA is likely to be under the jurisdiction of the City of Bremerton as a result of annexation in the time period covered by this Draft EIS. BMC Chapter 6.32 (Noise Levels) establishes limits on noise levels and durations of noise crossing property boundaries within the City of Bremerton. Kitsap County and City of Bremerton noise regulations are detailed below under *Mitigation Measures, Applicable Regulations and Commitments*.

Noise sensitive receivers are generally considered humans engaged in activities or utilizing land uses that may be subject to the stress of significant interference from noise. Activities usually associated with sensitive receptors include, but are not limited to, talking, reading, and sleeping. Land uses often associated with sensitive receptors include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, education facilities, libraries, and churches. Parks and open space are also sometimes considered to be noise sensitive land uses. Generally, outdoor areas of frequent human use are considered to be noise sensitive. Industrial and commercial land uses are generally not considered sensitive to noise.

Watershed

Noise sensitive receivers in the watershed include single-family residences, mobile homes, an RV park, churches, the Sunnyslope Elementary School, the Gold Mountain Golf Course, and the Rodeo Drive-In Theater. Sensitive receivers outside of the UGA are likely affected the most by vehicular traffic on SR 3, West Belfair Valley Road, Sunnyslope Road Southwest, and on local roads. Aircraft overflights from the Bremerton National Airport are a likely intermittent noise source throughout the watershed; noise associated with aircraft take-off and landings likely contribute to the ambient noise environment in the vicinity of the mobile home park and drive-in near the east end of the Bremerton National Airport runway. Although no sound-level measurements were taken as part of this evaluation, typical ambient outdoor daytime sound levels are expected to range from as low as 35 to 40 dBA in

rural areas away from major highways to as high as 50 to 75 dBA in more urban areas (near Gorst) near SR 3 (Caltrans 2009; FTA 2006).

Gorst UGA

Noise sensitive receivers within the UGA primarily include single-family residences along SR 3, SR 6, West Belfair Valley Road, West Sam Christopherson Avenue, and other local roads, and the Family Worship Center on West Frontage Road on the south side of SR 6. Noise sensitive receivers within the UGA are likely affected the most by vehicular traffic on SR 3 and SR 6, West Belfair Valley Road, and on local roads. Mechanical equipment and truck loading and unloading operations associated with commercial and industrial operations along SR 3 and SR 6, operations associated with the quarry north of Sherman Heights Road, also likely contribute to the overall noise environment within the UGA. Other intermittent noise sources likely include periodic aircraft overflights and rail noise associated railroad connecting the Puget Sound Naval Shipyard (PSNS) with the Bangor submarine facility and the Port of Shelton along the shoreline of Sinclair Inlet. Although, no sound-level measurements were taken as part of this evaluation, typical ambient, outdoor, daytime sound levels are expected to be between 60 and 75 dBA within the UGA, depending on distance from the roadway (Caltrans 2009; FTA 2006).

Impacts

This section describes the potential changes to the existing ambient noise environment from implementation of the project alternatives.

IMPACTS COMMON TO ALL ALTERNATIVES

Watershed

Construction Noise

Under all alternatives, development would occur throughout the Gorst Creek watershed to varying degrees as allowed by zoning and applicable regulations. As discussed in Section 2.5 *Study Alternatives: Future Growth*, it is assumed that most development outside of the UGA would be associated with residential dwellings, with less than 500 new dwellings constructed over the next 20-30 years.

Development in the watershed, outside of the Gorst UGA, may involve construction activity near existing residences, temporarily increasing noise levels. Sounds originating from temporary construction sites as a result of construction activity are exempt from daytime noise limits in the Kitsap County noise ordinance (KCC 10.28.070). Construction noise levels immediately adjacent to construction sites could be up to twice as loud as existing ambient noise levels and could cause annoyance or interfere with speech communication at adjacent outdoor locations. Construction noise levels could be discernible up to several hundred feet away from the construction site. Nighttime construction activity, if required, is not exempt from the Kitsap County's noise ordinance, and would be required to comply with the nighttime limits specified in the Kitsap County's noise ordinance. Compliance with the Kitsap County's nighttime noise ordinance limits would minimize any impacts from nighttime construction activity.

Traffic Noise

Development in the watershed would result in increases in future traffic volumes on highways and local roads outside of the UGA, resulting in higher ambient noise levels from moving and idling vehicles. Potential noise impacts on sensitive receivers would vary with distance from the roadway.

Any roadway improvements that would occur in the watershed that would use state or federal funding would be subject to State and/or Federal Highway Administration (FHWA) policies and procedures for evaluating traffic noise impacts and noise abatement. In cases where no state or federal funding is involved, the WSDOT and FHWA protocols are not applicable.

Gorst UGA**Construction Noise**

Under all alternatives, the majority of planned development would be focused within the Gorst UGA. Within the UGA, development could occur within the 281 parcel acres identified in Table 2-2 *Land Use Acres Comparison (Total Parcel Acres by Zone)*, although the types of development would vary by alternative. Potential noise impacts associated with construction activities within the UGA would be similar to those described for the watershed. However, because construction activity would be concentrated over a smaller area, and multiple construction activities may occur simultaneously or in overlapping timeframes in the same general area, residences and other noise sensitive receptors within the Gorst UGA would likely experience temporary increases in noise levels from construction more often and for longer periods of time, and construction noise levels may be higher. Sounds originating from temporary construction sites as a result of construction activity are exempt from daytime noise limits in the City of Bremerton noise ordinance. Construction noise levels immediately adjacent to construction sites could be up to twice as loud as existing ambient noise levels and could cause annoyance or interfere with speech communication at adjacent outdoor locations. Construction noise levels could be discernible up to several hundred feet away from the construction site. Nighttime construction activity, if required, is not exempt from the City of Bremerton's noise ordinance, and would be required to comply with the nighttime limits specified in the City of Bremerton's noise ordinance. Compliance with the City of Bremerton's nighttime noise ordinance limits would minimize any impacts from nighttime construction activity.

Traffic Noise

Development both within and outside of the UGA would result in increases in future traffic volumes on highways and local roads within the UGA, resulting in higher ambient noise levels from moving and idling vehicles. Potential noise impacts on sensitive receivers would vary with distance from the roadway. Modeled future daily traffic volumes and PM peak hour vehicles on study area roads are similar under all alternatives, and are estimated to increase by less than 35 percent over existing (2010) volumes. Based on the modeled data, traffic noise would be expected to increase by less than three dB(A), a change that is barely perceptible to the average human ear.

At this time, specific roadway improvements within the UGA have not yet been identified. Any roadway improvements that would occur within the UGA that would use state or federal funding would be subject to State and/or FHWA policies and procedures for evaluating traffic noise impacts and noise abatement. In cases where no state or federal funding is involved, the WSDOT and FHWA protocols are not applicable.

Noise from New Commercial Operations

Land use within the Gorst UGA under all alternatives would include residential and commercial use to varying degrees. New commercial development would likely occur near existing or future residences and other sensitive receivers. Mechanical equipment and trucks at loading docks could cause ambient noise levels at nearby residences to exceed the Kitsap County's and City of Bremerton's noise ordinance. However, the Kitsap County and City of Bremerton would require that all new development meet the Kitsap County's and City of Bremerton's daytime and nighttime noise ordinance limits.

Alternative 1

Construction, traffic, and noise from new commercial operations under Alternative 1 would be similar to that for all alternatives (described above). Land uses under Alternative 1 would include urban industrial uses, including heavy industrial. However, residential land uses under Alternative 1 would cover only 13 percent of the total UGA and the overall number of existing and future sensitive receivers that could potentially experience noise impacts is much smaller than under Alternatives 2 and 3. Regardless, new commercial and industrial operations could occur near existing or new residences and other sensitive receivers, and operations could cause noise levels to exceed Kitsap County's and the City of Bremerton's noise ordinance. Under Alternative 1, the majority of land zoned as Low Density Residential would be adjacent or in close proximity to areas zoned as High Intensity Commercial Mixed

Use along West Belfair Valley Road, West Sam Christopherson Avenue, and West Frone Drive. A small area north of West Sherman Heights Road that would be zoned as Low Density Residential under Alternative 1 would be bounded by High Intensity Mixed Use and Industrial areas and Mineral Resource lands to the north (see Figure 2-3 *Gorst Watershed Planning Area Land Use*). The Kitsap County and City of Bremerton would require that all new development meet the Kitsap County's and City of Bremerton's daytime and nighttime noise ordinance limits.

Alternative 2

Construction, traffic, and noise from new commercial operations under Alternative 2 would be similar to that for all alternatives (described above). However, residential land uses under Alternative 2 would cover 49 percent of the UGA, increasing the overall number of existing and new sensitive receivers that could potentially be affected by noise from new commercial operations. While residential land uses under Alternative 2 are zoned separately from commercial zones, new commercial operations could occur near existing or new residences and other sensitive receivers, and operations could cause noise levels to exceed the Kitsap County's and City of Bremerton's noise ordinance. Under Alternative 2, land zoned as Low Density Residential would be adjacent or in close proximity to areas zoned as Commercial Corridor along West Belfair Valley Road, West Sam Christopherson Avenue, West Frone Drive, and SR 3. Areas zoned as Medium Density Residential would be in close proximity to Commercial Corridor zones along West Sherman Heights Road (see Figure 2-4 *Gorst UGA Land Use: Alternative 1 – Kitsap County No Action*). The Kitsap County and City of Bremerton would require that all new development meet the Kitsap County's and City of Bremerton's daytime and nighttime noise ordinance limits.

Alternative 3

Construction, traffic, and noise from new commercial operations under Alternative 3 would be similar to that for all alternatives (described above). The overall increase in number of dwellings and population would be only slightly greater than Alternative 2 (See Section 2.5 *Study Alternatives: Future Growth*). However, under Alternative 3, areas zoned as Gorst Mixed Use would likely include residential uses located above or in very close proximity to commercial uses, and in areas served by public transit along major roadways. This development pattern increases the potential for operational noise levels associated with commercial development to exceed noise thresholds in the Kitsap County's and City of Bremerton's noise ordinance and impact nearby sensitive receivers. As under all alternatives, the Kitsap County and City of Bremerton would require that all new development meet the Kitsap County's and City of Bremerton's daytime and nighttime noise ordinance limits.

Mitigation Measures

Incorporated Plan Features

Under Alternative 3, the proposed balance of residential and commercial uses would reduce future traffic congestion on state routes compared to Alternatives 1 and 2 which have about the same level of congestion. Please see Section 3.11 *Transportation*.

Applicable Regulations and Commitments

City of Bremerton Noise Regulations

BMC Chapter 6.32 (Noise Levels) establishes limits on noise levels and durations of noise crossing property boundaries with the City of Bremerton. Permissible noise levels at a receiving land use depend on the Noise Control District classification of both the sound source and the receiving property. The City of Bremerton Noise Control District classifications for land use zones designated in the City of Bremerton's zoning ordinance are shown in Table 3.5-2 *City of Bremerton Noise Control Districts*. These will need to be updated with the possibility of new zoning classifications to be applied in Gorst through the subarea plan.

Table 3.5-2
City of Bremerton Noise Control Districts

Noise Control District	Land Use Zone
District I	R-10, CCR, MR
District II	NB, BC, CC, WWRC, NCC, DCC, DW, DC, LC, EC, INST
District III	IP, I, CUL, WS, MI, FC

Source: BMC Chapter 5.32.010(c)

Permissible noise limits are shown in Table 3.5-3 *Maximum Permissible Levels at Receiving Property Line*. Between the hours of 10:00 p.m. and 7:00 a.m. (nighttime hours) permissible noise levels are reduced by ten (10) dB(A) for receiving properties within Noise Control District 1.

Table 3.5-3
Maximum Permissible Levels at Receiving Property Line

Noise Control District of Sound Source	Permissible Noise Level in dBA Noise Control District of Receiving Property			
	District I		District 2 II	District III
	Daytime	Nighttime	All Hours	All Hours
District I	55	45	57	60
District II	57	47	60	65
District III	60	50	65	70

Source: BMC Chapter 5.32.040(a) (b)

For noise levels that exceed the above levels for short durations, maximum permissible sounds levels are regulated as shown in Table 3.5-4 *Adjustment to Maximum Permissible Levels at Receiving Property Line*.

Table 3.5-4
Adjustment to Maximum Permissible Levels at Receiving Property Line

Duration of Sound Level within 1 1-Hour Interval	Adjustment to Maximum Permissible Sound Level
15 minutes	+ 5 dBA
5 minutes	+ 10 dBA
1.5 minutes	+ 15 dBA

Note: BMC Chapter 5.32.040 (d) specifies sounds that are exempt from some or all of these provisions.

Source: BMC Chapter 5.32.040(c)

Sounds that are exempt from the maximum permissible noise levels adopted by the City of Bremerton between the hours of 7:00 a.m. and 10:00 p.m. include:

- Sounds originating from residential property relating to temporary projects for the maintenance or repair of homes, grounds, and appurtenances.
- Sounds created by the discharge of firearms on authorized shooting ranges.
- Sounds created by aircraft engine testing and maintenance not related to flight operations; provided that aircraft testing and maintenance shall be conducted at remote sites whenever possible.

Sounds that are exempt from the maximum permissible noise levels adopted by the City of Bremerton between the hours of 10:00 p.m. and 7:00 a.m. include:

- Noise from electrical substations and existing stationary equipment used in the conveyance of water, waste water, and natural gas by a utility.

- Noise from existing industrial installations which exceed the standards contained in these regulations and which, over the past three years, have consistently operated in excess of 15 hours per day as a consequence of process necessity and/or demonstrated routine normal operation. Changes in working hours, which would affect exemptions under this regulation, require approval from Ecology.

Sounds that are exempt from the maximum permissible noise levels adopted by the City of Bremerton at all times, except where provisions relate to the reception of noise within Noise Control District I between the hours of 10:00 p.m. and 7:00 a.m. include:

- Sounds originating from temporary construction sites as a result of construction activity.
- Sounds originating from forest harvesting and silviculture activity.

Sounds that are exempt from the maximum permissible noise levels adopted by the City of Bremerton at all times include:

- Sounds created by motor vehicles when regulated by Chapter 173-62 of the WAC.
- Sounds originating from aircraft in flight and sounds that originate at airports which are directly related to flight operations.
- Sounds created by surface carriers engaged in interstate commerce by railroad.
- Sounds created by warning devices not operating continuously for more than five minutes, or bells, chimes, and carillons.
- Sounds created by safety and protective devices where noise suppression would defeat the intent of the device or is not economically feasible.
- Sounds created by emergency equipment and work necessary in the interest of law enforcement or for health safety or welfare of the community.
- Sounds originating from motor vehicle racing events at existing authorized facilities.
- Sounds originating from officially sanctioned parades and other public events.
- Sounds emitted from petroleum refinery boilers during start-up of said boilers; provided the start-up operation is performed during daytime hours whenever possible.
- Sounds created by watercraft.
- Sounds created by the discharge of firearms in the course of hunting.
- Sounds created by motor vehicles, licensed or unlicensed, when operated off public highways except when such sounds are received in District I.

All new development would be required to comply with current noise regulations in the BMC. If nighttime construction is required, the developer will need to demonstrate compliance with the City of Bremerton's nighttime noise ordinance limits or apply for a variance.

Kitsap County Noise Regulations

KCC Chapter 10.28 (Noise) establishes limits on noise levels and durations of noise crossing property boundaries within the unincorporated areas of Kitsap County. Permissible noise levels at a receiving land use depend on its environmental classification for noise abatement (EDNA). Kitsap County EDNA classifications are shown in Table 3.5-5 *Kitsap County EDNAs*:

**Table 3.5-5
Kitsap County EDNAs**

EDNA	Land Use Zone
Class A	Residential Zones: all single-family residential zones, all multiple-family residential zones, residential mobile home zone, agricultural zone, forestry zone, undeveloped land zone.
Class B	Commercial Zones: business neighborhood zone, business general zone, commercial zone, light manufacturing zone.
Class C	Industrial Zones: manufacturing zone.

Non-conforming uses, as defined by Chapter 17.460 of the Kitsap County Zoning Ordinance, are classified according to the actual use of the property under the above EDNAs.

Permissible noise limits are shown in Table 3.5-6 *Maximum Permissible Levels at Receiving Property Line*. Between the hours of 10:00 p.m. and 7:00 a.m. (nighttime hours) permissible noise levels are reduced by ten dB(A) for receiving properties within Class A EDNAs.

**Table 3.5-6
Maximum Permissible Levels at Receiving Property Line**

EDNA of Noise Source	Permissible Noise Level in dBA EDNA of Receiving Property			
	Class A		Class B	Class C
	Daytime	Nighttime	All Hours	All Hours
Class A	55	45	57	60
Class B	57	47	60	65
Class C	60	50	65	70

Source: KCC Chapter 10.28.040(a) (b)

For noise levels that exceed the above levels for short durations, maximum permissible sounds levels are regulated as shown in Table 3.5-7 *Adjustment to Maximum Permissible Levels at Receiving Property Line*.

**Table 3.5-7
Adjustment to Maximum Permissible Levels at Receiving Property Line**

Duration of Sound Level within 1 1-Hour Interval	Adjustment to Maximum Permissible Sound Level
15 minutes	+ 5 dBA
5 minutes	+ 10 dBA
1.5 minutes	+ 15 dBA

Source: KCC Chapter 10.28.040(c)

Chapter 10.28.050 specifies sounds that are exempt from some or all of the provision in Chapter 10.28.050 (a) (b).

- Sounds that are exempt from the maximum permissible noise levels adopted by Kitsap County between the hours of 7:00 a.m. and 10:00 p.m. include the same sounds exempted by the City of Bremerton, in addition to blasting.
- Sounds that are exempt from the maximum permissible noise levels adopted by Kitsap County between the hours of 10:00 p.m. and 7:00 a.m. are similar to sounds exempted by the City of Bremerton during nighttime hours.

- Sounds that are exempt from the maximum permissible noise levels adopted by Kitsap County at all times, except where provisions relate to the reception of noise within Class A EDNAs between the hours of 10:00 p.m. and 7:00 a.m. are the same as sounds exempted by the City of Bremerton.
- Sounds that are exempt from the maximum permissible noise levels adopted by Kitsap County at all times are similar to sounds exempted by the City of Bremerton, but include: sounds from existing refrigeration equipment for preservation of retail food goods, sounds caused by natural phenomena and unamplified human voices, and sounds created by the discharge of legal fireworks only during specific days, times, and locations where discharge is allowable pursuant to existing state and local law. Kitsap County exemptions do not include: sounds created by watercraft or sounds created by the discharge of firearms in the course of hunting.

All new development would be required to comply with current noise regulations in the KCC. If nighttime construction is required, the developer will need to demonstrate compliance with the County's nighttime noise ordinance limits or apply for a variance.

Federal and State Noise Regulations

The FHWA has adopted criteria for evaluating noise impacts associated with federally funded highway projects, and for determining whether such impacts are sufficient to justify funding of noise abatement. These criteria are specified in the Code of Federal Regulations (23 CFR 772), Procedures for Abatement of Highway Traffic Noise and Construction Noise. WSDOT has adopted the FHWA Noise Abatement Criteria for evaluating noise impacts and determining whether such impacts are sufficient to justify funding of noise abatement for roadway improvement projects with state funding.

Traffic noise impacts occur when predicted Leq(h) noise levels approach or exceed the noise abatement criteria established by the FHWA, or substantially exceed existing noise levels. WSDOT considers a noise impact to occur if predicted noise Leq(h) noise levels approach within one dBA of the noise abatement criteria. The FHWA noise abatement criteria specify exterior Leq(h) noise levels for various land activity categories as described in Table 3.5-8 *FHWA Noise Abatement Criteria by Land Use*. WSDOT considers an increase of 10-dBA or more to be a substantial increase and a traffic noise impact.

Table 3.5-8
FHWA Noise Abatement Criteria by Land Use

Activity Category	FHWA Noise Abatement (dBA Leq)	Description of Activity Category
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Residential (single and multi-family units)
C	67 (exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings
D	52 (interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F. Includes undeveloped land permitted for these activities.
F	-	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance

Activity Category	FHWA Noise Abatement (dBA Leq)	Description of Activity Category
		facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing
G	-	Undeveloped lands that are not permitted

Any roadway improvements that would occur within the study area that would use state or federal funding would be subject to State and/or FHWA policies and procedures for evaluating traffic noise impacts and noise abatement. In cases where no state or federal funding is involved, the WSDOT and FHWA protocols are not applicable.

Other Potential Mitigation Measures

Effective noise abatement measures are unique for each situation. The physical techniques to mitigate noise vary in their noise reduction capabilities. Factors to consider when evaluating potential noise mitigation include: the amount of noise reduction desired, situations where physical techniques would be most effective, and aesthetics. The following measures may be used to mitigate noise impacts:

Site Planning

Proper site planning to reduce noise impacts should be considered for all noise sensitive developments. Buildings can be oriented on a site in such a way as to exploit the site's noise attenuating features. By consideration of a site's natural topography, size and shape, it is often possible to reduce and possibly eliminate noise impacts from vehicular traffic and railroads. Site planning techniques includes the following:

- Increasing the distance from the noise source to sensitive receptors by creation of setbacks;
- Placing non-noise sensitive uses such as parking lots and utility areas between the noise source and receiver; and
- Orienting usable outdoor living space such as balconies, patios, and child play areas away from roadways.

Barriers

Noise barriers such as walls and earthen berms are commonly used to mitigate noise from ground transportation, commercial and industrial sources. Noise barriers can be used to reduce the noise level both outdoors and indoors. The effectiveness of a barrier depends upon factors such as the relative height of the barrier relative to the line-of-sight from the source to the receiver, the distance from the barrier to the source and to the receiver and the reflections of sound. To be effective, a barrier must block the line-of-sight from the source to the receiver. A barrier must also be of solid construction (i.e., masonry) without holes or gaps and be long enough to prevent sound from passing around the ends. Under the best of circumstances, a properly designed noise barrier can reduce noise as much as 15 dB. A site-specific acoustical analysis is required to determine the proper height and placement of a barrier. A row of houses or other buildings may act as a barrier. A row of one- or two-story houses (with about 30 percent open gaps) provides a barrier attenuation of approximately three to five dB; two rows of houses, six to 10 db; and three or more rows of houses, 10 to 12 db.

Building Design

The location of a building on its site, the arrangement of rooms, and the location of doors and windows all have a bearing on interior noise control. The sides of a building which face a roadway or other noise source should house those activities that can tolerate the greatest amount of noise. Noise-sensitive areas include bedrooms, living rooms and dens. Less noise sensitive areas may include kitchens and bathrooms. Hallways, closets and storage rooms are generally not noise-sensitive.

Indoor noise levels are controlled by the noise reduction characteristics of the building shell. In general, doors and windows are the acoustical weak link in a building. Therefore, careful consideration should be given to their placement. By limiting the number and size of these openings on the sides of the building exposed to noise, interior noise levels will be reduced.

Often it is necessary to allow for a closed window condition to control interior noise. When this occurs, an alternative means of ventilation such as heat pumps or forced air units may be necessary to meet building code requirements. Heavy-pane or double-pane windows are frequently required to increase the sound insulation within a room. Doors facing a noise source should be solid-core and should be equipped with an appropriate gasket.

Local/Applicable Noise Level Standards

The following mitigation measures are general and programmatic in nature, and may be further refined in project-specific SEPA documents applicable in the watershed or applied in the Planned Action Ordinance in the UGA.

Revise the Noise Ordinance and condition development proposals to achieve the following:

- Provide hourly and maximum property line noise level limits for all major zoning districts defined in the Zoning Ordinance
- Limit the hours of deliveries to commercial, mixed use, and industrial uses adjacent to residential and other noise sensitive land uses
- Limit the hours of operation for commercial and retail to limit noise intrusion into nearby residential and other noise sensitive land uses
- Limit noise levels generated by commercial and industrial uses
- Limit outdoor industrial activities or operations to control excessive noise at adjacent residential properties
- Limit the hours of operation of high noise-generating industrial equipment
- Limit the hours of operation for refuse vehicles and parking lot sweepers if their activity results in an excessive noise level that adversely affects adjacent residential uses
- Require the placement of loading and unloading areas so that commercial buildings shield nearby residential land uses from noise generated by loading dock and delivery activities. If necessary, additional sound barriers shall be constructed on the commercial sites to protect nearby noise sensitive uses
- Require the placement of all commercial HVAC machinery to be placed within mechanical equipment rooms wherever possible. (Equipment manufacturer's specifications for venting and access to outside air shall be maintained.)
- Require the provision of localized noise barriers or rooftop parapets around HVAC, cooling towers, and mechanical equipment so that line-of-sight to the noise source from the property line of the noise sensitive receptors is blocked. (Equipment manufacturer's specifications for venting and access to outside air shall be maintained.)

In project-specific SEPA documents applicable in the watershed or through the Planned Action Ordinance in the UGA, the Kitsap County and City of Bremerton should require construction contractors to implement the following measures during construction activities through contract provisions and/or conditions of approval as appropriate:

- Construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., mufflers, silencers, wraps).
- Construction operations and related activities associated with the project shall comply with the operational hours outlined in the Kitsap County or City of Bremerton Noise Ordinance.

- Construction equipment shall not be idled for extended periods of time in the vicinity of noise sensitive receptors.
- Locate fixed and/or stationary construction equipment as far as possible from noise sensitive receptors (e.g., generators, compressors, rock crushers, cement mixers).
- Shroud or shield all impact tools, and muffle or shield all intake and exhaust ports on powered construction equipment.

Where feasible, temporary barriers shall be placed as close to the noise source or as close to the receptor as possible and break the line of sight between the source and receptor where modeled levels exceed applicable standards. Acoustical barriers shall be constructed material having a minimum surface weight of 2 pounds (lbs) per square foot or greater, and a demonstrated Sound Transmission Class (STC) rating of 25 or greater as defined by American Society for Testing and Materials (ASTM) Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be determined by analysis.

Significant Unavoidable Adverse Impacts

At the comprehensive planning level, implementation of the mitigation measures described above would avoid and/or reduce potential noise impacts to less than significant. If project-level impacts are identified as subsequent projects are proposed, specific mitigation measures would be required to meet Kitsap County and City of Bremerton noise limits.

3.6 Hazardous Materials

Affected Environment

Past and present land used within the watershed could have resulted in the use, storage, and release of hazardous materials within the study area. Because development is concentrated within the UGA, and because all of the proposed development alternatives pertain to land uses within the UGA, this area is of primary concern for contaminants and exposure to contaminants as a result of the proposed project activities.

Methodology

Materials reviewed to collect information on hazardous materials within the UGA or in proximity to the UGA in the watershed include readily available records, as well as reports from previous investigations.

For watershed-level review, an online search of Ecology databases (<http://www.ecy.wa.gov/database.html>) was conducted to determine the presence of facilities that generate, transport, store, or dispose of hazardous materials. Additionally, a review of regulatory database information for facilities located within 1 mile of the UGA was conducted. An environmental records database search was contracted to Environmental Data Resources (EDR) and was supplemented by online search of the Ecology and EPA databases to determine whether properties within the UGA would appear on lists of entities that generate, transport, store, or dispose of hazardous materials. This database review was consistent with the ASTM Practice E1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. Interviews with current facility operators were not conducted for this analysis.

Each identified hazardous materials site was categorized into one of the following groups, based on the review of records, current land use, and other available reports described previously:

- **Sites with No Apparent Risk.** Sites with No Apparent Risk include those sites for which the records indicate no known releases of hazardous materials, and there suggests little potential for contaminants to migrate into the study area.
- **Reasonably Predictable Sites.** Reasonably Predictable Sites are sites where the nature of potential contamination is known based on existing investigation data, or where it can be reasonably predicted based on observations of the site, and/or experience at similar sites, and/or best engineering judgment. Reasonably predictable sites are typically small to medium in size; the potential contaminants are not extremely toxic or difficult to treat; and probable remediation approaches are straightforward and well proven.
- **Substantially Contaminated Sites.** Substantially Contaminated Sites warrant additional regulatory review and possibly additional remediation by either the current owner or new buyers. These sites may represent health risks or economic risks for the future developers resulting from a combination of characteristics: highly toxic and/or highly mobile contaminants; difficult or costly site remediation requirements; and potential for construction delays. If the site has undergone a detailed investigation and feasibility study, and a remediation strategy would be available and remediation costs may have already been predicted.

Reasonably Predictable Sites and Substantially Contaminated Sites were considered areas of concern for the purposes of this Draft EIS. Sites with No Apparent Risk are not discussed further in this section.

The *Final Draft Engineering Evaluation/Cost Analysis for Bremerton Auto Wrecking Landfill – Gorst Creek Site* (Ecology and Environment, Inc. 2012) was reviewed to determine the historical land use of this landfill site, and the documented condition of soil and groundwater in the study area. The report summarizes proposed removal actions aimed at protecting human health and the environment by preventing human and ecological receptor contact with landfill contents and associated hazardous substances and to comply with applicable or relevant and appropriate requirements to the extent practicable.

Watershed

According to the regulatory database review, the following facilities are located within the Gorst Creek Watershed which are either known or suspected to have released hazardous materials into soil or groundwater:

- Victory Station Landfill – This facility is located at Victory Drive Southwest and State Route 3. Conventional inorganic contaminants, conventional organic contaminants, halogenated organics, Priority Pollutant metals, and unspecified petroleum products are suspected in soil and groundwater, and Priority Pollutant metals are suspected in surface water. This facility is reportedly awaiting cleanup. It is considered a Substantially Contaminated Site.
- Airport Auto Wrecking I – This facility is located at 6504 Southwest Old Clifton Road. Priority Pollutant metals, unspecified petroleum products, and polynuclear aromatic hydrocarbons have been confirmed in soil and are suspected in groundwater, and surface water and halogenated organics and non-halogenated solvents are suspected in soils. This facility is reportedly awaiting cleanup. It is considered a Substantially Contaminated Site.
- Washington Cedar and Supply Company – This facility is located at 4041 West State Highway 3. Gasoline, diesel, and other petroleum have been confirmed in soil. Cleanup at this facility is reportedly underway. This facility is considered a Reasonably Predictable Site.

In addition, nine hazardous waste generators (one of which is located in the SKIA UGA), four facilities with Underground Storage Tanks ([USTs]; one of which is located within the SKIA UGA), and one facility which stores threshold quantities of hazardous materials under the Emergency Preparedness and Community Right to Know Act were identified within the Gorst Creek Watershed (but outside of the Gorst UGA). These facilities were not listed on contamination-related databases and are considered Sites with No Apparent Risk. (Ecology 2013).

Gorst UGA

According to regulatory database review, numerous existing and historical commercial/industrial facilities within the UGA are either known or suspected to have released hazardous materials into the soil or groundwater. These sites are shown on Figure 3.6-1 *Gorst Creek Watershed: Hazardous Materials Sites*.

Many sites in the UGA are reported as storing hazardous substances or waste (i.e., Resource Conservation and Recovery Act [RCRA] generators) in quantities large enough to trigger federal or state regulation. However, unless a known or suspected release or contamination is listed on the appropriate federal or state databases, the site is considered a Site with No Apparent Risk. Only Reasonably Predictable Sites and Substantially Contaminated Sites are included in this discussion and shown in Figure 3.6-1 *Gorst Creek Watershed: Hazardous Materials Sites*.

Reasonably Predictable Sites are listed in Table 3.6-1 *Reasonably Predictable Sites within the Gorst UGA*. The database review showed historical contamination on these sites that is currently known and is being overseen by Ecology or another appropriate regulatory agency. Substantially Contaminated Sites are listed in Table 3.6-2 *Substantially Contaminated Sites with the Gorst UGA*. The database review or previous environmental investigations showed reported contamination at these sites that could pose a health or economic risk.

As shown in Table 3.6-1 *Reasonably Predictable Sites within the Gorst UGA*, contaminants of concern (gasoline, diesel, and other petroleum) were identified for only two of the Reasonably Predictable Sites, the Gorst Gas Mart and Washington Cedar and Supply Co. Releases from USTs at these sites have resulted in contamination of soil and groundwater. The remaining sites on this list are either of unknown status or have been cleaned up.

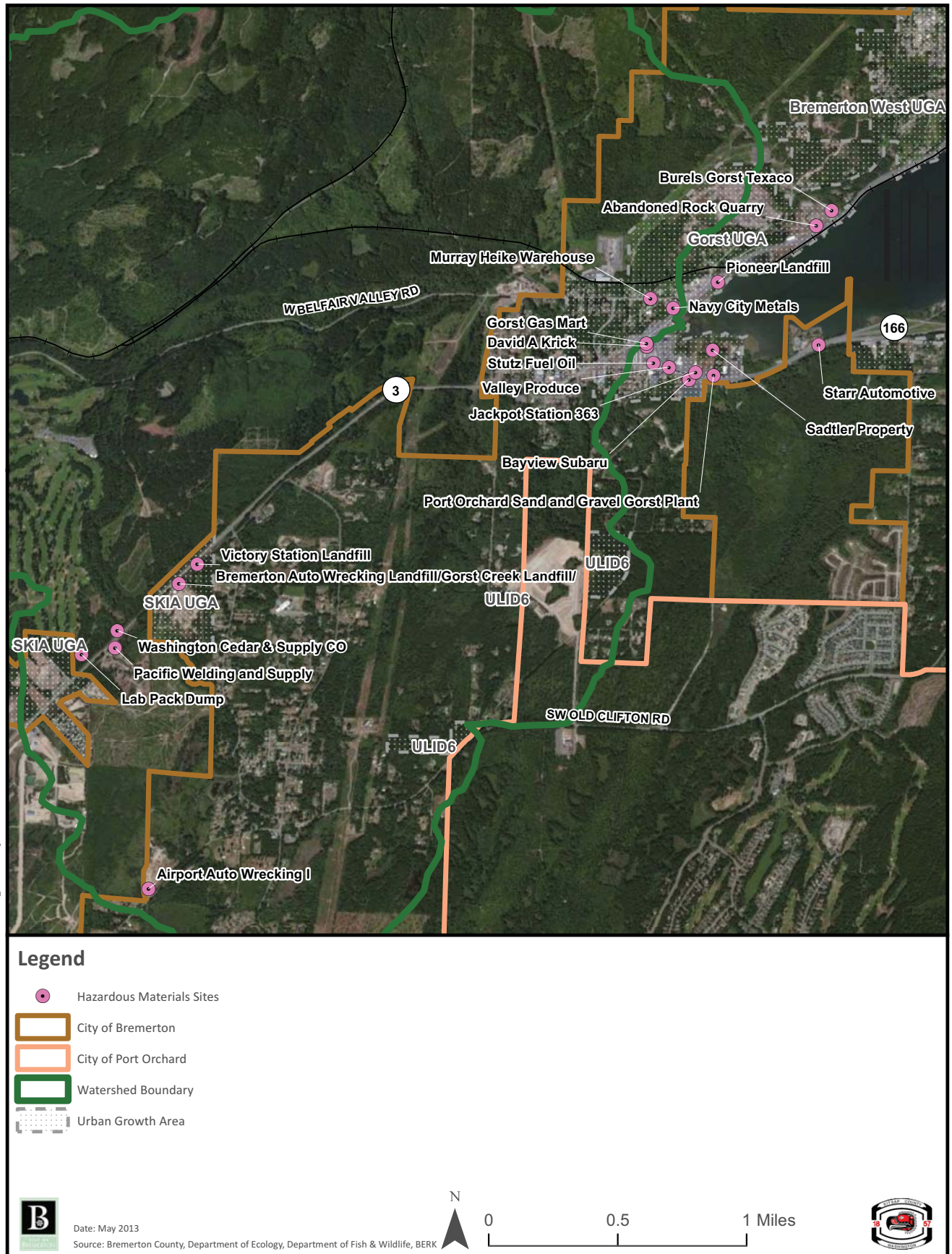
As shown in Table 3.6-2 *Substantially Contaminated Sites with the Gorst UGA*, there are seven Substantially Contaminated Sites within the Gorst UGA. Contaminants from these sites consist of arsenic, inorganic and organic conventional contaminants, halogenated organics, lead, mercury, metals, non-halogenated solvents, petroleum products, polycyclic aromatic hydrocarbons, organics, pesticides, PCBs, and benzene. Contaminants have been confirmed or are expected in soil, groundwater, and surface water. With the exception of Valley Produce, for

which additional information was not known, all of these facilities are currently undergoing cleanup or remedial actions.

Bremerton Auto Wrecking Landfill, located on State Route 3, is a source of contamination of particular concern within the UGA. According to the report that was reviewed for this site, it is a former landfill site that operated from the 1950s until 1989, and contains approximately 150,000 cubic yards of waste. The landfill primarily received auto wrecking wastes but also received other wastes such as medical waste from PSNS as well as demolition debris and municipal solid waste.

Sediment and groundwater sampling results at this facility indicated the presence of contaminants associated with landfill waste. The report indicated that during significant storm events Gorst Creek floods and overtops the landfill, carrying eroded waste downstream in the stream sediments. Contaminated groundwater is also being transported down-gradient into the watershed. The contamination at this facility includes pesticides, PCBs, semi-VOCs, metals, and VOCs. This report identifies microtunneling/pipe jacking as the recommended removal action alternative. By installing a creek bypass pipe, the potential for backup and overtopping of the landfill during significant storm events would be reduced, as a primary new pathway for Gorst Creek would be provided beneath the landfill.

FIGURE 3.6-1 GORST CREEK WATERSHED: HAZARDOUS MATERIALS SITES



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Table 3.6-1
Reasonably Predictable Sites within the Gorst UGA

Location/Address	Business Name	Site Identifier	Database Listings	Summary	Contaminants of Concern (Identified by Ecology)
3888 West Highway 16	Bayview Subaru	56413466	RCRA NonGen, FINDS, Allsites, UST	One UST which was installed in 1964 was removed in 1996. No violations were reported in association with the RCRA generator status.	NA
4110 West State Highway 16	David A. Krick	48752156	Allsites, UST	Three unleaded gasoline USTs, one leaded gasoline UST, and a diesel UST were removed from the facility in 1999.	NA
4121 Highway 16 West	Gorst Gas Mart	42261459	CSCSL, HSL, Allsites, LUST, UST, ICR	The facility received a No Further Action designation in relation to the LUST listing in 2002. Four gasoline USTs remain operational at the facility, one diesel UST was removed in 1998, and three additional USTs were removed in 2001.	<u>Gasoline:</u> Confirmed in soil and groundwater
6402 State Highway 3	Pacific Welding and Supply	75997319	UST, LUST	Based on the available information, it appears that the LUST listing was closed in 1997 and USTs were removed by 2000.	
3408 West Belfair Valley Road	Murray Heike Warehouse	8257809	FINDS, Allsites, CSCSL NFA, UST, Institutional Control, VCP, LUST	The USTs were closed in place in 2003 and the facility received a No Further Action Designation from Ecology under the VCP at that time. An environmental covenant exists for the facility which includes maintenance requirements, soil restrictions, impermeable surface requirements, land use restrictions, and groundwater restrictions.	NA
2800 SR 3	Abandoned Rock Quarry	2240695	Allsites, CSCSL NFA, VCP, Brownfields	This facility received a No Further Action designation by Ecology in 2008 under the VCP.	NA
3772 State Highway 3	Burels Gorst Texaco	81639146	FINDS, Allsites, UST	The status of the USTs at this facility is unknown.	NA
4041 West State Highway 3	Washington Cedar and Supply Co.	52429541	CSCSL, Allsites, LUST, UST	Three USTs were removed from this facility in 2010 and cleanup at the site from a leaking UST has started.	<u>Diesel:</u> Confirmed in soil <u>Gasoline:</u> Confirmed in soil <u>Petroleum-other:</u> Confirmed in soil
3401 Highway 16	Starr Automotive	8261546	Allsites, UST	The status of the USTs at this facility is unknown	NA

Location/Address	Business Name	Site Identifier	Database Listings	Summary	Contaminants of Concern (Identified by Ecology)
North of 7338 Highway 3	Belfair Lab Pack Dump	1002739	CERCLIS	The listing stated that removal only was necessary at this facility and no site assessment work was needed. The facility was cleaned up in 2008.	NA
3020 West Sherman Heights Road	Kitsap Reclamation and Materials	NA	Mines, SWRCY, Allsites, NPDES, RCRA-CESQG, FINDS	This facility is identified as a non-coal mining facility which accepts asphalt paving, concrete, and brick for recycling. No violations were reported in association with the RCRA listing.	NA

CERCLIS = Comprehensive Environmental Response Compensation and Liability Information System; CSCSL = Confirmed and Suspected Contaminated Sites List; CSCSL NFA = CSCSL No Further Action; FINDS = Facility Index System; HSL = Hazardous Sites List; ICR = Independent Cleanup Report; LUST = Leaking Underground Storage Tank; NPDES = National Pollution Discharge Elimination System; RCRA NonGen = Resource Conservation and Recovery Act Non-Generator; RCRA-CESQG = RCRA Conditionally Exempt Small Quantity Generator; SWRCY = Solid Waste and Recycling; UST = Underground Storage Tank; VCP = Voluntary Cleanup Program

NA = Not Available/Not Applicable

Source: Ecology Inc. 2013

Table 3.6-2
Substantially Contaminated Sites within the Gorst UGA

Location/Address	Business Name	Site Identifier	Data Source and Findings	Summary	Contaminants of Concern (Identified by Ecology)
3302 West Highway 16	Jackpot Station 363	1786697	CSCSL, Allsites, LUST, UST, VCP	Three USTs were removed in 1996 and three additional USTs were abandoned in place. As of 2002, cleanup actions had been started at this facility.	<p><u>Benzene</u>: Confirmed in groundwater</p> <p><u>Non-halogenated solvents</u>: Confirmed in groundwater</p> <p><u>Diesel</u>: Confirmed in groundwater</p> <p><u>Gasoline</u>: Confirmed in groundwater</p> <p><u>Other petroleum products</u>: Confirmed in groundwater and soil</p>
3140 State Highway 16 Southwest	Port Orchard Sand and Gravel Gorst Plant	77255681	CSCSL, Allsites, LUST, UST, Brownfields	Five USTs were removed in 1991 and two USTs were closed in place in 1996. This facility has been undergoing independent remedial action since 1991.	<p><u>Arsenic</u>: Confirmed in soil and groundwater, suspected in surface water</p> <p><u>Inorganic conventional contaminants</u>: Confirmed in soil and groundwater, suspected in surface water</p> <p><u>Priority pollutant metals</u>: Suspected in soil, groundwater, and surface water</p> <p><u>Non-halogenated solvents</u>: Suspected in soil</p> <p><u>Diesel</u>: Confirmed in soil</p> <p><u>Gasoline</u>: confirmed in soil</p>
3282 West Highway 16	Sadtler Property	595815	FINDS, CSCSL, Allsites, VCP, Brownfields	This facility is undergoing cleanup under Ecology oversight.	<p><u>Arsenic</u>: Confirmed in groundwater, suspected in soil</p> <p><u>Priority pollutant metals</u>: Confirmed in groundwater, suspected in soil</p> <p><u>Unspecified petroleum products</u>: Confirmed in groundwater, suspected in soil</p> <p><u>PAHs</u>: Suspected in soil</p>
3805 State Highway 3 West	Navy City Metals	2633	SWRCY, RCRA NonGen, FINDS, ICR, Allsites, CSCSL NFA, SWF/LF, Spills, Institutional Control, VCP,	This facility received an NFA designation by Ecology through the Voluntary Cleanup Program in 1999. However, a petroleum spill of unspecified volume took place at the facility in 2008. Institutional controls exist at this facility including maintenance requirements,	NA

Location/Address	Business Name	Site Identifier	Data Source and Findings	Summary	Contaminants of Concern (Identified by Ecology)
3976 West SR 16	Stutz Fuel Oil	4264138	NPDES UST, LUST	property use restrictions, and land use restrictions. This facility reportedly had a release from a UST which is awaiting cleanup. An end date for the UST program was listed for 2008.	<u>Diesel</u> : Confirmed in groundwater <u>Petroleum-other</u> : Confirmed in groundwater <u>Petroleum products-unspecified</u> : Confirmed in soil
3140 West SR 16	Valley Produce	NA	Brownfields, FINDS	Additional information regarding this brownfields listing was not available. The media affected are reported as unknown.	NA
4275 SR 3 Southwest	Bremerton Auto Wrecking Landfill/Gorst Creek Landfill/Pioneer Landfill	62752314/ 97682663	FINDS, CSCSL, HSL, Allsites, NPDES, Brownfields, VCP	Releases from a former auto wrecking landfill have migrated offsite. Independent remedial action is currently underway at this facility. This facility is discussed further in the main text.	<u>Arsenic</u> : Confirmed in groundwater, below cleanup levels in soil <u>Inorganic conventional contaminants</u> : Confirmed in groundwater, suspected in soil <u>Organic conventional contaminants</u> : Suspected in soil and surface water <u>Halogenated organics</u> : Suspected in soil, groundwater, and surface water <u>Lead</u> : Confirmed in groundwater <u>Mercury</u> : Confirmed in groundwater <u>Other metals</u> : Suspected in soil, groundwater, and surface water <u>Priority pollutant metals</u> : Confirmed in soil and groundwater, suspected in surface water <u>Non-halogenated solvents</u> : Suspected in soil, groundwater, and surface water <u>Unspecified petroleum products</u> : Confirmed in soil, groundwater, and surface water <u>Diesel</u> : Confirmed in groundwater, below cleanup levels in soil <u>Other petroleum products</u> : Below cleanup levels

Location/Address	Business Name	Site Identifier	Data Source and Findings	Summary	Contaminants of Concern (Identified by Ecology)
					<p><u>Polycyclic aromatic hydrocarbons:</u> Confirmed in soil, suspected in groundwater and surface water</p> <p><u>Base/neutral/acid organics:</u> Suspected in soil</p> <p><u>Unspecified pesticides:</u> Suspected in groundwater and surface water</p> <p><u>PCBs:</u> Suspected in soil, groundwater and surface water</p> <p><u>PAHs:</u> Confirmed in groundwater and soil</p>

CSCSL = Confirmed and Suspected Contaminated Sites List; CSCSL NFA = CSCSL No Further Action; FINDS = Facility Index System; HSL = Hazardous Sites List; ICR = Independent Cleanup Report; LUST = Leaking Underground Storage Tank; NPDES = National Pollution Discharge Elimination System; RCRA NonGen = Resource Conservation and Recovery Act Non-Generator; SWF/LF = Solid Waste/Landfill; SWRCY = Solid Waste and Recycling; UST = Underground Storage Tank; VCP = Voluntary Cleanup Program

NA = Not Available/Not Applicable

Source: Ecology Inc. 2013

Impacts

IMPACTS COMMON TO ALL ALTERNATIVES

Watershed

Under all alternatives, development and redevelopment would occur within portions of the Gorst Creek Watershed. Based on the online search of databases, the only contaminated sites of concern in the watershed that are outside the UGA are located in the southern half of the watershed, near the Gorst and SKIA UGAs. These three sites are currently releasing hazardous materials to the environment, as described under the Affected Environment section, although it is assumed that some level of cleanup of these sites would occur in the future under all of the alternatives. Redevelopment of these sites would likely include construction activities that could disturb contaminated areas, exposing workers, soil, groundwater, and/or surface water to hazardous materials. Additionally, construction activities elsewhere in the watershed could expose new contamination not previously documented, which would provide opportunities for remediation. It is expected that most likely areas to encounter contamination would be at industrial sites. Hazardous materials are not expected to be a concern in undeveloped and rural portions of the watershed, where most development would be residential.

Demolition of existing structures under any of the alternatives could be associated with risks to workers from exposure to lead-based paint and/or ACMs. However, implementation of proper techniques for removing these hazardous materials should minimize the risks. As all new structures would be constructed without the use of these materials, there would be a benefit to the public over the long term as buildings that contain these materials are taken down.

A variety of hazardous materials would be used and stored at construction sites, such as fuel, cleaning solvents, and paint. Improper storage or handling of these materials could result in a release of these chemicals to the soil, groundwater, or surface water. However with proper spill plans in place and followed, these risks should be minimized.

Gorst UGA

Under all alternatives, redevelopment of the Gorst UGA would be allowed, based on the zoned land uses. As discussed in the Affected Environment section, one Reasonably Predictable and seven Substantially Contaminated Sites have been identified within the Gorst UGA. Many of these sites are currently undergoing cleanup or remedial actions, and it is likely that cleanup actions would continue into the future under all of the alternatives. However, since many sites in the UGA are currently documented as storing hazardous substances or waste, it is likely that additional contaminated sites will be discovered in the future.

As discussed for the watershed, there would be risks associated with exposures or releases of hazardous materials during redevelopment activities, including disturbance of contaminated soil, demolition of buildings with lead-based paint or ACMs, and use/storage of hazardous materials at construction sites. Given the number of contaminated sites in the UGA and the amount of likely redevelopment in the future under all of the alternatives, the greatest amount of risk associated with hazardous materials would be in the UGA.

Alternative 1

Under this alternative, current land use designations would remain. Non-residential land uses (high intensity commercial, mineral resource, and industrial) would make up 87 percent of the land area in the UGA. These land uses are typically associated with a higher risk of contamination than residential uses. Additionally, many of the existing industrial facilities would likely remain operational, or would eventually be replaced by other industrial facilities. The potential for contamination of soil and water from land uses would likely be greatest under this land use breakdown, as compared to the action alternatives. Redevelopment of industrial or commercial properties to residential uses would also have an associated risk of human exposure to contaminants, particularly for sites where soil and groundwater contamination is not previously known.

The Watershed Characterization & Framework Plan and Gorst Subarea Plan would not be implemented under this alternative. Stormwater improvements and new LID regulations identified under the plan would not be implemented as part of the action. Issues with stormwater, which are discussed in Sections 3.2 *Water Resources* and 3.13.3 *Water, Wastewater, and Stormwater*, include flooding onto developed sites which can cause the movement of hazardous materials into surface waters and downstream areas. Of particular concern is the Bremerton Auto Wrecking Landfill, at which there is documentation of movement of contaminated, eroded waste downstream in the stream sediments as a result of flooding. While it is possible that this problem will be addressed in current remedial actions, there is no set timeline for resolution of these issues, and they would be expected to continue until such a resolution has occurred. Under this alternative there would be no Watershed Characterization & Framework Plan and Gorst Subarea Plan in place for reducing flooding and directing and infiltrating stormwater. Therefore, it is likely that flooding would continue to be a problem throughout the watershed and hazardous materials would continue to be transported downstream in surface water under this alternative.

Alternative 2

Under this alternative, the land use breakdown within the UGA would not include an industrial component. Approximately 46 percent of the UGA would be Commercial Corridor, and the remainder would be Low and Medium Density Residential and Open Space/Recreation. Therefore, land uses typically associated with a high risk of contamination would be much less prevalent than under Alternative 1. Additionally, the Industrial land use zoning would no longer be present. However, existing industrial facilities may continue to operate for many years before they are redeveloped into a different use. Additionally, hazardous material contamination associated with these sites would continue to be present, subject to ongoing and future cleanup/remediation activities. Future development in the UGA, however, would likely consist of land uses that are less likely to store hazardous substances or waste, and therefore less likely to cause future environmental contamination or human exposure to these hazardous materials. The potential for contamination of soil and water from future land uses would be lower under Alternative 2 than under Alternative 1.

The Bremerton Auto Wrecking Landfill would continue to be a site of concern under this alternative, as the contaminated waste would continue to be present and subject to movement offsite and into surface water during flooding events, until such time as the site is remediated. However, the Watershed Characterization & Framework Plan and Gorst Subarea Plan would be implemented under this alternative, which would help reduce flooding and improve stormwater infiltration throughout the watershed and particularly the UGA, and would help prevent future exacerbation of these issues by guiding future development throughout the watershed. Planned improvements to stormwater facilities, such as modifying culverts or providing means of diverting stormwater flows, would be likely to lessen flooding onto developed sites and associated movement of contaminants in surface water. Since new developments would be required to infiltrate stormwater, it is likely that over time flooding would be reduced, which would also lessen these impacts.

Alternative 3

Under Alternative 3, the land use breakdown would not include industrial components. Approximately 26 percent of the UGA would be zoned as Open Space/Recreation, Low Intensity Waterfront, or residential. Future land uses in these areas would be expected to have a fairly low associated risk of contamination with hazardous materials. The remainder of the UGA would be zoned as Gorst Mixed Use or Neighborhood Mixed Use. Commercial development would be more diffuse throughout the UGA than under the other alternatives. Similar to Alternative 2, the Industrial land use zoning would no longer be present, although existing industrial facilities may continue to operate for many years before they are redeveloped. Hazardous material contamination and risk for contamination associated with these sites would continue to be present, subject to remediation/cleanup activities. Overall, the potential for contamination of soil and water from future land uses would likely be lowest under this alternative.

Issues associated with movement of hazardous materials in stormwater from existing sites would be similar to those under Alternative 2. Bremerton Auto Wrecking Landfill would continue to be a site of particular concern, with contaminated waste carried offsite during flooding events. Implementation of the Watershed Characterization & Framework Plan and Gorst Subarea Plan would help address flooding and stormwater infiltration issues throughout the watershed, which would help minimize the amount of flooding onto developed areas and associated movement of hazardous materials in surface water.

Mitigation Measures

Incorporated Plan Features

The Watershed Characterization & Framework Plan and Gorst Subarea Plan do not contain features that are specific to hazardous materials. However, features of both plans would have the indirect benefit of reducing risks of exposure to hazardous materials over the long term. Regardless of the land use alternative selected, the Gorst UGA would no longer have the urban industrial designation, meaning that new developments would have a lower potential for releases of hazardous materials than some current land uses.

Features of the Watershed Characterization & Framework Plan and Gorst Subarea Plan that would minimize flooding and increase infiltration of stormwater would help reduce risks of surface water contamination by reducing the likelihood that flood water or stormwater would run onto contaminated sites such as the Bremerton Auto Wrecking Landfill. These stormwater features are discussed in detail in Section 3.2 *Water Resources*.

Applicable Regulations and Commitments

Federal hazardous material and waste laws and regulations would be applicable to hazardous substances used, stored, or generated by the project. Applicable federal laws include the RCRA; Hazardous and Solid Waste Amendments; CERCLA (aka Superfund); and Superfund Amendments and Reauthorization Act. Pursuant to regulations promulgated under Section 102 of CERCLA, as amended, release of a reportable quantity of a hazardous substance to the environment in a 24-hour period must be reported to the National Response Center (40 CFR Part 302). Similarly, Washington hazardous material and waste laws and regulations would be applicable to hazardous substances used, stored, and generated by the project. The Model Toxics Control Act (mobile source air toxics) requires reporting of a release of any hazardous substance within 90 days of the release (or within 24 hours for releases from a UST; WAC 173-340-300). Cleanup activities at contaminated sites are conducted under the MTCA and disposal of contaminated materials are conducted under the RCRA.

Demolition of older facilities may require asbestos and lead-based paint mitigation. Under the Washington Department of Safety and Health asbestos standards (WAC 296-62, 296-65, and 296-155), thermal system insulation (pipe lagging, boiler insulation, etc.), surfacing materials (spray-on acoustical plasters, troweled on plaster coatings, etc.) and flooring materials (vinyl tile, sheet goods, etc.) are all presumed to contain asbestos in buildings built before 1981 unless these materials are shown not to contain asbestos by a certified contractor. Demolition of asbestos in the project area is regulated by the Puget Sound Clean Air Agency (Article 4: Asbestos Control Standards) and requires an asbestos survey, a notification of demolition, verification that all asbestos was properly removed, and proper disposal of the asbestos-containing materials.

The Washington State Department of Commerce (Chapter 365-230 WAC) regulates certification, accreditation, enforcement and compliance for firms and individuals to use lead-safe work practices when working on pre-1978 homes or child-occupied facilities. The regulations apply to training and certification requirements for individuals and firms and to accreditation requirements for training programs.

Other Potential Mitigation Measures

The following general mitigation measures would minimize or eliminate construction impacts within the Study Area and could be incorporated into the Planned Action Ordinance.

- Since encountering unreported spills or unreported underground fuel tanks is a risk when performing construction, require contractors to provide hazardous materials awareness training to all grading and excavation crews on how to identify any suspected contaminated soil or groundwater, and how to alert supervisors in the event of suspected contaminated material. Signs of potential contaminated soil include stained soil, odors, oily sheen, or the presence of debris.
- Require contractors to implement a contingency plan to identify, segregate, and dispose of hazardous waste in full accordance with the MTCA.
- Require contractors to develop and implement the Stormwater Pollution Prevention Plan, BMPs, and other permit conditions to minimize the potential for a release of hazardous materials to soil, groundwater, or surface water during construction.
- Require contractors to follow careful construction practices to protect against hazardous materials spills from routine equipment operation during construction; prepare and maintain a current spill prevention, control, and countermeasure plan, and have an individual on site designated as an emergency coordinator; and understand and use proper hazardous materials storage and handling procedures and emergency procedures, including proper spill notification and response requirements.
- Require contractors to identify all ACM and lead-based paint in structures prior to demolition activities in accordance with 24 CFR Part 35. If ACM or lead-based paint is identified, appropriately trained and licensed personnel would contain, remove, and properly dispose of the ACM and/or lead based paint material according to federal and state regulations prior to demolition of the affected area.
- If warranted, require contractors to conduct additional studies to locate undocumented USTs and fuel lines before construction of specific development projects (areas of concern include current and former commercial and residential structures) and will permanently decommission and properly remove USTs from project sites before commencing general construction activities.

The following general mitigation measure would minimize or eliminate operational impacts within the Study Area and could be incorporated into the Planned Action Ordinance.

- Require applicants for development on properties identified as having potential for contamination to conduct a thorough site assessment. If contamination is discovered then require the applicant to comply with all state and federal regulations for contaminated sites.

Significant Unavoidable Adverse Impacts

Under all of the alternatives future redevelopment of contaminated sites would presumably occur, potentially resulting in the release of hazardous materials to soil, groundwater, and surface water, or exposure of workers and the public to these materials. Most of these potential impacts would occur within the UGA, at industrial sites.

Contaminants from existing sites within the study area could continue to be transported off of these sites as a result of stormwater and flooding issues. Such movement of contaminants would continue to impact surface water, groundwater, and soil resources within the study area. These impacts would be greatest under Alternative 1, and lower under Alternatives 2 and 3, which would address stormwater and flooding issues in the UGA as well as limit future land clearing in areas of protection in the watershed. Contaminated sites would be avoided during project design when possible. Implementing the mitigation approaches described above would reduce adverse effects on human health and the environment.

3.7 Land Use Patterns

This section describes existing land uses and land use patterns within the Gorst UGA. The section also compares the three alternatives described in Section 2.5 *Study Alternatives* with respect to the land uses proposed and evaluates their potential impacts on land use patterns and land use compatibility. Where implementation of an alternative would have significant adverse impacts, appropriate mitigation measures are identified.

Affected Environment

Watershed

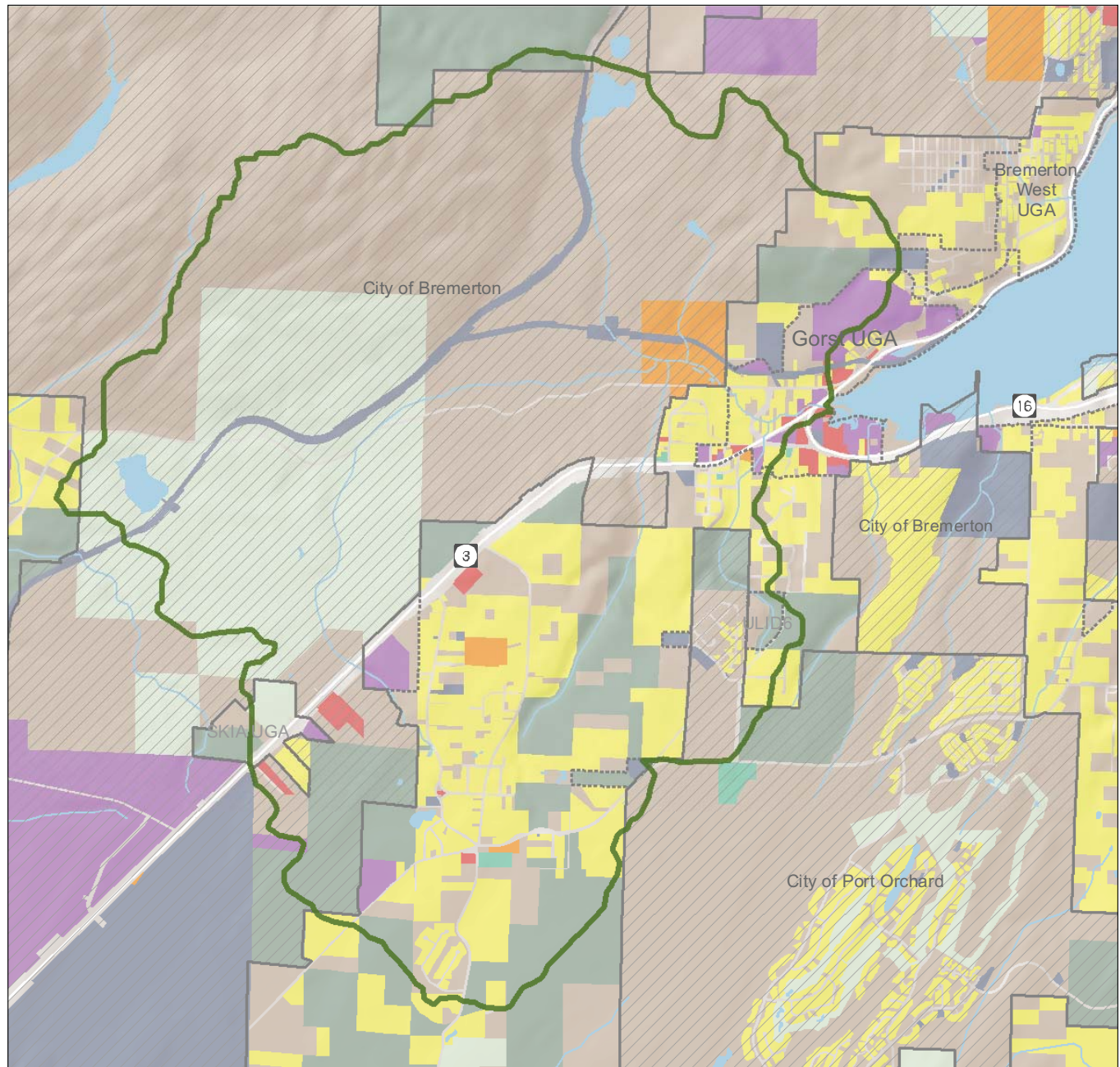
Existing Land Use

The Gorst Creek watershed encompasses approximately 6,000 acres in southwestern Kitsap County, of which the majority is undeveloped or engaged in natural resource uses. Approximately 120 acres are developed for commercial, industrial, or residential uses. Most of this development is concentrated near where the creek flows into Sinclair Inlet, within the Gorst UGA. Low to moderate-intensity development is also present in the south-central portion of the watershed in the form of a residential subdivision and some associated commercial and industrial development. Figure 3.7-1 *Gorst Watershed Planning Area: Current Land Use* shows existing land use throughout the Gorst Creek Watershed.






Comprehensive Plan Land Use and Zoning

The Gorst Creek Watershed covers portions of several local government jurisdictions, including the Cities of Bremerton and Port Orchard, unincorporated Kitsap County, and the Gorst, SKIA, and West Bremerton UGA's associated with the City of Bremerton. Comprehensive Plan Land Use designations and zoning throughout the watershed are established by each of these local jurisdictions. Figure 3.7-2 *Gorst Creek Watershed: Land Cover* shows the adopted land use designations for the Gorst Watershed vicinity. Land use designations in the watershed consist primarily of CUL, Rural Residential, and Urban Reserve designations. Industrial designations are present in and around the SKIA UGA, located in the southwestern portion of the watershed, and isolated transportation and public facilities (railroad traversing north of SR 3 and airport in SKIA). Urban residential, commercial, and industrial designations are concentrated within the Gorst UGA and are described in greater detail below.








FIGURE 3.7-1 GORST WATERSHED PLANNING AREA: CURRENT LAND USE



Legend

-  Watershed Boundary
-  UGA Boundary
-  City Limits
-  Water
-  Streams

Current Land Use

-  Residential
-  Commercial
-  Recreational
-  Institutional
-  Industrial
-  Transportation/Utilities
-  Public Facility
-  Forestry
-  Undeveloped



Date: April 2013
Source: Kitsap County, BERK

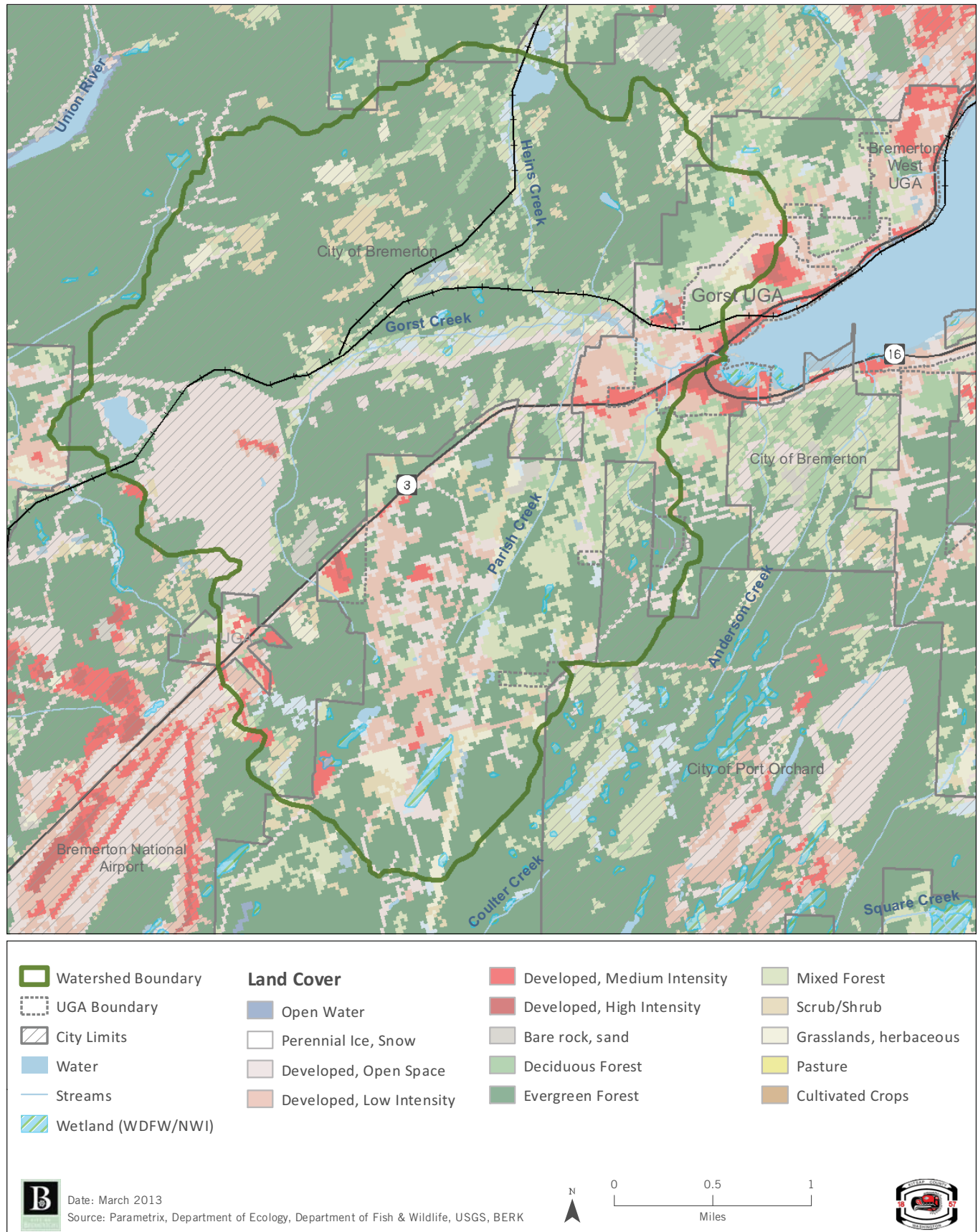


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FIGURE 3.7-2 GORST CREEK WATERSHED: LAND COVER



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Gorst UGA

Existing Land Use

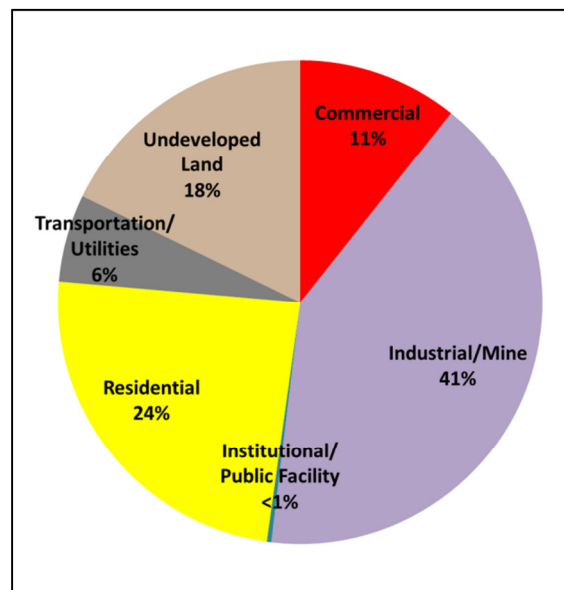
The Gorst UGA contains approximately 335 gross acres, of which about 54 acres are public right-of-way. Industrial and residential uses account for the majority of land in the Gorst UGA. Industrial land (including mineral extraction) is concentrated north of Sherman Heights Road and along the Sinclair Inlet waterfront east of the SR 3/SR 16 interchange, though smaller areas of industrial development are present throughout the Gorst UGA. Residential uses are concentrated in the southwestern portion of the UGA, mostly in the area between West Belfair Valley Road and SR 3. A concentration of residential uses is also present south of SR 16 along Feigley Road, and several residences are located adjacent to the existing mine along Sherman Heights Road. Commercial uses are generally located along the two state highways that pass through the UGA. Current land use in the Gorst UGA is summarized in Table 3.7-1 *Gorst UGA Existing Land Use*. Figure 3.7-3 *Current Land Use - Percentages* illustrates the land area by percentage in a pie chart. Figure 3.7-2 *Gorst Creek Watershed: Land Cover* maps the current land uses by assessor code in the UGA as well as in the watershed for reference.

Table 3.7-1
Gorst UGA Existing Land Use

Land Use Category	Acres	Percent
Commercial	30.06	10.71%
Industrial	115.63	41.19%
Institutional	0.58	0.21%
Public Facility	0.28	0.10%
Residential	67.87	24.18%
Transportation/Utilities	16.38	5.83%
Undeveloped Land	49.91	17.78%
TOTAL	280.70	100.00%

Source: Kitsap County 2012; BERK

Figure 3.7-3 Current Land Use – Percentages



Source: Kitsap County Assessor

Kitsap County Comprehensive Plan Land Use and Zoning

The Kitsap County Comprehensive Plan designates the Gorst UGA with a mix of commercial, mineral resource, industrial, and residential land use designations. The High Intensity Commercial Mixed Use designation makes up the largest portion of the UGA (43 percent), followed by Mineral Resource (34 percent). The remainder of the UGA consists of Low Density Residential (13 percent) and Industrial (10 percent) designations. The purpose and intent of these designations is described in the Kitsap County Comprehensive Plan as follows (Kitsap County 2012):

- **Urban High-Intensity Commercial Mixed Use:** This designation primarily focuses on larger commercial centers, including commercial uses that require large sites and draw customers at the community and regional scale. Examples of commercial uses appropriate to this designation include, but are not limited to, superstores, department store, automotive parts and sales, home improvement stores, hotels and motels, and restaurants. Mixed use developments incorporating residential units are also appropriate in this designation. Within the Gorst UGA, this land use designation is implemented by following zoning district:
 - **Highway/Tourist Commercial (10-30 DU/Ac):** This zone is intended to provide for those commercial uses that require large sites. The zone also serves the shopping and service needs for large sections of the county and provides visitor services and accommodations travelers. (KCC 17.355.010.B)
- **Mineral Resources:** The intent of the Mineral Resources designation is to protect sand, gravel, and rock deposits identified as significant. Commercial-quality deposits should be recognized as non-renewable resources and managed accordingly. Within the Gorst UGA, this land use designation is implemented by following zoning district:
 - **Industrial:** This zone allows a wide range of industrial activities, including heavy industry such as fabrication, warehousing, processing of raw materials, bulk handling and storage, construction, and heavy transportation. This zone is intended to provide sites for activities that require processing, fabrication, storage, and wholesale trade. (KCC 17.370.010)
- **Urban Low-Density Residential:** This designation focuses primarily on single-family dwellings but also may include innovative types such as clustered housing. It also includes regulated environmentally critical areas within the UGAs and other areas identified for low-density urban development. Within the Gorst UGA, this land use designation is implemented by following zoning districts:
 - **Urban Low Residential (5-9 DU/Ac):** The intent of this zone is to recognize, maintain, and encourage urban low density residential areas by including a full range of urban services and facilities that are adequate at the time of development. This zone is also intended to create cost-efficient residential areas that are capable of allowing the provision of community services in a more economical manner. (KCC 17.330.010)
 - **Urban Restricted (1-5 DU/Ac):** The Urban Restricted Zone is applied to areas within UGAs that have been identified with a significant concentration of environmentally critical areas or that are planned as greenbelts, and therefore are appropriate for lower-density development. These areas may include significant salmon spawning streams, wetlands, or steep slopes. Actual development densities will be determined at the time of land use approval, following site-specific analysis and review of potential impacts to nearby critical areas. (KCC 17.325.010) Approximately 11.8 acres within the Gorst UGA are zoned Urban Restricted, located in a contiguous block adjacent to the south side of West Belfair Valley Road and the west side of West Sam Christopherson Avenue.
- **Urban Industrial:** This designation includes both industrial and business uses, such as light manufacturing, hi-tech, warehousing, bio-tech, park-like business, four-year educational institutions, equipment and vehicle repair, as well as heavy industrial activities and those requiring access to major transportation corridors. Within the Gorst UGA, this land use designation is implemented by following zoning district:

- **Industrial:** This zone allows a wide range of industrial activities, including heavy industry such as fabrication, warehousing, processing of raw materials, bulk handling and storage, construction, and heavy transportation. This zone is intended to provide sites for activities that require processing, fabrication, storage, and wholesale trade. (KCC 17.370.010)

City of Bremerton Comprehensive Plan Land Use and Zoning

While the Gorst UGA is planned to be annexed by the City of Bremerton at some point in the future, it is currently an unincorporated part of Kitsap County. Through its Comprehensive Plan and development regulation docket process, the City of Bremerton has identified equivalent City of Bremerton zoning districts to the Kitsap County zoning currently in effect in the Gorst UGA, as illustrated in Table 3.7-2 *Comparison of Kitsap County and City Zoning for the Gorst UGA*.

Table 3.7-2
Comparison of Kitsap County and City Zoning for the Gorst UGA

Kitsap County Zoning	Equivalent Bremerton Zoning
<i>Highway/Tourist Commercial</i>	<i>Freeway Corridor</i>
Residential Density: 10-30 du/ac	No residential allowed
Building Height Max: 35 ft	Building Height Max: 60 ft
<i>Industrial</i>	<i>Industrial</i>
Building Height: 35 ft	Building Height: 50 ft
<i>Urban Low Residential</i>	<i>Low Density Residential</i>
Residential Density: 5-9 du/ac	Residential Density: 5-10 du/ac
Min Lot Size: 2,400 sq ft	Min Lot Size: 4,300 sq ft
Building Height Max: 35 ft	Building Height Max: 35 ft
<i>Urban Restricted</i>	<i>No City Equivalent*</i>
Residential Density: 1-5 du/ac	N/A
Min Lot Size: 5,800 sq ft	N/A
Building Height Max: 35 ft	N/A

Note: The City of Bremerton has no adopted zones that allow residential density below 5 units per acre. Land currently zoned as Urban Restricted will be rezoned when Bremerton annexes the Gorst UGA.

Source: KCC 2012, BMC 2012

The purpose and intent of these equivalent zones are described in BMC Title 20:

- **Freeway Corridor (FC):** The intent of the FC zone is to identify areas for commercial activities that will typically be region-serving in nature and scale. Uses in the zone benefit from high visibility from freeways serving the region, incorporate signage legible to fast-moving traffic, provide large areas for parking, and may include large-scale structures and/or outdoor display or storage areas. Design standards, buffering and/or other techniques are used to mitigate the effects of the intense uses allowed in the FC zone on less intense adjacent uses. (BMC 20.86.010)
- **Industrial:** The intent of the industrial (I) zone is to accommodate light and heavy industrial uses in locations where there is limited interaction with residential uses. Uses include large-scale and/or heavy industries in a manner that reduces impact to the community while meeting industry's needs for easy access, large sites, and locations that do not cause conflicts with residential and other less intense use areas. (BMC 20.94.010)
- **Low Density Residential:** The intent of the low density residential (R-10) zoning district is to accommodate single-family housing by infilling at a range of lot sizes consistent with urban growth patterns. Some attached single-family housing may be appropriate when responding to sensitive areas or with innovative design. Residential development at higher densities is encouraged at the edge of designated centers. (BMC 20.60.010)

Impacts

The impact discussion evaluates the amount and intensity of development under each of the alternatives, with specific focus on potential changes in land use patterns and compatibility with adjacent land uses. The determination of impacts to land use patterns was made based on a comparison of current and proposed land use designations under each of the alternatives and a comparison of the scale and intensity of current development with that of development likely to occur under each alternative.

IMPACTS COMMON TO ALL ALTERNATIVES

Watershed

Outside the Gorst UGA, no changes to land use designations or zoning are proposed for the Gorst Creek watershed under any of the alternatives. The area is anticipated to add homes in the Rural Residential and Urban Reserve designations as they are in place today. Within SKIA principally, more jobs are anticipated based on current plans. Because the City of Bremerton and Kitsap County plans and zones would be retained, including zoning and development standards addressing site design, landscaping, and other appropriate standards, no adverse impacts are anticipated with respect to land use patterns or compatibility.

Gorst UGA

Under all alternatives, additional growth is anticipated in the Gorst UGA. Vacant land would, over time, be developed for commercial, residential, recreational, or industrial use, as allowed by the land use and zoning districts adopted under that alternative, see Table 3.7-3 *Land Use Acres Comparison (Total Parcel Acres by Zone)*.

Table 3.7-3
Land Use Acres Comparison (Total Parcel Acres by Zone)

Zone	Acres	Percent
Alternative 1		
High Intensity Commercial Mixed Use	121.9	43
Mineral Resource	96.3	34
Low Density Residential	35.3	13
Industrial	27.2	10
TOTAL	280.7	100
Alternative 2		
Commercial Corridor	127.8	46
Medium Density Residential	105.4	38
Low Density Residential	31.6	11
Open Space/Recreation	16.0	6
TOTAL	280.7	100
Alternative 3		
Neighborhood Mixed Use	105.4	38
Gorst Mixed Use	103.3	37
Gorst Creek Residential	31.6	11
Low Intensity Waterfront	24.5	9
Open Space/Recreation	16.0	6
TOTAL	280.7	100

Source: Kitsap County 2012; BERK

Properties occupied by nonconforming uses (e.g. single family in Alternative 1 commercial zones) would eventually be redeveloped in a manner consistent with adopted zoning. The precise mix of land uses and intensity of development would vary by alternative, as described in the following impact analysis sections.

New development and redevelopment within the Gorst UGA would also entail the eventual modification or demolition of some existing structures, as well as the construction of new buildings. These construction activities would have the potential to cause temporary impacts to neighboring properties during the period of active construction. These temporary construction-related impacts would result from increased levels of noise, fugitive dust, and vehicle traffic. Dust is addressed in Section 3.3 *Air Quality*, noise impacts are analyzed in Section 3.5 *Noise*, and traffic impacts are discussed in detail in Section 3.11 *Transportation*.

Alternative 1

Land Use Patterns

Under the No Action Alternative, the Gorst Watershed Plan would not be adopted, and a planned action would not be adopted for the Gorst UGA. New stormwater regulations and LID standards would not be adopted in the Gorst Creek watershed, and existing comprehensive plan land use designations and zoning regulations for the Gorst UGA would remain in effect. Land use patterns in the Gorst UGA are therefore anticipated to remain similar to existing conditions, though some residential parcels that are designated and zoned for commercial use may redevelop in the future, thereby shifting the land use mix away from residential development and toward more commercial uses. (See Figure 2-4 *Gorst UGA Land Use: Alternative 1 – Kitsap County No Action* in Section 2.5 *Study Alternatives*.) Undeveloped land within commercial zones would also be developed over time, extending this use to greater portions of land along highways and towards the current residential neighborhoods (e.g. West Belfair).

Land Use Compatibility

Under the No Action Alternative, existing comprehensive plan land use designations and zoning regulations would guide development in the Gorst UGA. The current development standards for building height, setbacks, and allowed uses would remain in effect. The overall low rise suburban character of development in the Gorst UGA would remain similar to existing conditions, particularly along state highways. Because residential uses are prevalent in portions of the Gorst UGA zoned for commercial development, some localized incompatibilities may occur as infill development of vacant parcels and redevelopment of individual residential properties occurs. Localized incompatibilities may also occur surrounding the existing mine, where approximately 11 acres zoned for residential use are located adjacent to industrial zoning.

Alternative 2

Land Use Patterns

Under Alternative 2 (Gorst is a well-designed regional commercial center), the Gorst Watershed Plan would be adopted, and new low-impact development and stormwater standards would be applied throughout the watershed, though no significant changes to land use patterns are anticipated outside the Gorst UGA. Within the Gorst UGA, new land use designations and associated zoning would be applied as shown in Figure 2-6 *Gorst UGA Land Use: Alternative 2*. Under Alternative 2, the land use pattern in the Gorst UGA would transition over time to include substantially less industrial property than currently exists in the area. The existing mine site, which is the largest industrial property in the UGA, would be reclaimed and redeveloped for Medium-Density Residential development, and the application of the Commercial Corridor designation to the central portion of the UGA would ultimately result in the redevelopment of most of these industrial properties for commercial use. Though the areas waterward of SR 3 and SR 16 along Sinclair Inlet would not be included in the planned action, new land use designations and zoning would take effect, causing the existing industrial uses in this portion of the UGA to eventually redevelop as commercial uses or open space as dictated by the subarea plan.

Land Use Compatibility

As described in Chapter 2.0 *Alternatives*, Alternative 2 would apply new land use designations to the Gorst UGA. Similar to the No Action Alternative, most of the central and southern portions of the UGA would be designated for commercial development, as well as those parcels adjacent to SR 3 in the northeastern corner of the UGA. As described under the No Action Alternative, much of the central and southern portions of the Gorst UGA are currently occupied by residential development, despite the applied commercial zoning. Continued designation of these areas for commercial development could result in localized land use incompatibilities as the area transitions. These incompatibilities would primarily consist of commercial development located adjacent to previously existing residences as infill development of vacant parcels, lot consolidation for commercial development, and redevelopment of individual residences occurred.

In limited circumstances where existing residences are adjacent to an industrial use, redevelopment of the industrial property for commercial use could potentially result in greater compatibility compared to current conditions. New commercial development under Alternative 2 would include the application of landscaping, streetscape improvements, and design guidelines, thereby reducing incompatibilities with adjacent residential uses. Transitions such as this are most likely to occur near the mine site once it is reclaimed and redeveloped for Medium Density Residential, as well as in the residential neighborhood south of SR 16.

Alternative 3

Land Use Patterns

Under Alternative 3, the Gorst Watershed Plan would be adopted, and new low-impact development and stormwater standards would be applied throughout the watershed, though no significant changes to land use patterns are anticipated outside the Gorst UGA. Within the Gorst UGA, new land use designations and associated zoning would be applied as shown in Figure 2-8 *Gorst UGA Land Use: Alternative 3* in Section 2.5 *Study Alternatives*. Under Alternative 3, the land use pattern in the Gorst UGA would shift toward a focus on mixed uses and a balance between residences, commercial development, recreation, and the natural environment.

Alternative 3 would result in relatively subtle changes to the overall land use pattern of the Gorst UGA. Because the proposed land use designations would allow for a broader range of uses to be intermixed than is allowed under current zoning, the Gorst UGA is unlikely to experience the large-scale conversion of residential properties to commercial use, which is anticipated under both Alternatives 1 and 2. Industrial properties in the central and southern portions of the UGA, however, are still anticipated to gradually convert to commercial, office, residential, or a mix of these uses in accordance with the proposed Gorst Mixed Use designation. Properties along the Sinclair Inlet waterfront would also be redeveloped over time, replacing industrial and high-intensity commercial uses with lower-intensity uses featuring reduced impervious cover and integrated shoreline habitat and recreation features.

Similar to Alternative 2, the existing mine site in the northern portion of the UGA would be reclaimed and redeveloped. Under Alternative 3, this area would be converted to neighborhood-scale mixed use development featuring low and medium-density housing, as well as small commercial uses designed to serve local residences.

Land Use Compatibility

Similar to Alternatives 1 and 2, localized incompatibilities could potentially arise as the Gorst UGA transitions from the current land use pattern to the proposed land use designations. Commercial development occurring under Alternative 3 would be designed for a mixed-use environment with associated design guidelines, thereby reducing the potential for incompatibilities with existing residential development or other sensitive uses. Similar to Alternative 2, existing incompatibilities could potentially be alleviated as industrial properties adjacent to residences are redeveloped to more compatible uses, such as low-intensity commercial, office, or multi-family residential.

Mitigation Measures

Incorporated Plan Features

Adoption of the Watershed Characterization & Framework Plan and the Gorst Subarea Plan are part of both action alternatives. Adoption of these two plans would include the following:

- Alternatives 2 and 3 would include implementation of new capital facility and urban design improvements, such as streetscape improvements and trails.
- Alternatives 2 and 3 would include adoption of new policies promoting amended stormwater and habitat regulations throughout the Gorst Creek watershed.
- Alternatives 2 and 3 would include policies and urban design concepts that would improve the landscape, streetscape, and site design of developments.
- As described above, the land use designations proposed for Alternative 3 would guide development toward a predominantly horizontal or vertical mixed-use pattern. Associated development regulations and design guidelines in the subarea plan would ensure that incompatibilities between more intense uses and less intense uses are minimized.

Applicable Regulations and Commitments

In addition to the new stormwater regulations that would be applied to the Gorst Creek watershed and the design guidelines and development regulations that would be applied to the Gorst UGA, the following regulations and commitments would help mitigate impacts regarding land use compatibility throughout the watershed study area.

- KCC 17.382 – Density, Dimensions, and Design
- KCC 17.385 – Landscaping
- KCC Title 19 – CAO

Other Potential Mitigation Measures

- Adoption of implementing zoning and urban design regulations to fulfill Draft Gorst Subarea Plan policies would help mitigate changes to land use patterns and compatibility. It is anticipated that such regulations would be prepared with a Preferred Alternative.

Significant Unavoidable Adverse Impacts

Under all alternatives, the Gorst Creek watershed in general, and the Gorst UGA in particular, would experience additional growth in population and employment. Vacant land in the Gorst UGA is anticipated to be developed, and some existing properties would redevelop over time. While the overall land use pattern in the area would be irreversibly changed, anticipated impacts can be mitigated with design and development standards as described in the Mitigation Measures section above.

3.8 Socio-economics

This section provides a summary of 2010 population, housing, and employment for the Gorst Watershed and the Gorst UGA, trends for the last 10 years, and the studied growth for 2035. This section also evaluates the impacts of additional people and jobs in the three alternatives on the Gorst UGA. Lastly, the section identifies mitigation measures for any significantly adverse impacts.

Affected Environment

Watershed

The Gorst Watershed covers multiple jurisdictions and does not align with U.S. Census geographies. To estimate population, housing, and employment for this geography, the analysis used Kitsap County Transportation Analysis Zones (TAZs) that overlapped with the watershed to approximate the watershed boundaries. These TAZs were then used to determine the total and projected figures for areas in the watershed excluding the Gorst UGA, which was separately calculated by Census block groups. Figures for the entire watershed sum the select TAZs' totals with the totals for the Gorst UGA.

Population and Housing

In the 2010, the entire watershed had an estimated total population of 2,032. By 2035 the population is projected to increase to 2,886, an average annual growth rate of 1.4 percent. In comparison, from 2003⁴ to 2010 the population grew at an average annual rate of 1.1 percent.

The majority of the watershed's population is outside of the Gorst UGA. Excluding the Gorst UGA, the watershed had a population 1,810 in 2010 with a projected population of 2,659 by 2035. This population increase represents an average annual rate of 1.5 percent. The 2003 population was 1,661 and grew at an average rate of 1.2 percent annually.

The watershed excluding the Gorst UGA had 742 housing units in 2010. The vast majority, 83 percent, of households were single-family homes. By 2035 under current Kitsap County and City of Bremerton plans the watershed is projected to have 1,149 housing units with 93 percent being single-family homes. All the projected new housing is anticipated to consist of single-family homes. This increase represents an average of over 15 homes added each year. Multi-family housing is projected to decrease slightly by 17 units.

From 2001 to 2011 there were 63 residential building permits issued within the watershed outside of the Gorst UGA. All the permits issued were for single-family houses or mobile homes. See Table 3.8-1 *PSRC Residential Permits in Watershed (Excluding Gorst UGA)*.

Table 3.8-1
PSRC Residential Permits in Watershed (Excluding Gorst UGA)

Sector	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Single-Family	1	5	4	6	7	1	4	3	2	33
Multi-Family	0	0	0	0	0	0	0	0	0	0
Manufactured home	10	6	1	0	5	2	3	2	0	29
Total	11	11	5	6	12	3	7	5	2	63

Source: PSRC, 2009

⁴ Population and household figures are available by transportation analysis zone for the years 2003, 2010, and 2035.

The area averaged over 7 permits per year over this 9-year period, about half the rate projected from 2010 to 2035. The majority of the permits were issued between 2001 and 2005, and the number tapered with toward the end of the decade with the recession, which started in 2008. The population and housing growth studied in this Draft EIS, whether considering current plans or projected plans, is more than the watershed experienced during the housing boom period before 2008.

Employment

In 2010, there were 551 jobs within the watershed. Less than half (264) were in the area of the watershed excluding the Gorst UGA. Employment present represents a variety of sectors. The government and education and finance, insurance, and real estate (FIRE) sectors had the largest share of total employment in 2010 with about one third of the total for each sector. Table 3.8-2 *Employment by Sector in Watershed (Excluding Gorst UGA)* below shows the breakdown of total employment by major sector for the watershed not in the Gorst UGA for 2010 and the projected totals for 2035 based on current plans.

Table 3.8-2
Employment by Sector in Watershed (Excluding Gorst UGA)

Sector	2010		2035		Change
	Employment	Percent	Employment	Percent	2010-2035
Government and Education	88	33.30	90	3.90	2
Finance, Insurance, and Real Estate (FIRE)	78	29.50	1,157	50.20	1,079
Construction and Resources	56	21.20	29	1.30	-27
Warehouse, Transportation, and Utilities	18	6.80	32	1.40	14
Manufacturing	15	5.70	918	39.80	903
Retail	9	3.40	78	3.40	69
Total	264	100.00	2,305	100.00	2,041

Source: Kitsap County, 2012; BERK, 2012

The watershed excluding the Gorst UGA is projected to add a significant number of jobs by 2035. The FIRE and manufacturing sectors are projected to realize almost all of the 2,305 jobs. Much of the projected growth is within parts of the SKIA and the City of Bremerton in the watershed.

From 2001 to 2010, there was just one commercial building permit issued to the Sunnyslope Water District within the watershed area excluding the Gorst UGA. This indicates that the projected employment gains would be new development above and beyond any recent market trends.

Gorst UGA

Population and employment figures studied for the Gorst UGA are drawn from the Kitsap County UGA Sizing and Composition Remand Final Supplemental EIS and the current Kitsap County Comprehensive Plan (August 2012).

Population and Housing

In 2010, the population of the Gorst UGA was 222 with 106 housing units, 83 percent of which are single-family homes. Future growth estimated in the Kitsap County Comprehensive Plan is 83 persons and 33 dwelling units, all single family, which would bring the totals to 304 persons and 139 dwellings. Based on residential building permit data compiled by the PSRC, from 2001 to 2009 there was one residential building permit issued within the Gorst UGA for a mobile home in 2009. The permit data indicates that the current market for new housing in Gorst is not strong. Kitsap County's growth estimates in the current Comprehensive Plan would represent a stronger growth than experienced in permit trends, though the addition of 33 dwellings is a modest addition in itself.

Employment

The Gorst UGA had a total of 237 jobs in 2010. The largest share of these was retail sector jobs with 103. Table 3.8-3 *2010 Employment by Sector in the Gorst UGA* shows the breakdown of total employment by major sector for the Gorst UGA for 2010, and Table 3.8-4 *2035 Employment by Alternative in the Gorst UGA* shows the breakdown of employment by commercial and industrial uses under the Kitsap County's current plan for the year 2035.

Table 3.8-3
2010 Employment by Sector in the Gorst UGA

Sector	Jobs	Percent
Retail	103	43.5
Finance, Insurance, and Real Estate (FIRE)	49	20.7
Construction and Resources	42	17.7
Warehouse, Transportation, and Utilities (WTU)	25	10.5
Manufacturing	14	5.9
Government and Education	4	1.7
Total	237	100.0

Source: Kitsap County, 2012; BERK, 2012

Table 3.8-4
2035 Employment by Alternative in the Gorst UGA

Sector	Alternative 1	
	Jobs	Percent
Commercial	606	81.7
Industrial	136	18.3
Total	742	100.0

Source: Kitsap County, 2012; BERK, 2012

The Gorst UGA is projected to sizably increase the number of jobs within the UGA under current plans by 2035.

From 2001 to 2010 there were seven commercial building permits issued within the UGA. Four of the seven permits issues were for the Peninsula Auto Group for their property on SR 16. The other three permits were for retail and general commercial establishments. The current Comprehensive Plan assumes employment growth significantly above what the UGA has experienced over the last decade.

Impacts

This section evaluates potential impacts of the additional growth in population and employment within the Gorst Creek Watershed and the Gorst UGA. As a result of the expected growth, areas within the watershed would see an increase in land development and economic activity. Impacts of the additional land development and activity include:

- Conversion of open space, undeveloped land, and underutilized land, for new residential, commercial and/or industrial uses
- Increased need for infrastructure, public services, and amenities
- Increase in the number of trip within and to and from the watershed
- Change in character of the local business composition and economy

Other sections of this Draft EIS address the first three impacts listed more specifically. Sections 3.12 *Public Services* and 3.13 *Utilities* address impacts on public services and utilities in more detail, respectively. Section 3.7 *Land Use Patterns* addresses land use impacts and the conversion of land, and Section 3.11 *Transportation* discusses traffic and transportation impacts. The following section, discusses potential impacts to the local economy in more detail.

IMPACTS COMMON TO ALL ALTERNATIVES

The current character of the local economy in Gorst is a mix of small to medium scale auto-oriented businesses serving a larger geographic area as well as pass through traffic on SR 3 and SR 16. These types of businesses often need large amount of land area, for parking and easy access, with relatively inexpensive rent. The resulting character is low scale buildings on large lots of land, what one currently sees in Gorst. The small population base in the Gorst UGA, just 222 in 2010, makes it difficult for the local economy to support smaller scale local serving retail and commercial service businesses.

The increase in people living, working, and passing through in the watershed is anticipated to increase the demand for retail and commercial services in the UGA. The increase in demand for housing and commercial uses will likely make land more valuable as businesses are able to be more productive and serve larger and/or new markets. As a result, the types of businesses located in Gorst could also change over time, especially if land owners are able to get higher rents for their land. The types of businesses currently there and those that are able and willing to pay higher rents in the future may be different, leading to a change in businesses located in the UGA.

All of the alternatives studied anticipate an increase in some mix of residents and jobs within the UGA by 2035. As a result, changes in the character of the local economy, as discussed above, could take place. Impacts of these changes could include the displacement of existing businesses and the establishment new businesses. Additional impacts from the increase in economic activity could include higher tax revenues for local jurisdictions, especially from retail sales taxes, business and occupation taxes, and utility taxes.

Watershed

Outside the Gorst UGA, it is not expected there will be any differences for the Gorst Creek Watershed in terms of population and employment growth between the alternatives. Population growth will most likely occur on rural lots in the areas designated Rural Residential and Urban Reserve in the southern part of the watershed. Both designations limit development to relatively low densities. Rural Residential allows one dwelling unit per five acres and Urban Reserve allows one unit per 10 acres. Commercial and employment growth will most likely occur within parts of SKIA and Bremerton in the watershed. Impacts from the large increase in jobs in SKIA are addressed in the SKIA Subarea Plan and EIS.

Gorst UGA

Under all alternatives, additional growth is anticipated in the Gorst UGA. The number and composition of people and housing varies considerably by alternative, however. Table 3.8-5 *2035 Net New Population and Housing Unit Capacity by Alternative in the Gorst UGA* lists the population and housing unit mix for each alternative.

Table 3.8-5
2035 Net New Population and Housing Unit Capacity by Alternative in the Gorst UGA

Sector	Alternative 1	Alternative 2	Alternative 3
Population	304	1,207	1,304
Housing Units	139	644	703
Single-Family	121	113	98
Multi-Family	18	531	605

Source: Kitsap County, 2012; BERK, 2012

The growth in Alternatives 2 and 3 would diverge from past trends in the UGA based on the development of the mine site. Alternative 2 and Alternative 3 have sizable population growth, with much of the growth occurring as more dense housing, primarily townhomes style, at the mine site in the northwest portion of the UGA. Alternative 1 would have much less population and housing growth. The little growth that does occur is all in lower density single-family homes.

The Gorst UGA is projected to sizably increase the number of jobs by 2035 within the UGA for all alternatives, particularly Alternative 1 and Alternative 2 in Table 3.8-6 *2035 Net New Employment by Alternative in the Gorst UGA*. Alternative 3 would also see an increase in employment, but much less than in the other two alternatives. The vast majority of the new employment for all the alternatives will be in commercial uses, such as retail and commercial services. Industrial employ would have a sizable increase in Alternative 1 and stay the relatively the same under Alternatives 2 and 3 as it is today.

Table 3.8-6
2035 Net New Employment by Alternative in the Gorst UGA

Sector	Alternative 1		Alternative 2		Alternative 3	
	Jobs	Percent	Jobs	Percent	Jobs	Percent
Commercial	606	81.7	573	94.6	315	94.6
Industrial	136	18.3	33	5.4	18	5.4
Total	742	100.0	606	100.0	333	100.0

Source: Kitsap County, 2012; BERK, 2012

Alternative 1

The growth assumed in Alternative 1 (No Action, Gorst is a relatively small highway-oriented commercial and industrial center) is mostly employment growth for commercial uses with a small population increase. Alternative 1 also assumes the current comprehensive plan land use designations and zoning regulations stay in effect. The limited residential growth and lack of change in land use regulations make it likely that any change in the local economy will be a continuation of the current character with some larger scale and/or more intense commercial uses that cater to the regional market and pass through traffic.

The additional employees in the community during the day would spur demand for some retail establishments, such as lunch and coffee spots.

Alternative 2

Alternative 2 (Gorst is a well-designed regional commercial center) has a substantial increase in population and moderate employment growth. Land use and zoning changes in this alternative allow Medium-Density Residential development on the mine site in the northwest portion of the UGA and more commercial development on areas currently designated for industrial uses. Most of the population and housing growth is accommodated by the redevelopment of the mine site. Larger and more intense commercial and retail uses could be developed along SR 3 and SR 16.

The additional residential growth and ability for larger scale commercial uses could lead to the establishment of new businesses and change of current businesses to larger scale ones. The addition of almost 1,000 residents would likely increase the demand for small scale retail uses, especially convenience items and food services. Larger retail establishments, such as a grocery store or department store, need to be supported by a larger population base. The proximity to Bremerton and Port Orchard and the amount of pass by traffic may allow Gorst to support these types of businesses. Traffic congestion and highway access would likely be key factors in whether this scale of auto-oriented businesses materializes.

The additional residents and employees in Gorst would increase the need for infrastructure, open space, and amenities, especially at the mine site. To make the mine site an attractive location for significant residential development the site would benefit from attractive community design, access to more park and recreation facilities, and taking advantage of scenic views for those who would live there.

These changes would likely change the character of the local economy by adding some smaller scale businesses that support the new residents as well as the potential for larger scale and/or more intensive businesses, which could displace some of the existing businesses and uses with highway access.

Alternative 3

Alternative 3 (Gorst becomes a complete community) assumes the most population growth, and the smallest amount of employment growth. This alternative would change the land use designations and zoning to allow a mixture uses not currently allowed. Along the waterfront a lower intensity commercial land use pattern develops with smaller impervious footprints interspersed by trails, parks, and reclaimed shoreline habitat. Central Gorst allows more intensive regional commercial, office, hotel, and mixed use residential developments. Highway-oriented uses would be less likely, especially along the Sinclair Inlet waterfront because of the zoning changes. Most of the population and housing growth is accommodated by the redevelopment of the mine site, which would also allow small scale retail uses on the site to serve the local population.

The additional residential growth, the allowance of more types and intensity of commercial uses throughout the UGA, and better access to open space and recreational facilities could make area more attractive for more types of commercial uses. This may lead to the establishment of new businesses and business types that do not currently exist in the area. The addition of almost 1,100 residents would likely increase the demand for small scale retail uses, especially convenience items and food services. In addition, better access to opens space and recreation, a better connection to the waterfront, and the associated view add value to these sites, which make them more attractive certain commercial and recreational uses. The broader range of uses allowed may also attract businesses that currently cannot locate in the community, but the accessibility the area has to south Kitsap County. As a result, these businesses would likely be willing to pay more in rent to be located by them then many of the current businesses, which could lead to the redevelopment of sites overtime with higher value and more intense uses. The flexibility in the zoning would also allow residential uses, which also value the added amenities and regional access.

Under this situation the character of the local economy has the potential to be quite different from what it is today. The land use and zoning changes allow the potential for more mixture of residential and commercial uses adjacent to each other. The community may have more small scale businesses that support the new residents. In addition, the potential for more uses may attract new business types, especially those that value the additional amenities of the area and/or regional access it provides. The amenity-oriented businesses would be less dependent of pass by traffic and likely less highway-oriented that many of the currently businesses. Those businesses that value the accessibility, such as a hotel/motel or an office building, would still be auto-oriented in nature. However, these businesses would add to the mix and character of businesses currently in the UGA.

Mitigation Measures

Incorporated Plan Features

Under Alternative 2 and Alternative 3, Watershed Characterization & Framework Plan and the Gorst Subarea Plan would be adopted. The adoption of these plans includes specific features that help mitigate for the impact of additional people and economic activity within the watershed. Features of the plans include:

- Implementation of new capital facility improvements and urban design improvements.
- Adoption of amended stormwater and habitat regulations throughout the Gorst Creek watershed.

- The creation of new land use designations, development regulations and design guidelines in Alternative 3 to minimized impacts of development, especially in environmentally sensitive areas.

Applicable Regulations and Commitments

In addition to the incorporated plan features, the following regulations and commitments would help mitigate impacts of additional people, activity, and development within the watershed and UGA. Below are listed key sections of Kitsap County's code and Comprehensive Plan.

- KCC 17.382 – Density, Dimensions, and Design
- KCC 17.385 – Landscaping
- KCC Title 19 – CAO
- Kitsap County Capital Facility Plan, an appendix to the Comprehensive Plan

Corollary chapters of the BMC and Comprehensive Plan include:

- BMC Title 20, Division III. Zoning, with development standards in each zone as well as general and specific standards for particular uses
- Chapter 20.50, Landscaping
- BMC Chapter 20.14, Critical Areas
- Bremerton City Services Element of Comprehensive Plan

Other Potential Mitigation Measures

None.

Significant Unavoidable Adverse Impacts

Population, employment and housing will increase under any of the alternatives reviewed, to different degrees. Alternative 2 and Alternative 3 have the most growth in population and Alternatives 1 and 2 the most growth in employment. Additional growth in any of the scenarios will increase the demand for the development of housing and commercial uses. The additional growth will also result in secondary impacts on the natural and built environment and to the demand for utilities and public services, which is addressed in the appropriate sections of this Draft EIS. Regarding the character of the local economy, there are no potential significantly adverse impacts are identified from the anticipated growth in population and employment.

3.9 Aesthetics

This section discusses the existing aesthetic character of the study area and the aesthetic impacts associated with the three alternatives. The aesthetic character of the study area is described in terms of the overall visual character, building height, bulk, and scale, and views.

Affected Environment

The aesthetic character of the study area comprises a wide range visual characteristics and distinct physical environments. The Gorst watershed is largely undeveloped and rural in character, while the Gorst UGA contains a mix of more developed, urban, and highway oriented uses.

The identity of the subject area is strongly influenced by its aesthetic qualities, both positive and negative. Comments received during the course of the public process, including those gathered during the SWOT analysis (see Section 2 *Alternatives*), indicate that strong opinions exist regarding the aesthetic quality of the study area. Impacts to aesthetics, whether maintaining positive attributes or remedying undesirable conditions, is a high priority issue for area stakeholders.

Positive aesthetic qualities noted during the public process include:

- Waterfront aesthetic, which is attractive to development
- Views of the water and Olympic mountains
- Natural beauty of forested areas, streams, and wildlife

Negative aesthetic qualities noted, include:

- Unattractive, poorly maintained buildings
- “Seedy” highway commercial businesses
- “Junky” properties
- Haphazard development
- No sense of place
- Litter, especially on the beach
- Traffic congestion

Such comments, in combination with observations of existing physical characteristics, provide a baseline for evaluating aesthetic impacts of the three alternatives.

VISUAL CHARACTER

This section describes the existing visual character of the study area, including the defining characteristics and relative quality of the natural and built environments; the design, character, and condition of buildings; and the design, character, and condition of public spaces, including streetscapes.

Watershed

This section describes the visual character of the Gorst watershed, excluding that portion of the watershed within the Gorst UGA.

The City of Bremerton owns approximately 3,000 acres in the upper Gorst watershed, commonly referred to as the CUL. The CUL are managed for low intensity forestry uses, limited commercial and recreational uses, and for the protection of the watershed and wildlife habitat. The CUL are largely composed of native evergreen and mixed forest and previously cleared forested areas in various stages of regrowth. Users of the area may include

recreational users, forestry workers, or people passing through on area roads. The overall character of the Utility Lands consists of undisturbed or resource-oriented forest.

The Gold Mountain Golf Club is located in the central western portion of the Gorst Watershed. The character of this area is of developed open space.

In the western portion of the watershed along SR 3 are portions of SKIA UGA and the Bremerton National Airport. A mix of land uses currently occupies this area, including a mobile home park, drive-in movie theater, light industrial uses, and undeveloped land. As a result, the area lacks a cohesive aesthetic but is generally highway oriented and fairly utilitarian.

Low density, rural residential uses occupy significant portions of the watershed, including the area south of SR 3 along Sunnyslope Road SW and the areas immediately west and south of the Gorst UGA. These areas are occupied by a mix of house types on larger lots and a road network characterized by two-lane or unstriped paved roads without curbs or sidewalks.

The Port Orchard city limits extend into the southeastern portion of the Gorst watershed. This area contains a partially developed master planned residential community known as McCormick Woods.

**Figure 3.8-1
Gorst Creek**



Source: City of Bremerton, undated

Gorst UGA

The Gorst UGA is more intensely developed and urban in character than the non-UGA portions of the Gorst watershed. A mix of uses occupy the UGA including highway oriented commercial, single-family residential, light industrial uses, developed and undeveloped open space, and an operating gravel quarry. The UGA can be thought of as comprising several distinct aesthetic environments: the highway corridors of SR 3 and SR 16, the generally single-family residential areas located off the highway, the quarry, and scattered areas of undeveloped open space.

The heavily trafficked state highways, SR 3 and SR 16, form the backbone of the UGA and dominate the visual character of the area in the minds of area stakeholders. The aesthetic character of these highway corridors is heavily highway and automobile oriented, with a prevalence of impervious surfaces, overhead power lines, highway signage, highway scale lighting, pole mounted signage, and an overall lack of pedestrian facilities and pedestrian scale. Land uses are a mix of industrial and commercial and lack any cohesive design character.

The area waterward of SR 3 and SR 16 consists of a combination of much the same type of highway strip development as is found elsewhere along the state highways, alternating with undeveloped shoreline and intertidal areas. As such, the character of this area is mixed. Areas that provide views to the water have a potentially high aesthetic quality; however, the larger area is still largely dominated by roadways with heavy traffic and uncoordinated development.

The quarry site located north of West Sherman Heights Road encompasses an active quarry as well as undeveloped, forested land.

The remainder of the UGA is characterized by a mix of low density, single-family residential development, undeveloped open space, and scattered industrial uses, such as along and north of West Belfair Valley Road. The residential development tends to have a rural feel, similar to the rural residential located in the Gorst Watershed. Density is low, housing types, ages, and conditions are mixed without consistent design elements, and roads tend to be low-volume roads without curbs or sidewalks.

Gorst Creek traverses the UGA in the triangle north of SR 3 and south of W Belfair Valley Road. This area is characterized by a mix of undeveloped forested riparian land adjacent to Gorst Creek and some low-density residential uses.

**Figure 3.8-2
Visual Character of Gorst UGA Highway Corridor**



Source: BERK July 2011

BUILDING HEIGHTS, BULK, AND SCALE

Watershed

Residential buildings in the Gorst Watershed are predominately modestly scaled, one- and two-story, single-family homes and outbuildings, modular homes, and mobile homes. The bulk and scale of these homes is consistent with a low-density, rural residential area. Due to the limited height and low-density nature of the residential area, shading impacts of existing structures on adjacent properties are negligible.

A variety of other building types exist in the watershed, particularly in the SKIA area, including industrial or agricultural pole buildings, warehouses, and other structures. While the height and bulk of some of these

structures is greater than that of nearby residential areas, the density of development is low, and topography combined with trees and other vegetation provides some screening. The result is that the more industrial areas still have a somewhat rural scale and do not tend to dominate the landscape.

The screen at the drive-in movie theater along SR 3 is a unique structure that is taller than other structures in the areas. But given the generally low density of development in the area, it does not detract from the rural feel of the area.

Gorst UGA

Buildings along the SR 3 and SR 16 corridors tend to be low-rise, one- or two-story buildings in a range of sizes. Smaller buildings include restaurants, taverns, markets, and espresso stands, while larger buildings include industrial buildings, an auto dealership, and self-storage buildings. The height and bulk of buildings does not dominate the scale of the area. Rather, it is the automobile-oriented nature of development, with buildings spread apart from one another, separated by paved parking areas and driveways, and set back from the highway that defines the scale of the area. The area is not pedestrian scaled.

Residential development in the UGA is similar in height, bulk, and scale to rural residential development elsewhere in the watershed. Buildings are one- and two-story, modestly scaled single-family homes. Density is low and roads lack curbs and sidewalks. Homes are set back from the street and often screened by vegetation and fences. Shading impacts are negligible.

Scattered industrial uses elsewhere in the UGA consist of larger buildings as well as an electrical substation. The larger buildings and the substation are screened from nearby residential development by trees and other vegetation.

Figure 3.8-3
Examples of Building Height, Bulk, and Scale of UGA Highway Corridor



Source: BERK, July 2011

VIEWS

Watershed

The Gorst Watershed provides numerous scenic mountain and water views. The Olympic Mountains, Mount Rainier, and the Sinclair Inlet are all visible from various points in the watershed. Territorial views also exist, including views of local hills and forested areas.

Gorst UGA

Sinclair Inlet and local forested hills provide a scenic backdrop within the UGA, particularly at higher elevations, such as along Sherman Heights Road.

**Figure 3.8-4
Sinclair Inlet View**



Source: BERK, August 2011

Impacts

The following sections assess potential aesthetic impacts for three alternatives. The assessment considers the projected growth associated with each alternative as well as the proposed Watershed Framework & Characterization Plan and Subarea Plan measures that would affect the aesthetic characteristics of the built and natural environment.

When assessing aesthetic impacts, it is important to acknowledge that the aesthetic preferences of individual viewers varies, and what one perceives as a negative impact, another may see as neutral or positive. Consideration is given to the comments received during the public process, as noted above. These comments indicate a level of agreement regarding the positive attributes of the natural scenery present within the watershed, as well as the negative attributes of the highway-dominated, haphazard development present in the UGA. Other considerations include generally accepted urban design principles regarding land use compatibility, cohesiveness of design character, potential conflicts of building height, bulk, and scale, and view impacts.

IMPACTS COMMON TO ALL ALTERNATIVES**VISUAL CHARACTER*****Watershed***

Impacts to the visual character of the CUL, SKIA, and McCormick Woods would be minimal for all alternatives, including Alternative 1. The CUL would continue to be managed as undeveloped or for limited resource-oriented

uses. Existing roads would be maintained and new development would be minimal. The visual character of this area would remain as largely forested, undeveloped, or resource-oriented.

SKIA is subject to a separate subarea plan. The Gorst Creek Watershed Characterization & Framework Plan would not affect the implementation of the SKIA plan. The majority of projected future employment growth in the watershed would occur in SKIA. It is expected that future development in SKIA would include a mix of light industrial, commercial, and airport oriented uses under all alternatives. The resulting visual character would be more intensely developed than the current conditions, but with a similar mix of uses and primarily oriented around SR 3 and the Bremerton National Airport.

McCormick Woods is subject to a development agreement under the jurisdiction of the City of Port Orchard. It is unlikely that the Gorst Creek Watershed Characterization & Framework Plan would affect the terms of this agreement or the nature of development that is to occur. Under all alternatives, future development in McCormick Woods would consist of low density residential uses. The visual character would remain as low density residential, but with a greater total extent of developed area.

Gorst UGA

The Gorst Creek Watershed Characterization & Framework Plan would not have any adverse impacts within the Gorst UGA. The Watershed Characterization & Framework Plan supports the Guiding Principles that protect forest lands, maintain rural densities, and promote well-designed urban development in the Gorst UGA.

BUILDING HEIGHT, BULK, AND SCALE

Watershed

The Gorst Creek Watershed Framework & Characterization Plan would not affect building height, bulk, and scale. Future buildings would continue to be regulated by existing City of Bremerton and Kitsap County zoning and building regulations under all alternatives. While development is expected to increase over the planning horizon, future buildings would be of a similar height, bulk, and scale to existing conditions and therefore no significant adverse impacts are anticipated under any of the alternatives.

Gorst UGA

The Gorst Creek Watershed Framework & Characterization Plan would direct building height, bulk, and scale within the Gorst UGA.

VIEWS

Watershed

The Gorst Creek Watershed Characterization & Framework Plan is not anticipated to significantly affect views under any of the alternatives. The Framework Plan would not affect building design or building heights. While future development is expected to result in vegetation clearing, the effects of this clearing would be localized and unlikely to significantly affect views. No significant adverse impacts to views are expected under any of the alternatives.

Gorst UGA

The proposed Gorst Creek Watershed Characterization & Framework Plan does not regulate views. None of the alternatives propose to reroute the major highway corridors within the UGA. As such, existing mountain views as seen when traveling along these corridors are unlikely to be significantly altered under any alternative.

Alternative 1: No ActionVISUAL CHARACTER**Watershed**

Excluding the CUL, SKIA, and McCormick Woods, the remaining portions of the watershed are expected see limited rural scale development during the plan horizon. Future development is assumed to continue to be regulated by current Kitsap County and City of Bremerton zoning and building regulations. The character of future development is expected to remain as largely rural residential. Under current regulations, a greater amount of vegetation clearing and impervious area is expected compared to action alternatives, which to a greater extent implement LID and cluster development measures that intend to reduce impervious area and increase native vegetation retention. This would result in the visual character of these areas being somewhat more developed and less natural than under the two action alternatives. However, given the limited amount of development expected (e.g. less than 500 new dwellings), and the low density and rural character of future development, no significant adverse impacts to visual character under Alternative 1 are expected.

Gorst UGA

Under Alternative 1, the Gorst UGA would be subject to the current Kitsap County Comprehensive Plan land use designations, and is projected to see substantial employment growth of 742 jobs and limited population growth of 82 persons during the plan horizon.

In some respects, the visual character of Alternative 1 would be similar to current conditions. Much of the existing development would continue in its present form, and a substantial portion of new development along the highway corridors would be similarly highway oriented, low rise development with large areas of impervious surfaces. Alternative 1 also assumes that the gravel quarry would continue operations.

Alternative 1 would result in significant changes to the current visual character. This change would be the result of the substantial projected growth in employment-generating uses (e.g., commercial and industrial). The current land use designations identify large areas that are currently occupied by low density residential uses or are undeveloped that would be available for high intensity commercial and mixed uses in the future. Therefore it is likely that some existing, low density residential uses would be displaced by more intensely developed commercial uses of a substantially different character. Current Kitsap County development regulations establish building setbacks and landscaping and screening requirements that are intended to ensure compatibility of residential and non-residential uses. These regulations would mitigate transition impacts.

BUILDING HEIGHT, BULK, AND SCALE**Watershed**

The impacts associated with building height, bulk, and scale under Alternative 1 would be the same as those described for Impacts Common to All Alternatives.

Gorst UGA

Along the highway corridors, impacts related to building height, bulk, and scale and likely to be negligible. The current conditions include a wide variety of building bulk and scale, while buildings tend to one or two stories. Future development of commercial and industrial uses would likely fall within the current range of building height, bulk, and scale.

In those areas of existing low density residential or undeveloped land that are identified for commercial and mixed uses, the potential exists for negative impacts related to building height, bulk, and scale as these areas transition from residential to commercial during the course of the plan horizon. Current land use designations would allow for buildings of substantially greater height, bulk, and scale adjacent to small single-family residences. Current Kitsap County setback and landscaping standards would mitigate these impacts.

VIEWS**Watershed**

The impacts associated with views under Alternative 1 would be the same as those described for Impacts Common to All Alternatives.

Gorst UGA

For the most part, mountain and water views would be minimally affected under Alternative 1. Some localized impacts may occur if, for instance, a new building blocks or alters an existing view from a neighboring parcel. However, these types of impacts are difficult to predict and, when considering the UGA as a whole, are not likely to be significant.

Views of Sinclair Inlet may be negatively affected as waterfront areas are more intensely developed with commercial and industrial uses. Given the extent of development already present in these waterfront areas, however, these impacts are not expected to be significant.

Alternative 2VISUAL CHARACTER**Watershed**

Alternative 2 assumes that the recommendations of the Gorst Creek Watershed Characterization & Framework Plan are fully implemented, which would affect the visual character of future development in the watershed, excluding the CUL, SKIA, and McCormick Woods. The remaining portions of the watershed are expected to see limited, largely rural residential development and the continuation of existing uses such as the Gold Mountain Golf Club and existing rural residential areas. The Gorst Creek Watershed Framework & Characterization Plan would result in new development regulations and other actions that would restore vegetation cover in currently developed areas and would promote the use of clustering and LID for proposed new development. The result of these measures would be that future development within the watershed would result in less vegetation clearing, fewer impervious surfaces, and a more natural visual character than what would be expected under Alternative 1. The promotion of a more natural character to future development would serve to maintain the positive impressions of the watershed by area stakeholders as an area possessing natural beauty. No significant adverse impacts are expected for Alternative 2.

Gorst UGA

Alternative 2 projects employment to grow by 606 jobs and population to grow by 985 persons. The employment growth is somewhat less than the growth projected under Alternative 1, but population growth is considerably more. Much of this projected population growth is expected to occur as medium-density residential development of the quarry site, once mining operations cease and reclamation requirements are met. Alternative 2 would also implement new development standards and design guidelines that would result in more pedestrian oriented and sustainable development than that envisioned by current standards.

Implementation of Alternative 2 would result in substantial changes to the present visual character of the UGA. Areas of existing low-density residential uses would be converted to more intense commercial development, and the quarry site would be converted from its present resource extraction use to a residential neighborhood. This transition would occur incrementally over the course of the planning horizon and may have localized negative impacts, such as in areas where more intense commercial development displaces existing low-density residential uses or where currently forested portions of the quarry site are cleared for development. Similarly, some existing development would continue in its present form as legal nonconforming uses, resulting in some juxtaposition of building sites with divergent visual characters.

The overall impact of Alternative 2 on the visual character of the UGA is likely to be positive, however, as new Gorst Subarea Plan policies and urban design concepts would result in new design guidelines that mitigate many of the negative aesthetic qualities frequently associated with the Gorst UGA. Streetscapes would be improved as street trees, planter boxes, planter strips, and sidewalks are introduced. Buildings would be brought closer to the street with entrances oriented to the street and connected to sidewalks, with street-facing windows and weather protection, creating a more welcoming, pedestrian friendly environment. Impervious surfaces would be reduced and parking would be placed to the sides or rear of buildings, reducing the desert-like quality of large expanses of pavement.

BUILDING HEIGHT, BULK, AND SCALE

Watershed

The impacts associated with building height, bulk, and scale under Alternative 2 would be the same as those described for Impacts Common to All Alternatives.

Gorst UGA

Similar to Alternative 1, some conflicts of scale may occur as areas currently occupied by low-density residential uses transition to more intensely developed commercial uses. Subarea Plan policies and design concepts should mitigate much of this conflict by encouraging a more consistent building-street relationship and avoiding the often haphazard nature of development that currently characterizes much of the UGA.

New development along the highway corridors would likely be within the existing range of building heights, bulk, and scale, but would have a more consistent and attractive design and streetscape.

VIEWS

Watershed

The impacts associated with views under Alternative 2 would be the same as those described for Impacts Common to All Alternatives.

Gorst UGA

Similar to Alternative 1 some localized view impacts may occur as sites develop; however, these impacts are not expected to be significant. Development of the quarry site as a residential neighborhood would have positive and negative view impacts. Positive impacts would result from new views of Sinclair Inlet being opened up from the new neighborhood. Views of the new neighborhood from elsewhere in the UGA may be considered negative as currently forested areas are cleared and replaced by development.

Alternative 3

VISUAL CHARACTER

Watershed

The impacts associated with visual character under Alternative 3 are the same as those described for Alternative 2.

Gorst UGA

Alternative 3 would support greater population growth, at 1,082 persons, and less employment growth, at 333 jobs, than the other two alternatives. The types of development envisioned in this alternative differ from other alternatives as well. Alternative 3 places a greater emphasis on mixed use development as well as more aggressive LID measures in sensitive areas of the UGA, such as adjacent to Gorst Creek and waterward of SR 3 and SR 16.

The impacts of Alternative 3 are similar to those of Alternative 2 in terms of the extent of overall change in visual character from the present condition to a more compactly developed urban center, the potential for conflicts

during the transition from current conditions to future build out, and the overall positive effect of new design policies and concepts.

There are several differences between Alternatives 3 and 2. Alternative 3 envisions more residential and less commercial growth, with a greater emphasis on mixed use development. The greater amount of residential may ease some of the potential transition conflicts in currently residential areas.

Alternative 3 proposes a Low Intensity Waterfront zone waterward of SR 3 and SR 16. This would have the effect of transitioning this area from its current condition to one more characterized by low impact commercial development with less impervious area, greater shoreline setbacks, more vegetation, and more public access. As this area is largely built out at present, the transition would occur slowly as parcels redevelop and transition conflicts would likely be minimal. Upon full implementation, the aesthetic effect would be positive as the shoreline would have a more natural aesthetic and there would be more opportunities for public viewing of the shoreline.

BUILDING HEIGHT, BULK, AND SCALE

Watershed

The impacts associated with building height, bulk, and scale under Alternative would be the same as those described for Impacts Common to All Alternatives.

Gorst UGA

Building height, bulk, and scale impacts of Alternative 3 would be similar to those described for Alternative 2.

VIEWS

Watershed

The impacts associated with views under this alternative would be the same as those described for Impacts Common to All Alternatives.

Gorst UGA

View impacts of Alternative 3 would be similar to those described for Alternative 2.

Mitigation Measures

Incorporated Plan Features

Watershed

The Gorst Creek Watershed Framework & Characterization Plan identifies areas for protection, restoration, and development. The effects of these actions on aesthetics relate to the maintenance of a more natural or rural visual character, the maintenance of vegetation cover, and the minimization of impervious areas.

Areas of protection are to be managed for the maintenance of forest cover, limited clearing, and minimal impervious surfaces. Areas identified for protection include the CUL and other forested areas in the north central portion of the watershed.

Areas of restoration would promote the re-establishment of habitat, including forest cover, riparian areas, and wetlands. Areas of restoration include the Gold Mountain Golf Club in the western portion of the watershed, and rural residential areas along Sunnyslope Road and to the west of the Gorst UGA. Existing development would remain in these areas, but new regulations would gradually increase native habitat.

Areas of development are considered to be suitable for growth, but would implement measures to control erosion and promote infiltration. Clustered development and LID would be encouraged for new development in these areas. Clustered development allows for the permitted density of a proposed development to be located on a smaller portion of a site, while requiring that the remainder portion be kept in a natural state.

LID is a method of land development that seeks to mimic pre-development hydrology through the use of clustering, retaining native vegetation, and minimizing impervious surfaces, among other measures.

Identified areas of development include the SKIA area and adjacent areas, and the currently developed areas of the Gorst UGA and the McCormick Woods area of the City of Port Orchard. SKIA would be subject to its recently adopted design guidelines. McCormick Woods is a master planned development subject to a development agreement. The Gorst UGA would have its own design guidelines in the Subarea Plan as further described below.

Gorst UGA

The Gorst Subarea Plan projects growth for the UGA that differ for each alternative. These growth projections would affect aesthetics within the UGA as a result of differences in the extent of development expected within the UGA, the mix of development types expected (e.g., residential versus commercial), and the density of development expected (e.g., medium density residential versus low density residential). The primary means of implementation would be zoning and development regulations that determine allowed and prohibited uses and establish minimum and maximum densities.

Applicable Regulations and Commitments

Current regulations and policies that may affect the aesthetic characteristics of the watershed and UGA include Kitsap County and City of Bremerton comprehensive plans, shoreline master programs, critical area regulations, and zoning and development regulations, including those addressing landscaping, lighting, signage, and project review procedures. Following is a list of some of the applicable regulations and policies.

Kitsap County

- 2012 Comprehensive Plan
- KCC Title 16 Land Division and Development
- KCC Title 17 Zoning
- KCC Title 19 CAO
- KCC Title 21 Land Use Development and Procedures
- Shoreline Master Program (2013 updated draft adopted by Kitsap County, currently in review by Ecology) – also codified as KCC Title 22

City of Bremerton

- 2004 Comprehensive Plan
- BMC Title 20 Land Use Shoreline Master Program (update adopted by City of Bremerton, currently in review by Ecology) – part of BMC Title 20 Land Use, Chapter 16

Other Potential Mitigation Measures

Once a Preferred Alternative is selected development and design regulations would be prepared and are anticipated to address:

- Allowed and prohibited uses/development types
- Minimum and maximum density
- Building height
- Building setbacks
- Maximum lot coverage
- Maximum impervious area

- Critical area buffers

In addition other City or County regulations such as those governing signage, lighting, and landscaping would apply.

Future design guidelines developed with the Preferred Alternative would likely establish discretionary review of future development proposals focusing on the design of the public realm and those portions of private development sites that directly affect the public realm. The design guidelines are intended to promote walkability, complete streets, identifiable character, the efficient and coordinated use of land and infrastructure, and LID. Accordingly, the design guidelines may address:

- Streetscape guidelines
- Site planning guidelines

The streetscape guidelines apply to the design of public rights-of-way. Streetscape guidelines would address:

- Design of the roadway, including width of travel, bicycle, and parking lanes
- Design of the curb zone, which includes street trees and other amenities and infrastructure
- The sidewalk
- The transitional zone, which is the area between the sidewalk and edge of right-of-way
- Building frontage elements such as the provision of weather protection where buildings abut the right-of-way

The streetscape guidelines could vary based on type of roadway.

The site planning guidelines associated with the Preferred Alternative would likely address the design of individual building sites with regard to several aspects, including:

- Building orientation, including the location of entrances
- Building façade, including street-facing windows, building articulation, and blank wall limitations
- Parking and vehicular access, including location of parking, curb cuts, shared parking, and pedestrian accessibility

Significant Unavoidable Adverse Impacts

New development and redevelopment would result in changes to the current aesthetic conditions of the study area under all alternatives. The significance of visual impacts on the study area depends in large part on the values of those viewing the changes as well as the overall character and quality of the architectural and urban design features incorporated into future development.

Under all alternatives, temporary character and shading impacts would result from different building heights between adjacent properties as development of individual sites occurs. Currently, most properties in the study area are at low rise scales and have not developed to the extent allowed under present zoning. In some cases the action alternatives would allow greater heights than present zoning. Impacts would diminish as redevelopment becomes more widespread throughout the study area. Existing and potential development regulations regarding height limits, setbacks, and screening would mitigate for such impacts.

The overall aesthetic character of the study area would change under all alternatives as development and redevelopment occurs. All alternatives would be subject to mitigation measures in the form of policies, development regulations, and design standards that will mitigate for potentially adverse aesthetic impacts or result in a positive change to the aesthetic character of the study area. Therefore, no significant unavoidable adverse impacts on aesthetics are anticipated.

3.10 Cultural Resources

The analysis of impacts to cultural resources for the proposed project was completed at a programmatic level for the anticipated impacts of growth and civic investment throughout the Study Area. The analysis included extensive background research and tribal consultation; no fieldwork or project specific inventory and evaluation of cultural resources was conducted.

The term cultural resource in this document refers to archaeological sites, TCPs and historic built environment structures, regardless of eligibility for listing in the Washington Heritage Register (WHR) or the National Register of Historic Places (NRHP). The term significant cultural resource refers to archaeological sites, TCPs, and structures that are eligible for listing in the WHR or NRHP.

Regulatory Context

The following regulatory context applies to both the Watershed and Gorst UGA.

Washington SEPA

SEPA requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies be planned so that environmental considerations—such as impacts on cultural resources—are considered when state-agency-enabled projects affect properties of historical, archaeological, scientific, or cultural importance WAC 197-11-960). These regulations closely resemble NEPA.

Under SEPA, DAHP is the specified agency with the technical expertise to consider the effects of a proposed action on cultural resources and to provide formal recommendations to local governments and other state agencies for appropriate treatments or actions.

Minor construction currently exempt from SEPA review includes the following, except when undertaken wholly or partly on lands covered by water (WAC 197-11-800(1))(b):

- (i) The construction or location of four detached single family residential units.*
- (ii) The construction or location of four multifamily residential units.*
- (iii) The construction of a barn, loafing shed, farm equipment storage building, produce storage or packing structure, or similar agricultural structure, covering 10,000 square feet, and to be used only by the property owner or his or her agent in the conduct of farming the property. This exemption shall not apply to feed lots.*
- (iv) The construction of an office, school, commercial, recreational, service or storage building with 4,000 square feet of gross floor area, and with associated parking facilities designed for twenty automobiles. This exemption includes stand-alone parking lots.*
- (v) Any landfill or excavation of 100 cubic yards throughout the total lifetime of the fill or excavation not associated with an exempt project in subsection (b)(i), (ii), (iii), or (iv); and any fill or excavation classified as a Class I, II, or III forest practice under RCW 76.09.050 or regulations thereunder.*

Cities and counties may increase the exemption for minor new construction. Currently, the City of Bremerton uses standard exemptions, except these do not apply on lands wholly or partially covered by water or in the case of critical areas (wetlands, critical aquifer recharge areas, flood hazard areas, geologic hazards, and fish and wildlife conservation areas). However, in the case of critical areas, SEPA review is limited to determining impacts on critical areas not otherwise covered by CAOs. The City is considering increasing its exemption levels consistent with new SEPA rules.

Kitsap County has adopted similar SEPA rules as the City of Bremerton; it applies flexible exemption levels in UGAs including Gorst, as follows:

A. The county establishes the following exempt levels for minor new construction under WAC 197-11-800(1)(c):

- 1. For the construction or location of residential dwelling units in WAC 197-11-800(1)(b)(i):*
 - a. Up to nine residential dwelling units within the boundaries of an UGA; or*
 - b. Up to four residential dwelling units outside the boundaries of an UGA*
- 2. For agricultural structures in WAC 197-11-800(1)(b)(ii): up to fifteen thousand square feet of ground coverage. This exemption shall not apply to feed lots*
- 3. For the construction or location of office, school, commercial, recreational, service or storage buildings in WAC 197-11-800(1)(b)(iii): up to eight thousand square feet with associated parking up to forty parking spaces*
- 4. For the construction or location of parking lots in WAC 197-11-800(1)(b)(iv): up to forty parking spaces*
- 5. For any landfills or excavations in WAC 197-11-800(1)(b)(v):*
 - a. Up to five hundred cubic yards; or*
 - b. Up to one hundred fifty cubic yards if the proposal is located on property subject to the provisions in Title 22, Shoreline Management Master Program.*

Washington Heritage Register

The WHR is an official listing of historically significant sites and properties found throughout the state. The list is maintained by DAHP and includes districts, sites, buildings, structures, and objects that have been identified and documented as being significant in local or state history, architecture, archaeology, engineering, or culture. To qualify for placement on the WHR, the resource must meet the following criteria:

- A building, site, structure or object must be at least 50 years old. If newer, the resource should have documented exceptional significance.
- The resource should have a high to medium level of integrity (i.e., it should retain important character-defining features from its historic period of construction).
- The resource should have documented historical significance at the local, state, or federal level.

Governor's Executive Order 05-05

Washington State Executive Order 05-05—which requires state agencies with capital improvement projects to integrate Washington State Department of Archaeology & Historic Preservation (DAHP), the Governor's Office of Indian Affairs, and concerned tribes into their capital project planning processes—was signed into action by Governor Chris Gregoire in November 2005. All state agency capital construction projects or land acquisitions, not otherwise reviewed under federal law, must comply with this executive order, if the projects or acquisitions have the potential to affect cultural resources. Agencies with projects or acquisitions subject to review under the executive order must consult with DAHP and concerned tribes and invite their participation in project planning. If cultural resources are present, then reasonable steps to avoid, minimize, or mitigate potential effects must be taken.

Other Applicable Cultural Resources Laws

Other state laws that govern the protection of archaeological resources include:

- Chapter 27.44 RCW, Indian Graves and Records, provides for the protection of Native American graves and burial grounds, encourages voluntary reporting of said sites when they are discovered, and mandates a penalty for disturbance or desecration of such sites.

- Chapter 27.53 RCW, Archaeological Sites and Resources, governs the protection and preservation of archaeological sites and resources and establishes DAHP as the administering agency for these regulations.
- RCW 36.70A.020 includes a goal to “Identify and encourage the preservation of lands, sites, and structures that have historical, cultural, and archaeological significance.” Cities planning under the Washington State GMA must consider and incorporate this historic preservation goal in their Comprehensive Plans and implementing development regulations.
- Chapter 68.60 RCW, Abandoned and Historic Cemeteries and Historic Graves, provides for the protection and preservation of abandoned and historic cemeteries and historic graves.

Affected Environment

This section describes the environmental and cultural setting of the Study Area, including the Watershed and Gorst UGA, and was used to assess the potential for cultural resources to be present within the study area and to define the potential impacts. A review of the physical environments that affect human behavior and the cultural setting can help generate expectations about how archaeological sites could be distributed across the landscape and the kinds of activities that occurred there.

Environmental Context: Watershed and UGA

Geology

The Puget Lobe of the Fraser Glaciation covered parts of Puget Sound with up to 1250 meters (4060 ft.) of ice. The glacier’s terminus was located south of Budd Inlet. The Puget Lobe retreated to the area near Port Townsend by approximately 15000 BP (Thorson 1980). When it retreated north into the Strait of Juan de Fuca, proglacial lakes were inundated with saltwater, the water level dropped and the glacial processes of deposition were replaced by a landform of unconsolidated glacial clay, silt, sand and gravel. Surface geology is characterized as unconsolidated sediments from the Pleistocene continental glacial drift, Quaternary alluvium, dune sand and loess (Troost and Booth 2008; Puget Soundkeeper Alliance 2008).

The Gorst Creek Watershed is located within the Puget Trough Physiographic Province (Franklin and Dyrness 1988). The specific geographic province is referred to as the Puget Lowland or Puget Sound Lowland. The landform of the Kitsap Peninsula is characterized by gently rolling, low hills dissected by numerous rivers and stream. Within the project vicinity there are a number of small coves and inlets consisting of sandy beaches and mud flats.

Paleoenvironment

Vegetation composition and animal distributions in the Puget Lowlands have changed dramatically since the end of the Pleistocene. Lodgepole pine covered the newly deglaciated surface, following in succession by Douglas fir, white pine, spruce and alder (Barnosky 1984). The climate of the region became warmer and drier between 10000 and 6000BP then present day. Forests were more open and prairies were common throughout the Puget Lowland in gravelly outwash soils. Beginning at about 6000 to 5000 BP conditions began to change with cooler temperatures and increased precipitation and have remained relatively stable to the present with forests of western red cedar, western hemlock and Douglas fir (Whitlock 1992).

Cultural Context: Watershed and UGA

This section presents an overview of the cultural setting of the Study Area, including the Precontact, ethnographic and historic period contexts.

Precontact

Studies of the prehistory of the Puget Sound and surrounding areas divide the prehistoric cultural sequence into multiple phases or periods from about 12,500 to 225 years ago, and are delineated by changes in regional patterns of land use, subsistence, and tool types over time. These phases are academic constructs and do not necessarily reflect tribal viewpoints. This document uses the Pacific Northwest coast precontact cultural sequence provided by

Ames and Maschner (1999) to help describe patterns in precontact cultural developments in the Puget Sound region. The sequence includes five periods, which are briefly summarized below:

- **Paleo-Indian (prior to 12,500 years ago).** Characterized by sparse and highly mobile groups that primarily used terrestrial resources. Assemblages include large stone bifaces and bone technology.
- **Archaic (12,500 to 6,400 years ago).** Characterized by generalized resource use. Assemblages include leaf-shaped bifaces, cobble and cobble-flake tools, bone tools, thin shell midden and faunal remains along coastal areas, and an absence of faunal remains in upland areas.
- **Early Pacific (6,400 to 3,800 years ago).** Characterized by increased sedentism, expanded use of intertidal resources, and increased dependence on bone and antler tools. Assemblages include bone points, barbs, and harpoons, ground stone points and celts, and extensive shell middens.
- **Middle Pacific (3,800 to 1,800–1,500 years ago).** Characterized by the first evidence of permanent social inequality, as well as a shifting emphasis to storage-based economy, intensification of salmon fishing, increase in the variety of bone and antler tools, and near-modern art styling. Assemblages include artifacts from the Early Pacific period, as well as plank house remains, wooden boxes, toggling harpoons, fish hooks, and fish rakes.
- **Late Pacific (1,800–1,500 to around 225 years ago).** Characterized by the emergence of extremely large houses, heavy-duty woodworking tools, and a decreased reliance on chipped stone tools.

The first widely accepted evidence of human occupation of the Puget Sound region comes in the form of large fluted stone bifaces, identified as Clovis technology. This technology has been dated to between 13,300 and 12,800 years ago across North America (Waters and Stafford 2007), but has not been found in datable contexts in the Puget Sound. It is commonly thought that this technology was used by highly mobile foragers (Bonnichsen and Turnmire 1991; Waguespack and Surovell 2003). Although widespread, artifacts attributed to Clovis occupation of the Puget Sound are rare and commonly recorded as isolated finds on upland terraces associated with peat deposits (Williams et al. 2008). Near the project vicinity, one Clovis-style isolate has been identified on the Kitsap Peninsula near Port Orchard (Stein et al. 2004), and another was identified near Waughop Lake (Avey 1991:15–18).

Archaeological sites attributed to the Archaic and Early Pacific periods are most commonly situated on upland plains with very few coastal sites from this period. Throughout the Puget Sound region, sites with heavily weathered basalt flakes, cores, and lanceolate, or Cascade-style bifaces, are commonly assigned to the Archaic and Early Pacific periods. Based on well-dated stylistic comparison of bifaces from the Glenrose Cannery site in British Columbia, Nelson (1990) suggests that these upland sites are comparable in age and date between 10,000 and 6,000 years ago. However, several investigators have noted that leaf-shaped points are found in a variety of well-dated contexts that range from 9,950 to 2,260 years in age (Blukis Onat et al. 2001; Greengo and Houston 1970; Shong et al. 2007). Upland archaeological sites tend to consist of scatters of lithic materials at or just below the ground surface, rarely contain organic materials such as charcoal and bone, and tend to show signs of disturbance from bioturbation (Kiers and Blukis Onat 2008).

Archaeological sites situated along the coastal margin and in riverine settings become increasingly prevalent during the Middle Pacific period, although the highest frequency of known coastal sites have been dated to the Late Pacific period. Accumulations of shell and bone (termed shell middens), technological innovation and intensification in the form of increasingly complex composite food-procurement technology (e.g., toggling harpoons, fish weirs), greater numbers of groundstone artifacts, as well as large wooden plank houses appear during these periods. These periods are also characterized by increased warfare and interpersonal violence as evidenced by physical trauma indicators observed in burials from this time (Ames and Maschner 1999). Analysis of faunal remains from archaeological sites dated to these periods indicates that salmon were an important, consistently exploited, resource in the region (Butler and Campbell 2004). Several coastal archaeological sites are located along the shoreline of Quartermaster Harbor in the vicinity of the APE (J. Stein 2002).

Ethnography and Ethnohistory

The Study Area is in the ethnographic territory of the Suquamish, a south Puget Sound Lushootseed speaking group. The traditional territory of the Suquamish centered along Puget Sound from the Kitsap Peninsula to Hood Canal, including Bainbridge Island and portions of Whidbey Island (Ruby and Brown 1992; Snyder 1968).

Suquamish subsistence was traditionally based upon seasonal availability of terrestrial and marine resources. The most important resources of which was salmon, though a variety of other fish, shellfish, roots, bulbs and berries were also part of their diet. Winter villages were often located on sheltered bays at or near the mouths of streams. Ethnographically recorded Suquamish villages included a village at Sandy Hook south of Suquamish and on Miller Bay north of Suquamish (Snyder 1968; Waterman 2001). Spring, summer and fall month's small family groups dispersed to camps along inlet, shallow bays and creeks for fishing and hunting and gathering. Resources were harvested in quantity and preserved for consumption in the winter (Haeberlin and Gunther 1930).

With the establishment of Fort Nisqually in 1832, the Suquamish regularly traded with the Hudson's Bay Company. In 1855, Chief Sealh, a member of the Duwamish, signed the Point Elliott Treaty creating the Port Madison Reservation for several Puget Sound groups including the Suquamish (Ruby and Brown 1992).

History

In 1972, Captain George Vancouver was the first Euroamerican to record many of the prominent landmarks on Kitsap Peninsula, including Hood Canal, Bainbridge Island and Port Orchard. The Wilkes Expedition surveyed the area in 1841, naming Gig Harbor, Agate Passage, Port Madison and Sinclair Inlet. Many of the earliest Euroamerican settlements were associated with Fort Nisqually at the southern end of Puget Sound near present day DuPont. Farming and livestock were the primary activities at Fort Nisqually, although trading of furs and other commodities with Native American took place (Kirk and Alexander 1990).

Lumber became a major export industry for the Puget Sound in its early history. The California Gold Rush of 1849 had a significant impact in that industries development as it did for much of the Pacific Northwest. The mining camps and boomtowns in California required timber resources, and Washington's heavily timbered land and deep water ports provided the economic solution (Andrews 1956; Ficken 1987).

Known Cultural Resources and Previous Studies within the Study Area: Watershed and UGA

A records search of existing data was conducted of the Study Area using the Washington Information System for Architectural and Archaeological Records Database (WISAARD). This records search included a review of previously recorded cultural resources, including archaeological sites, built environment resources, and traditional cultural properties, as well as cultural resources studies within the Study Area that are listed in the WISAARD database.

Three previous studies were conducted within the Study Area, resulting in the identification of one archaeological site located within the Study Area. A summary of cultural resource studies identified during the literature review is provided in Table 3.10-1 *Previously Studied Cultural Resources within the Study Area*. Table 3.10-2 *Known Archaeological Resources within the Study Area* presents the known historic built environment resources that have previously been recorded within the Study Area.

One archaeological site has been previously recorded within the Study Area and has been determined eligible for listing in the NRHP: Site 45KP109, the Seshwa'p Site. Site 45KP109 consists of precontact artifacts fish bones and shell midden. The site was recommended eligible for listing in the NRHP for its ability to provide data significant in prehistory.

Three historic built environment resources have been previously recorded within the Study Area and are summarized in Table 3.10-3 *Known Historic Built Environment Resources within the Study Area*. None were found eligible for listing on the National Register of Historic Places.

Table 3.10-1
Previously Studied Cultural Resources within the Study Area

NADB#	Author (Year)	Report Title	Description	Cultural Resources
1345515	Chambers and Hartman (2005)	<i>Cultural Resources Assessment for the Gorst Creek Estuary Restoration Project, Kitsap County, Washington</i>	Archival research; archaeological survey.	None
1348864	Chambers (2007)	<i>Archaeological Monitoring for Phase 1 Gorst Creek Estuary Restoration Project, Kitsap County, Washington</i>	Archaeological Monitoring.	None
1347532	Berger (2006)	<i>Cultural Resources Assessment for the Sinclair Inlet Restoration and Trail Project, Kitsap County, Washington</i>	Archival research; archaeological survey.	None
1342954	Hartmann (1999)	<i>Data Recovery Plan for Investigations at 45KP109 for the WSDOT State Route 3 Project</i>	Archival research and report	Precontact Site

Table 3.10-2
Known Archaeological Resources within the Study Area

Site Trinomial	Description	Date Recorded	NRHP Eligibility
45PI109 (precontact site)	Precontact camp and/or village location. Archaeological resources include charcoal, fish bones, shellfish fragments. Site was dated to 928-991 BP	1992	Eligible

Table 3.10-3
Known Historic Built Environment Resources within the Study Area

Common Name	Address	Date Constructed	NRHP Eligibility
Svedburg Dwelling	9371 Thorson Rd W, Bremerton, WA	1941	Not Eligible
Harold Davis Dwelling	3657 W Frontage Rd, Port Orchard, WA	1941	Not Eligible
Theresa Lutz	4124 Division Ave Ct W, Bremerton, WA	1942	Not Eligible

Expectations for Cultural Resources Sensitivity within the Study Area

Archaeology

This section describes the expectations for where archaeological resources are anticipated within the Study Area. Expectations were developed based on an analysis of the environmental setting of the Study Area, and the relationship to human behavior. Analysis of the available background information, including the Suquamish Tribes GIS Archaeological Sensitivity Model for Kitsap County (Suquamish Tribe and Peterson GIS 2010) indicates that the Study Area is sensitive for buried archaeological resources.

The geology and geomorphology of coastal Puget Sound and surrounding uplands are conducive to the preservation of cultural resources (i.e., comprised primarily of stable or depositional landforms). Several documented precontact and historical archaeological sites are located within the Study Area or in the vicinity. Although only one site has been evaluated for NRHP eligibility, it is highly probable that eligible sites will be identified when project specific inventories and evaluations are conducted. The paucity of documented cultural resources within the Study Area is a function of lack of previous inventory efforts rather than lack of cultural resources.

Table 3.10-4 *Archaeologically Sensitive Landforms Likely Present in the Study Area* depicts the archaeological sensitivity areas within the Study Area and is based on the Suquamish Tribes GIS Archaeological Sensitivity Model for Kitsap County (Suquamish Tribe and PetersonGIS 2010). Figure 3.10-1 *Gorst Creek Watershed: Cultural Resources Probability* depicts high and moderate probability locations within the Study Area. The High Probability Areas include the locations where known archaeological sites and historic built environment resources have been recorded as well as those areas where archaeological sites are anticipated based on geology, soils, slope, Lidar, and ethnographic data. The Moderate Probability Areas include locations where there is the potential for archaeological sites and historic built environment resources to be located based on the available data; however none have been identified to date and historic and modern land use and alteration (e.g. freeway construction, mining activities, etc.) may have disturbed.

Historical and Modern Landscape Alteration

The landscape of the Study Area has undergone extensive modification since the first Euroamerican settlements were established in the area. Two of the most widespread landscape modification methods included the removal of sediment and filling of topographical depressions. Each of these methods has a unique effect on archaeological site preservation and visibility. By understanding these effects, expectations about archaeological potential can be generated for developed areas and then used to inform archaeological investigation strategies to identify where archaeological deposits are most likely to be present.

Sediment removal is used to decrease the elevation of and/or level the ground surface. Removal, also referred to as “cutting” is achieved through a variety of processes including mechanical excavation, hydraulic sluicing, and the use of explosives. Since cutting results in the removal of sediment, it provides no direct sedimentary indicators. However, locations where sediments have been removed can be recognized by truncation or absence of soil horizons. Cutting does not affect archaeological potential equally across landforms. For example, on landforms formed as a result of glacial advance and retreat, such as till plains, precontact human activity would have only occurred on the exposed ground surface. Removal of this surface would result in the removal of all sediments that have the potential to contain intact archaeological deposits. For example, the ground disturbance associated with the quarry within the Study Area would have substantially disturbed, and likely removed, all evidence of precontact habitation and use.

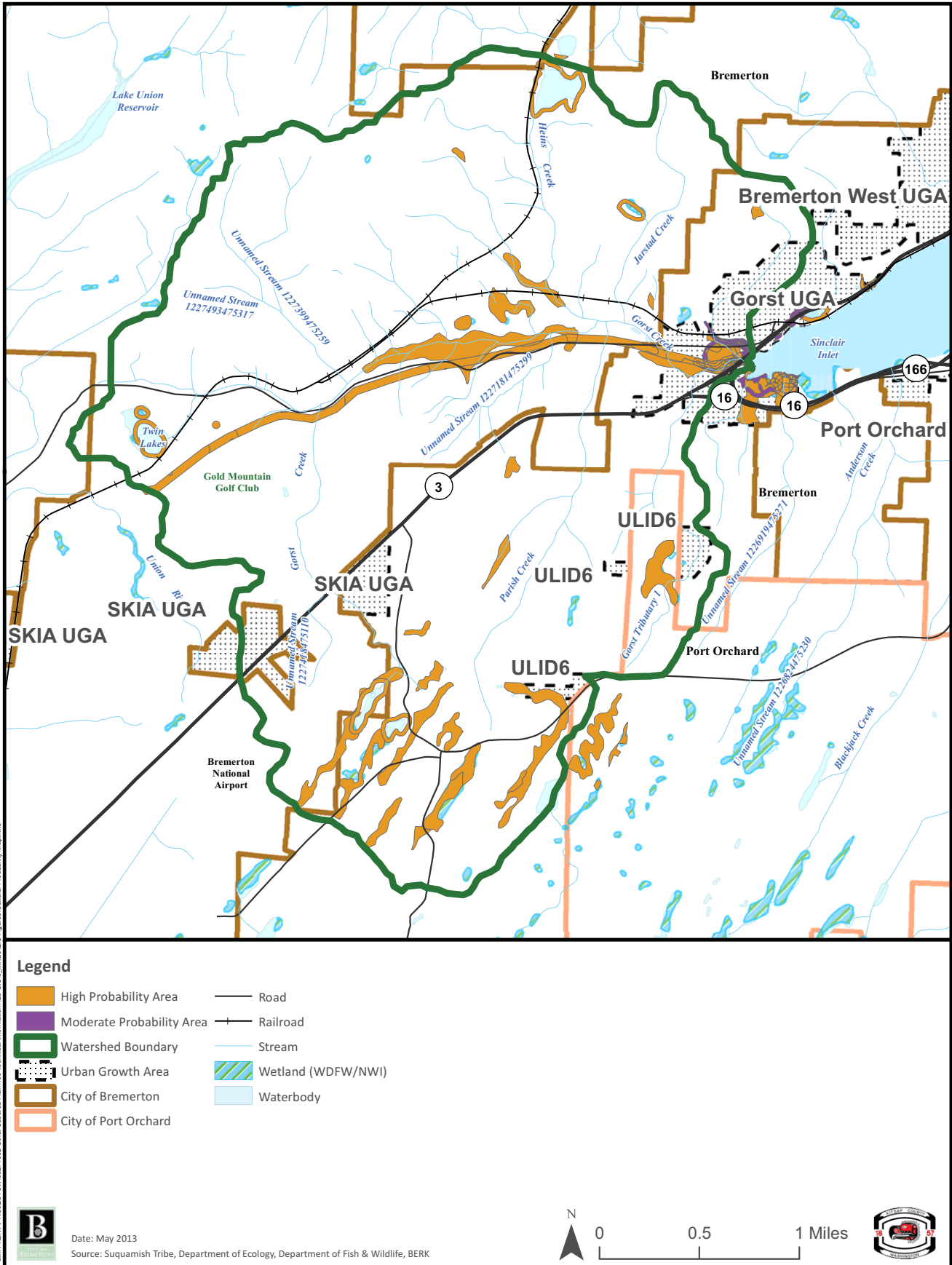
Filling is used to raise the elevation of the ground surface. The composition of fill deposits is defined by the deposit’s source or origin. Fill deposits may contain accumulations of precontact, historical, and/or modern objects that have been displaced from the location of their primary deposition. Since widespread filling began during the historical period, precontact archaeological deposits within these fill deposits are not expected to be in primary depositional context and, therefore, do not represent an intact archaeological site.

Anticipated Archaeological Property Types

Precontact human habitation, however, was dependent on the availability of water and the ease with which resources could be transported. Consequently, habitation areas were likely located along coastal, river, and lake margins. The Study Area encompasses a coastal environment with several rivers, creeks, and lacustrine areas and is considered highly sensitive for archaeological sites. The Study Area extends across two broad environments—coastal and upland. Eight landform types likely to be found in these environments that have the potential to contain archaeological sites are discussed in detail below. A summary table of these landforms is provided in Table 3.10-4 *Archaeologically Sensitive Landforms Likely Present in the Study Area*.

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FIGURE 3.10-1 GORST CREEK WATERSHED: CULTURAL RESOURCES PROBABILITY



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Table 3.10-4
Archaeologically Sensitive Landforms Likely Present in the Study Area

Landform	Age	Accessibility	Resources
Salt marsh	Holocene	Inundated for short periods during the day.	Fish, waterfowl, plants, terrestrial mammals.
Tide flat	Holocene	Inundated for long periods during the day.	Fish, shellfish.
Subtidal coastal	Holocene	Permanently inundated.	Fish, aquatic plants.
Berm	Holocene	Seasonally inundated.	Tool stone, grasses.
Intertidal beach	Holocene	Inundated for long periods during the day.	Fish, shellfish, tool stone, aquatic plants.
Upland plain	Pleistocene	Permanently accessible.	Terrestrial mammals and plants, tool stone, ochre.
Nearshore lacustrine/marsh	Holocene	Seasonally accessible.	Waterfowl, fish, plants, terrestrial mammals.

Several specific activities are likely to have occurred in the Study Area given expectations about human behavior and landforms and their attributes (e.g., stability and accessibility) discussed above. The precontact property types presented in this section are modeled after types, developed by Lewarch and Larson (2003:6-1–6 11), that focus on characterizing the activities represented by an archaeological assemblage (e.g., fishing and fish capture location). The precontact property types that may be present within the Study Area are as follows:

- Fish Capture and Processing
- Shellfish Processing
- Lithic Procurement and Processing
- Plant Collection and Processing
- Terrestrial Mammal Hunting and Butchering
- Habitation
- Multiple Processing Activities

Historic Built Environment Resources

Several historic built environment resources have been identified within the Study Area; however a complete inventory of buildings and structures older than 50 years has not been completed. The Study Area contains the location of domestic, industrial, recreation, or other activities that have the potential to contain buildings and structures older than 50 years. A review of the land use history and historical development reveals that the residential, commercial, and industrial areas were established within the Study Area and that there is high potential for buildings and structures older than 50 years to be currently located within the Study Area.

Impacts

Impacts Common to All Alternatives

Watershed

Impacts that can adversely affect important cultural resources include anything that might significantly destroy or alter the important features of a cultural resource. Direct and indirect effects to cultural resources can result from human activities or natural events. Under all alternatives, development would occur throughout the Gorst watershed, to varying degrees as allowed by zoning and applicable regulations. As discussed in Section 2.5 *Study*

Alternatives: Future Growth, it is assumed that most development outside of city limits and designated UGAs would be associated with residential dwellings, with increased construction over the next 20 years. Construction of new buildings, structures, and infrastructure would result in ground disturbance within affected areas and potential effects to historic built environment resources older than 50 years. Removal of trees and other vegetation within these areas could also lead to reduced infiltration and erosion of exposed soils from affected sites. Ground disturbance and increased construction may result in the potential loss of significant cultural resources. Under all the alternatives, risks of disturbance to significant cultural resources associated with development and other ground disturbing activities would be greatest on within those areas identified as High Probability Areas (Table 3.10-5 *Development and Construction Activities in High and Moderate Probability Areas Discussion*). Preconstruction cultural resources inventories and evaluations within the High Probability Areas would help minimize these impacts to varying degrees.

One significant cultural resource is known to exist in the Study Area: Site 45KP109. Future development in the Study Area would not affect known cultural resources unless they occur on the same parcels where Site 45KP109 is located or results in the discovery of a previously unknown resource. The potential for impacts on unknown cultural resources cannot be accurately measured at this time because the Study Area has not been inventoried for significant cultural resources. The only cultural resources studies that have been completed in the Study Area include those listed in Table 3.10-1 *Previously Studied Cultural Resources within the Study Area* 1. Other portions of the Study Area have not been surveyed for cultural resources, including archaeological sites, built environment resources, and TCPs. Portions of the Study Area have been identified as having high probability for containing significant cultural resources.

Both Alternatives 2 and 3 accommodate future growth in the Study Area, which could occur on any parcel within the Study Area, including those areas determined to have High Probability and Moderate Probability, and therefore have the potential to affect unknown cultural resources. Therefore, potential impacts on unknown cultural resources would be the same under all studied alternatives, although the rate and timing of these impacts would vary. Implementation of mitigation measures would identify potential impacts on cultural resources reduce them to less than significant.

Given that significant cultural resources are present within the Study Area and that High Probability Areas have been identified, future development would have the potential to impact these resources. It is assumed that under all alternatives, future development projects would receive the appropriate permits, and that buffers, development standards, and other mitigation measures pertaining to identifying and preserving significant cultural resources would be implemented.

Gorst UGA

Under all alternatives, most impacts to cultural resources would occur within the Gorst UGA, where the majority of planned development would be focused. Within the UGA, development could occur within the 281 parcel acres previously discussed, although the types of development would vary by alternative. Additionally, it is unlikely that all currently developed areas would be redeveloped within the next 20 to 30 years. Potential impacts associated with development and construction activities within the UGA would be similar to those described for the watershed. The potential for loss of significant cultural resources would be present, including archaeological sites, historic built environment resources, and TCPs, all of which would have the potential to be minimized, to varying degrees by conducting preconstruction cultural resources inventories and evaluations within the High Probability Areas and implementing mitigation measures.

Prior to initiating development and construction activities in High and Moderate Probability Areas (Table 3.10-5 *Development and Construction Activities in High and Moderate Probability Areas Discussion*), it is recommended that intensive surveys of the High and Moderate Probability Areas be conducted and evaluations prepared to determine which of those resources would be considered significant for the purposes of SEPA and listed in the WHR and/or the NRHP. Intensive surveys would provide economies of scale in evaluating each survey area, rather

than evaluation properties individually as they are directly affected by proposed activities. Knowledge of the relative importance of certain buildings and neighborhoods can inform the planning process. However, it is recognized that some projects will take place before such surveys can be completed. The following impacts will address activity types that are known to have the potential to impact significant cultural resources (e.g. archaeological sites, historic built environment resources, TCPs). Projects proposed within High and Moderate Probability Areas that involve these activity types will be required to implement the associated mitigation measures in an attempt to reduce the impacts to a level of less than significant.

Table 3.10-5
Development and Construction Activities in High and Moderate Probability Areas Discussion

Type of Impact	Impact Discussion
Construction	Typical project impacts that could affect cultural resources in the Study Area include demolition, removal, or substantial alteration of resources older than 50 years of age without consideration of historic built environment, archaeological sites, and TCPs.
Operations, Indirect, and Cumulative Impacts	Development could occur on or near parcels in the Study Area that contain previously identified and/or unknown cultural resources. Development within parcels containing previously identified cultural resources will require further study to determine if the project has the potential to impact significant resources and if so, the appropriate mitigation measures. This development would likely include ground disturbance and modifications to buildings and structures, which could result in potentially significant impact on cultural resources. Due to the potential to impact unknown cultural resources, a detailed review of potential impacts on cultural resources would be required on a project-specific basis for those projects within the High and Moderate Probability Areas.

Alternative 1

Based on the information in Table 2-7 *Growth Comparison by Gorst UGA Alternative*, a total of approximately 41 developable acres within the UGA have been identified under Alternative 1. In addition to these developable parcel acres, some land would be modified in existing or future rights of way or on lands for public purposes. Therefore, in addition to future projects on already developed parcels, locations that currently do not support development would likely be altered. Development and associated construction activities would result in ground disturbance within 41 acres, and could contribute to increased disturbance to known and undocumented archaeological sites, historic built environment resources, and TCPs.

Under this alternative, sand, gravel, and rock deposits would continue to be mined from the area identified with the mineral resources overlay in Figure 3.1-1 *Gorst Creek Watershed: Geology*. There would be no additional impacts to cultural resources within the mining area because of the substantial ground disturbance that has previously occurred and the fact that the same activities will continue.

Given that significant cultural resources are present within the Study Area, future development would have the potential to impact these resources. It is assumed that under Alternative 1, future development projects would receive the appropriate permits, and that buffers, development standards, and other mitigation measures pertaining to identifying and preserving significant cultural resources would be implemented.

As the Watershed Characterization & Framework Plan would not be implemented under this alternative, there would be no watershed-level plan for future development to assess specific impacts to cultural resources.

Alternative 2

A total of approximately 70 developable acres have been identified for Alternative 2. In addition to these developable parcel acres, some land would be modified in existing or future rights of way or on lands for public purposes. Therefore new development on currently undeveloped parcels has the potential to impact significant cultural resources on up to 70 acres, which is greater than that under Alternative 1. Additionally, small areas of open space and recreation would be maintained. Development and associated construction activities would result

in ground disturbance within the proposed 70 acres, and could disturb known and undocumented archaeological sites, historic built environment resources, and TCPs.

Under this alternative, the area that is currently used for mineral resource extraction would be developed into Medium Density Residential with a mix of housing types. This area includes large existing mining areas that has drastically altered the landscape and affected the potential for intact archaeological resources to be present at this location. Therefore, construction activities in this area would have limited potential to encounter significant cultural resources.

Given that significant cultural resources are present within the Study Area and several areas are High Probability Areas have been identified, future development would have the potential to impact these resources. It is assumed that under Alternative 2, future development projects would receive the appropriate permits, and that avoidance, development standards, and other mitigation measures pertaining to identifying and preserving significant cultural resources would be implemented.

Alternative 3

The area of developable land identified for Alternative 3 is approximately 69 acres, roughly the same as under Alternative 2, but greater than under Alternative 1. In addition to these developable parcel acres, some land would be modified in existing or future rights of way or on lands for public purposes. This alternative includes the same amount of open space as Alternative 2, as well as low intensity waterfront, which include High Probability Areas for significant cultural resources.

Under this alternative, the area that is currently used for mineral resource extraction would be developed into Neighborhood Mixed Use. This area includes large existing mining areas that has drastically altered the landscape and affected the potential for intact archaeological resources to be present at this location. Therefore, construction activities in this area would have limited potential to encounter significant cultural resources.

Given that significant cultural resources are present within the Study Area as well as the designation of several areas as High Probability Areas; future development has the potential to impact these resources. It is assumed that under Alternative 3, future development projects would receive the appropriate permits, and that avoidance, development standards, and other mitigation measures pertaining to identifying and preserving significant cultural resources would be implemented.

Mitigation Measures

Incorporated Plan Features

The Draft Watershed Characterization & Framework Plan proposes the following Guiding Principle and Policy:

- Promote interpretive art, signage, and public spaces that recognize cultural history and environmental features
- Celebrate cultural history in the watershed through interpretive displays and events. Protect sensitive cultural resources from disturbance.

Applicable Regulations and Commitments

Federal and state laws would apply as listed in the “Regulatory Context” above.

Kitsap County and the City of Bremerton have adopted historic preservation regulations to promote a special tax valuation to promote historic site rehabilitation and preservation and protect important archaeological and historic sites. Additional County and City regulations include:

- Kitsap County recently approved (January 2013) a shoreline master program undergoing Ecology review. It includes several measures designed to protect cultural resources including that “all Tribal Historic Preservation Officers (THPOs) for tribes with jurisdiction will be provided the opportunity to review and comment on all development proposals in the Kitsap County shoreline jurisdiction, both terrestrial and aquatic, in order to ensure all known or potential archaeological sites, Traditional Cultural Properties and Traditional Cultural Landscapes are acknowledged, properly surveyed and adequately protected.” In addition, “sites with known or potential archaeological resources, as determined pursuant to the resources listed at the beginning of this section, shall require a site inspection by a professional archaeologist” and “work on sites with identified archaeological resources shall not re-commence until authorized by the Department of Archaeology and Historic Preservation through an Archaeological Excavation and Removal Permit, which may condition development permits.”
- KCC 18.12.020, Eligible lands. The Open Space Act (Chapter 84.34 RCW) describes lands which may be considered for current use assessment as open space. Kitsap County has refined this definition to a prioritized list of lands which may be eligible for enrollment in the open space taxation program within the unincorporated area of Kitsap County. Kitsap County provides for the preservation of any land area, the preservation of which in its present use would preserve historic sites.
- Bremerton has recently adopted a Shoreline Master Program that would when approved by Ecology include several protective measures including “a site assessment by a qualified professional archaeologist or historic preservation professional and ensure review by qualified parties including the Washington State Department of Archaeology and Historic Preservation, and the Suquamish Tribe Archaeology and Historic Preservation Program” for properties with known cultural resources and “stop work” orders on any newly discovered cultural features with a requirement for notification of the State and tribes and an assessment.

Other Potential Mitigation Measures

A cultural resources study should be conducted at the applicant’s expense for specific projects within High Probability Areas (Table 3.10-6 *Mitigation Measures*) to determine if archaeological sites, TCPs, or historic built environment resources are present that may be significant. This should include but is not limited to background research, consultation with appropriate Tribes and interested parties, field study, and reporting. A desktop review of existing background information regarding cultural resources should be conducted at a minimum for projects within Moderate Probability Areas to determine if resources older than 50 years are present requiring evaluation and/or additional field studies. Table 3.10-6 *Cultural Resources Mitigation Measures* identifies the potential mitigation measures for significant cultural resources and when they should be completed.

**Table 3.10-6
Cultural Resources Mitigation Measures**

Mitigation Measure Description	Timing
A. For future projects that are qualified as planned actions and that involve, development, ground disturbance, and/or construction in the Study Area in areas shown as high or moderate probability on the predictive model map in Figure 3.10-1 Gorst Creek Watershed: Cultural Resources Probability, Kitsap County or City of Bremerton should determine if cultural resources are located in the specific project area (at the applicant’s expense). This should consist of background research, a field visit (particularly for High Probability Areas), and consultation with the Department of Archaeology and Historic Preservation (DAHP) and the Tribes to determine if cultural resources (sites, buildings, TCPs) are located within the project area. The following provides guidance for qualified planned action activities requiring land use, construction, or building permits from Kitsap County or City of Bremerton and located within high or moderate probability areas:	Prior to Construction

Mitigation Measure Description	Timing
<ul style="list-style-type: none"> i. Areas with prior negative archaeological survey, no ground disturbance, or in 100 percent culturally-sterile fill: 1) document reason no survey is required; 2) require no further review. ii. For all ground-disturbing projects not addressed in “i” above: 1) consult statewide predictive model and tribal predictive model; 2) provide tribal notification; 3) if no known cultural resources are present, condition permit with standard inadvertent discovery language; 4) if known cultural resources are present, provide state and tribal notification, conduct survey; 5) In the event that a proposed project would disturb an archaeological resource, the responsible local government shall impose any and all measures to avoid or substantially lessen the impact; 6) if avoidance of the archaeological resource is not possible, an appropriate research design/treatment program must be designed and implemented with data recovery to occur prior to project related ground disturbance; 7) the avoidance of archaeological resources through selected of project alternatives and changes in design to avoid the archaeological resource would eliminate the need for measuring or mitigating impacts. 	
B. In the event that a proposed development location within the Study Area contains a building or structure at least 45 years of age that is not listed in the WHR or the NRHP, the project shall be required to undergo a review to determine if the building/structure is considered eligible for listing on the State or National Registers. If impacts cannot be avoided on a historic resource that is determined eligible for listing on either state or national historic registers, the responsible local government is required to consult with DAHP about mitigation options.	Prior to Construction
C. If human skeletal remains are encountered during construction, the contractor/project proponent will stop work and the Kitsap County Sheriff, DAHP, and the necessary Tribes will be contacted immediately.	During Construction
D. If archaeological resources are encountered during construction, work must stop until state and tribal notifications are made and until a qualified archaeologist can assess the discovery and implement mitigation if necessary.	During Construction

- Kitsap County and the City of Bremerton in coordination with the Suquamish Tribe could periodically conduct educational activities with residents and businesses regarding the importance of cultural resources, how to avoid impacts, and what to do in cases of inadvertent discovery. Such educational activities could promote voluntary notification to the local government and tribe of activities exempt from SEPA or the planned action, but which may result in ground disturbance (e.g. fences, gardening, etc.).

Significant Unavoidable Adverse Impacts

The impacts on cultural resources caused by new development associated with all studied alternatives could be significant and unavoidable, depending on the nature and proximity of the proposed development project. Implementation of mitigation measures would identify potential impacts on cultural resources and reduce them to a less than significant level (Table 3.10-6 *Cultural Resources Mitigation Measures*).

3.11 Transportation

Cumulatively, the study area transportation system has been addressed in the following EISs, for which the transportation analysis is incorporated by reference:

- SKIA Subarea Plan and Planned Action August 2012. A small portion of the SKIA area lies in the watershed.
- UGA Sizing and Composition Remand Final EIS August 2012. This EIS addressed eight UGAs including the Gorst UGA as well as a cumulative analysis countywide including South County.

To the extent relevant, this transportation analysis updates the Kitsap County transportation analysis reflecting the lower employment growth adopted in the City of Bremerton's SKIA Subarea Plan. It tests the differences in the growth in the Gorst UGA, which is the focus of land use changes under consideration in the Gorst Subarea Plan.

Affected Environment

Watershed

The primary arterial network roadways in the Watershed include State Route 3, West Belfair Valley Road, SW Old Clifton Road, and Sunnyslope Road SE. See Figure 3.11-1 *Gorst Creek Watershed: Existing Roadway Inventory*. The focus of future land use changes is in the Gorst UGA. The affected environment related to transportation is discussed in the Gorst UGA section.

Gorst UGA

The affected environment related to transportation in the Gorst UGA includes state highways, Kitsap County rights-of-way, state interchanges and bridges, bikeways and trails, public transportation facilities and services, and Department of Defense railroad. In addition marine ports, ferries, and airports located outside of the Gorst UGA are considered key transportation facilities. The State, County, and special districts share jurisdiction over these facilities.

This section discusses existing conditions relating to transportation in the Gorst UGA, including state and local regulations and policies; inventory of transportation infrastructure and services, including roadway, transit, non-motorized, rail, air, and ferry; and existing operational conditions of the transportation system.

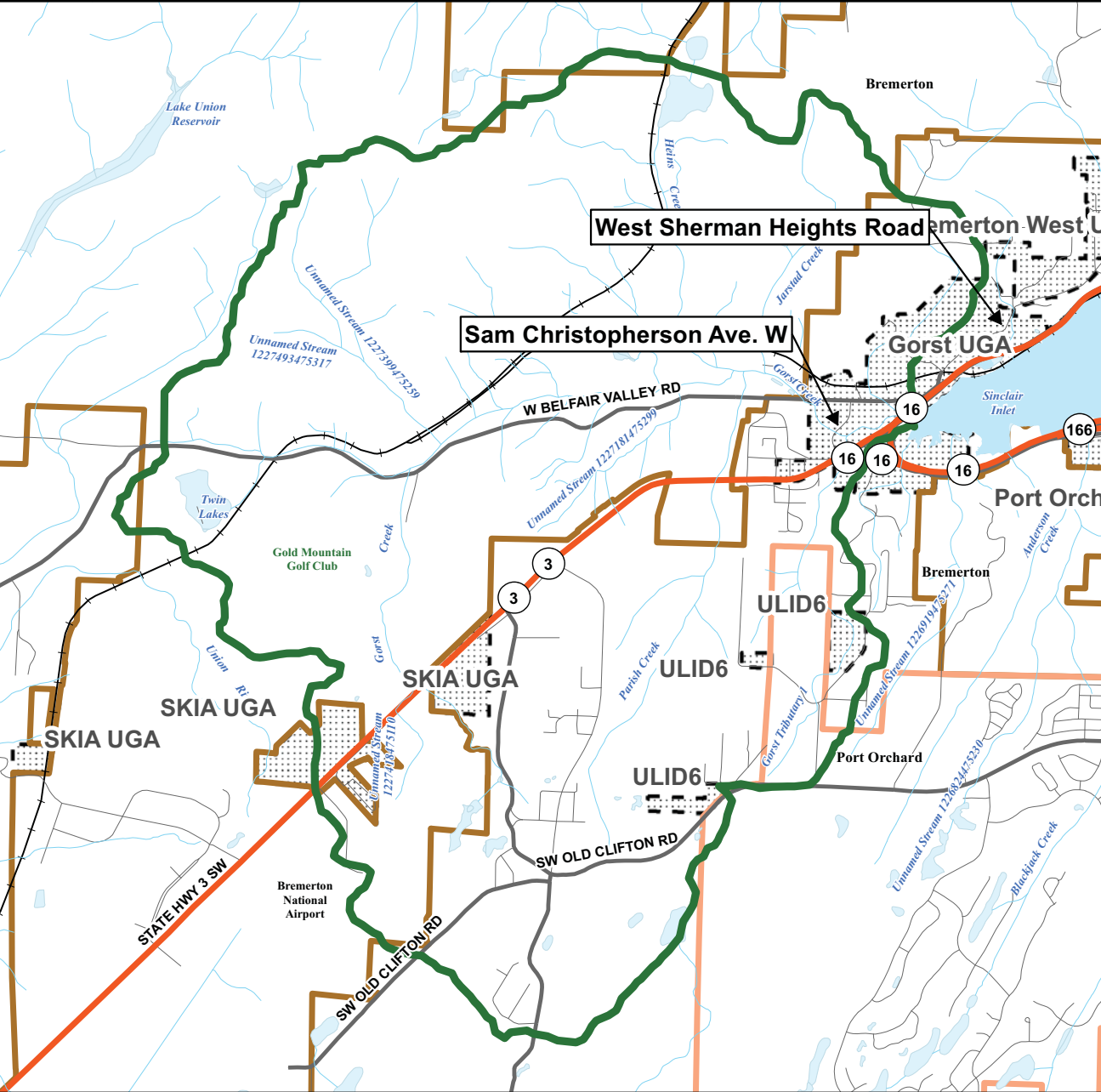
Planning Context

Washington GMA

GMA provides direction regarding preparation of the transportation chapter of the Comprehensive Plan. The GMA requires a transportation chapter to be consistent with the land use chapter of the comprehensive plan, as codified in RCW 36.70A.070 (6). Planned land use must be reflected in the travel forecasts that are prepared to evaluate the impacts of development. The transportation improvements and implementation measures in the transportation chapter must adequately support planned land use at adopted LOS standards.

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FIGURE 3.11-1 GORST CREEK WATERSHED: EXISTING ROADWAY INVENTORY



Legend

Watershed Boundary	State Route
Urban Growth Area	Primary Road
City of Bremerton	Secondary Road
City of Port Orchard	Railroad
Waterbody	Stream

0 0.5 1 Miles

Date: May 2013
Source: Kitsap County, Department of Ecology, Department of Fish & Wildlife, BERK

Path: P:\ENV\PROJECT\SW\6271862\Gorst\Subarea Plan\400_Technical Information\423_GIS\3_MXD\EIS_Figures\Existing Roadway Map.mxd

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As described in WAC 365-196-430, a transportation chapter must specifically present the following information:

- Land use assumptions used in estimating travel
- Estimated traffic impacts to state-owned transportation facilities resulting from land use assumptions
- Inventory of air, water, and ground transportation facilities and services, including transit alignments and general aviation airports facilities
- LOS standards for all locally owned arterials and transit routes, and actions necessary to allow transportation facilities and services to meet the standards
- For state-owned transportation facilities, LOS standards for highways to gauge the performance of the system
- Specific actions and requirements for bringing into compliance locally owned transportation facilities that are below an established LOS standard
- Forecasts of traffic for at least ten years based on the adopted land use plan
- Identification of state and local transportation system needs to meet current and future travel demand
- An analysis of funding capability to judge needs against probable funding resources
- A multi-year financing plan based on the needs identified in the comprehensive plan
- If probable funding falls short of meeting identified needs, a discussion of how additional funding will be raised, or how land use assumptions will be reassessed to ensure that LOS standards will be met
- Intergovernmental coordination and impact assessment
- Strategies for reducing travel demand
- Pedestrian and bicycle component
- Consistency between the transportation element, six-year plan for cities, counties, public transportation systems, and the ten-year plan for the state

Both the County and City of Bremerton have adopted transportation elements and capital facility plans that may require amendment or adjustment to incorporate the results of the Gorst Subarea Planning process.

Transportation Facilities and Services of Statewide Significance

Transportation related issues of growth management planning in Washington are further addressed through RCW 47.06.140. The Washington State Legislature declares a number of transportation facilities and services to be of statewide significance, including Highways of statewide significance (in Gorst, this includes SR 3 and SR 16) as designated by the legislature under Chapter 47.05 RCW, the interstate highway system, interregional state principal arterials including and ferry connections that serve statewide travel. This legislation further declares that the state shall plan for improvements to transportation facilities and services of statewide significance in the statewide multimodal transportation plan in cooperation with regional transportation planning organizations, counties, cities, transit agencies, public ports, private railroad operators, and private transportation providers, as appropriate.

Furthermore, the department of transportation, in consultation with local governments, shall set LOS standards for state highways and state ferry routes of statewide significance. Although local governments will be consulted when setting LOS standards, the department retains authority to make final decisions regarding LOS standards for state highways and state ferry routes of statewide significance. In establishing these levels of service standards, the department will consider the necessary balance between providing for the free inter-jurisdictional movement of people and goods and the needs of local communities using the facilities.

Washington Transportation Plan (WTP)

The WTP 2007-2026 fulfills the requirements for both state multi-modal and federal long-range plan requirements. WTP 2007-2026, developed collaboratively by the Washington State Transportation Commission and the WSDOT, outlines transportation goals and objectives for Washington State. It offers policy guidance for all jurisdictions statewide on matters related to the transportation system over the next 20 years. The WTP provides a blueprint and strategies to guide decisions and investments needed to develop Washington's transportation system to serve the future needs of its citizens, communities, and economy while safeguarding its environment. The core principle of the investment guidelines is that the existing system cannot be allowed to deteriorate. The plan identifies the top transportation investment priorities for the entire state in the areas of preservation, safety, economic vitality, mobility, and environmental quality and health. It addresses all modes of Washington's transportation system: roadways, ferries, public transportation, aviation, freight rail, passenger rail, marine ports and navigation, bicycles and pedestrians.

The Washington State Transportation Commission developed the WTP 2030 at the direction of the State Legislature. It is the overarching state policy framework intended to provide policy guidance and recommendations across all transportation modes and regions in the state. WTP 2030 serves as the policy update to the federally compliant WTP 2007-2026, reflecting recent changes and new challenges.

The WTP addresses the roles of WSDOT, regional planning organizations, local jurisdictions, and Tribal governments in Washington State. The WTP is required by state and federal law to be regularly updated. Under GMA, the Kitsap County Transportation Chapter must assess the impact of future land use on state transportation facilities, and must be consistent with the WTP.

Regional Planning**PSRC – Transportation 2040**

Transportation 2040, adopted by the PSRC in 2010, is the long-range transportation plan for the central Puget Sound region of Washington State, which comprises King, Pierce, Snohomish, and Kitsap Counties. The plan outlines a long-term template for how the region should invest in transportation to accommodate rising travel demand, while at the same time embracing the need to be flexible and responsive to change. Transportation 2040 identifies investments to support the region's expected growth and improve transportation service to people and businesses, includes a financing plan that suggests a long-term shift in how we fund transportation improvements with more reliance on users paying for transportation improvements, and proposes a strategy for reducing transportation's contribution to climate change and its impact on regional concerns such as air pollution and the health of Puget Sound.

Built upon the foundation of Vision 2040, Transportation 2040 establishes three integrated and sustainable strategies: congestion and mobility, environment, and funding. These strategies guide transportation investment decisions to meet growing travel needs for people and freight, with more transit, more biking and walking facilities, more ferries, and more complete roadways. Within these strategies, the plan identifies four major categories of investment: preservation, maintenance and operations, safety and security, efficiency, and strategic capacity.

Transportation 2040 supports Vision 2040's Regional Growth Strategy. A fundamental goal of Vision 2040 is to focus growth (people and jobs) in urban areas in a way that improves transportation efficiency, increases the use of transit, biking, and walking, and improves the balance between jobs and housing. Transportation 2040 supports focusing approximately 97 percent of growth within designated UGAs, and to more than double current development in designated regional growth centers by 2040. It outlines specific projects to support the growth strategy.

The PSRC is responsible for allocating federal transportation funding to local jurisdictions, as well as certification of local transportation chapters within the four-county region.

The Transportation 2040 plan does recognize operational shortcomings within the Gorst UGA and includes some midterm and long projects associated with improvements to SR 3 and the interchange of SR3 and SR 16.

Countywide Planning Policies (CPP)

KRCC is the local council of governments for Kitsap County; the Cities of Bremerton, Bainbridge Island, Port Orchard, and Poulsbo; the Port of Bremerton; and the Suquamish and Port Gamble/S'Klallam Tribes. The KRCC is responsible for: maintaining and updating Kitsap CPP; allocating federal transportation funding; 2060 Low Income Housing Program grants; Community Development Block Grant funding; and facilitating intraregional and interregional coordination. The Council's Board is composed of elected officials from Kitsap County, cities located within the county, Tribes located within the county, and the Port of Bremerton.

CPP, which were developed by the KRCC and adopted in 2011, support the following stated goals.

- Optimize and manage the safe use of transportation facilities and services.
- Reduce the rate of growth in auto traffic, including the number of vehicle trips, the number of miles traveled, and length of vehicle trips taken, for both commute and non-commute trips.
- Minimize the environmental impacts of transportation facilities and improvements.
- Recognize differences in density, character, and development patterns throughout the county.
- Support transit and pedestrian travel appropriate to each type of urban and rural development.
- Create multimodal transportation linkages between designated local and regional centers.
- Identify preferred routes for freight movement and support compatible land uses along those routes.
- Facilitate inter-jurisdictional coordination.
- Coordinate intra-county transportation planning efforts.
- Provide coordinated and consistent LOS standards.

Kitsap County Comprehensive Plan Transportation Chapter

The Kitsap County Comprehensive Plan Transportation Chapter is the County's long-range transportation planning document, which satisfies the requirements of GMA and defines the transportation policies, methods, and priorities for the County transportation system over a 20-year planning period. The Transportation Chapter is guided by the countywide transportation planning policies, as described in the previous section. The collective analysis in the County's integrated Comprehensive Plan/EIS and CFP, meets the content requirements of GMA and other guiding laws and rules, and includes an inventory of transportation infrastructure and services within the county; establishes operational standards; provides analysis methods and results for operations of the transportation system; and provides a financially balanced transportation improvement plan to ensure that the transportation system is adequate to support the long-range land use plan.

Bremerton Comprehensive Plan Transportation Chapter

The City of Bremerton Comprehensive Plan Transportation Element is the City of Bremerton's long-range transportation planning document, which satisfies the requirements of GMA and defines the transportation policies, methods, and priorities for the City of Bremerton's transportation system. The Transportation Element primarily supports the Land Use Element of the Comprehensive Plan but also complements each of the other plan elements. The Transportation element emphasizes the need to consider pedestrians and bicycles in transportation planning as well as working toward setting standards on heavily used arterials to enable mobility. The Transportation Element establishes LOS Criteria, documents existing deficiencies, discusses future conditions and associated deficiencies and provides proposed transportation improvements and costs.

Highways and Roadways

State Highways

The Gorst UGA is served by two state highways that provide access to and serve mobility needs within and beyond the county. The two major state highways that connect to Kitsap County from the Puget Sound region are SR 16, which connects to Pierce County, and SR 3, which connects to Mason County and the Olympic peninsula.

At the community of Gorst, SR 16 connects with SR 3. SR 3 continues north through Kitsap County to the Hood Canal Bridge and south to Shelton. Just north of the Gorst UGA boundary, SR 304 connects to SR 3 providing a link from SR 3 to downtown Bremerton and the Bremerton to Seattle Ferry. To the south of the Gorst UGA boundary, SR 3 provides access to the SKIA and the Bremerton National Airport.

Highways of Statewide Significance

In 1998, Highway of Statewide Significance (HSS) legislation was passed by the Washington State Legislature and codified as RCW 47.06.140. HSS facilities are those highways that promote and maintain significant statewide travel and economic linkages. The legislation emphasizes that these significant facilities should be planned from a statewide perspective. Local jurisdictions will assess the effects of local land use plans on state facilities. HSS facilities located in whole or in part within the Gorst UGA are listed below:

- SR 3–US 101 (Shelton) to SR 104 (Hood Canal Bridge).
- SR 16–I-5 (Tacoma) to SR 3 (Gorst).

National Highway System (NHS)

The NHS is one component of the national transportation system, defined as part of the federal Intermodal Surface Transportation Efficiency Act, which was the precursor to Transportation Equality Act for the 21-Century (TEA-21) and Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The purpose of the NHS is to focus resources on roadways that are most important to interstate travel and national defense, that connect other modes of transportation, and that are essential for international commerce. The entire interstate highway system is part of the NHS, which also includes a large percentage of urban and rural principal arterials, the defense-strategic highway network, and other strategic highway connectors. Both of the highways in the Gorst UGA are part of the NHS.

Functional Classifications

Classifying roadways by their function helps in system planning, maintenance, and operations. The classification system is used in day-to-day decisions and long range planning for land use and transportation purposes. All roadways exist to serve two functions: mobility and land access. Mobility refers to the movement of vehicles or people at a reasonable speed. Access refers to the ability to get on the roadway, and includes features such as driveways, parking, and loading areas on the street. At times, these functions conflict with each other.

To minimize these conflicts, a system of classifying arterials, collectors, and local streets has been established. Functional classifications are based on the following characteristics:

- Average trip lengths.
- Traffic characteristics such as volumes, design, and posted speeds.
- Roadway design characteristics such as right-of-way requirements, number of travel lanes, lane widths, shoulder widths, medians, sidewalks, and turn lanes.
- System continuity.
- Degree of access control.
- Operations, including parking and signal systems.

- Ability to serve other travel modes, including buses, bicycles, pedestrians, and equestrians.
- Reasonable spacing, depending on population density.
- Directness of travel and distance between points of economic importance.
- Connection of population centers.

Both the County and the City of Bremerton use the Federal Functional Classification (FFC) system for transportation systems planning, financial planning and administrations, and developing design criteria and standards for County and private sector roadway improvements.

- **Transportation Systems Planning.** Functional classification is a tool for building a transportation system that serves all types of travel needs. It helps in setting priorities and making evaluations for improvement projects. It helps jurisdictions to coordinate their approaches to the transportation system, and it affects land use planning and zoning decisions.
- **Financial Planning and Administration.** The classification system also helps in the allocation of funds for transportation system improvements and maintenance like Moving Ahead for Progress in the 21st Century (MAP-21), Surface Transportation Program (STP) [Urban and Rural], and the Washington State Urban Arterial Board (UAB) fund, are reserved for specific types of facilities. WSDOT distributes Federal Aid highway funds to cities and counties in the state. The classification system is used to determine which roads are eligible for certain state and federal funds.
- **Design Issues.** The County has developed an extensive set of road design standards by functional classification. These standards guide the design of improvements for individual County roads. They also are used in the review of land development proposals to determine infrastructure requirements (e.g., right-of way, pavement, and sidewalk requirements) for both on- and offsite roads. The standards, used with the functional classification system, are especially useful for longer-range planning, helping to make sure that enough land is set aside for roadways in developing areas.

Table 3.11-1 *Federal Functional Classifications* explains the various federal functional classifications of roadways within the Gorst UGA. The table describes the primary access and mobility functions for each major classification. Each classification is also further designated as “Urban” or “Rural”.

**Table 3.11-1
Federal Functional Classifications**

Functional Classification	Description
Freeway	A freeway is a multilane, high-speed, high-capacity roadway intended exclusively for motorized traffic. All access is controlled by interchanges and road crossings are grade-separated. The freeways in the Gorst UGA are under the jurisdiction of WSDOT.
Principal Arterial	Principal arterials primarily serve a mobility function, and typically have either full or semi-controlled access. Principal arterials provide for movement between urban and rural intra-county population centers. As such, this roadway facility classification predominantly serves "through" traffic with minimum direct service to abutting land uses. Principal arterials provide routes for public transit systems between major communities within the county.
Minor Arterial	Minor arterials provide access to the principal arterial and freeway systems. They provide a lower level of travel mobility than principal arterials to major communities within the county. They provide primary access to or through communities of high-density residential, commercial or retail, or industrial land areas. They provide access to abutting properties at predetermined locations. Trip lengths on minor arterials generally exceed 5 miles. Minor arterials provide routes for public transit systems between major communities within the county.

Functional Classification	Description
Major Collector	Major collectors provide the primary access to a minor arterial for one or more neighborhoods or non-residential areas. Collectors distribute trips to and from the arterial system. They provide a limited amount of travel through neighborhoods and non-residential areas that originates and terminates externally. Collectors provide direct connections to local roads and minor collectors. They provide collection and distribution routes for public transit systems. The basic trip length is generally between 2 and 10 miles.
Minor Collector	Minor collectors provide direct access to local roads and driveway access points to abutting properties. They provide for internal distribution of trips within a neighborhood or non-residential area, or part of a neighborhood or non-residential area. Minor collectors contain a limited amount of through traffic; traffic is primarily local in nature.
Local	A local access street provides access immediately to adjacent properties. Characteristics of local streets include: low traffic volumes, maximum of two travel lanes, no medians, no shoulders, no access control, and no preference at signals. Sidewalks and parking may be permitted. Local streets should connect local properties to minor collector streets and, in turn, to higher-class facilities. Fixed bus service is generally not provided along local streets.

Source: Kitsap County Public Works Department 2001

County Roadway Inventory

Within the Gorst UGA there are a number of short local roadways that essentially provide access to the various residential developments within the area. These local roadways feed directly into the state highways or into other county roadways. Outside of the state highways there are four main roadways that provide the majority of the access to the Gorst UGA.

W. Belfair Valley Road

W. Belfair Valley Road is a two lane roadway that is classified as an Urban Minor Arterial in the vicinity of the intersection with Sam Christopherson Avenue. The classification of this roadway changes to a rural major collector as the roadway proceeds west out of the Gorst UGA. W. Belfair road provides an alternative route to the town of Belfair that is located southwest of Gorst on SR 3. W Belfair Road begins at SR 3 just north of the SR 3/SR 16 intersection and heads southwest toward the town of Belfair. This roadway generally parallels SR 3 and is a viable alternative route to SR 3 from the Gorst UGA to Belfair

Sherman Heights Road

Sherman Heights Road is a two lane roadway that is classified as a local roadway. This road connects to W Belfair Valley Road north of the intersection of SR 3 and SR 16 and continues north generally paralleling SR 3. Sherman Heights Road provides the local access to the existing quarry area. North of the Gorst UGA Sherman Heights Road connects with a series of local roadways and eventually connects to Werner Road. There is an existing interchange at SR 3 and Werner Road/W. Loxie Eagans Blvd. Sherman Heights Road and the other local roadway provide a connection from the City of Bremerton and SR 3 to the Gorst UGA that does not require travelling on the heavily travelled SR 3 corridor.

Sam Christopherson Avenue

Sam Christopherson Avenue is a relatively short two lane local roadway with provides an important connection between W. Belfair Valley Road and SR 3/ SR 16 west of the SR 3/SR 16 intersection. Sam Christopherson Avenue is the primary connection from the northwest portion of the Gorst UGA to both SR 3 and SR 16.

Feigley Road

Feigley Road is a two lane local roadway that provides access to SR 16 and SR 3 from the south east portion of Gorst UGA. This roadway primarily serves the existing residences in the southern portion of the UGA.

Roadway LOS

LOS designations are qualitative measures of congestion that describe operational conditions within a traffic stream and take into consideration such factors as volume, speed, travel time, and delay. LOS is represented by letter grades A through F. LOS A through C imply traffic flows with minimal delay, while LOS D and E imply conditions that approach capacity, and LOS F implies unstable flow with potential for substantial delays (Transportation Research Board 2000). The characteristics of the six LOS designations for roadway segments and intersections are summarized in Table 3.11-2 *LOS Descriptions*. The LOS scale has been adopted by the Institute of Transportation Engineers, the Transportation Research Board, and by most jurisdictions throughout the country. Methods applied to calculate LOS for roadway segments and intersections is described later in this chapter in *Methodology*.

**Table 3.11-2
LOS Descriptions**

LOS	Roadways	Intersections
A	Describes primarily free-flow operations at average travel speeds, usually about 90 percent of the free-flow speed for the arterial class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Stopped delay at signalized intersections is minimal.	Describes operations with low control delay, up to 10 seconds per vehicle (s/veh). This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
B	Represents reasonably unimpeded operations at average travel speeds, usually about 70 percent of the free-flow speed for the arterial class. The ability to maneuver within the traffic stream is only slightly restricted and stopped delays are not bothersome. Drivers are not generally subjected to appreciable tension.	Describes operations with control delay greater than 10 and up to 20 s/veh. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than at LOS A, causing higher levels of delay.
C	Represents stable conditions; however, ability to maneuver and change lanes in mid-block location may be more restricted than at LOS B, and longer queues and/or adverse signal coordination may contribute to lower average travel speeds of about 50 percent of the average free-flow speed for the arterial class. Motorists will experience appreciable tension while driving.	Describes operations with control delay greater than 20 and up to 35 s/veh. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	Borders on a range in which small increases in flow may cause substantial increases in approach delay and, hence, decreases in arterial speed. This may be due to adverse signal progression, inappropriate signal timing, high volumes, or some combination of these. Average travel speeds are about 40 percent of free-flow speed.	Describes operations with control delay greater than 35 and up to 55 s/veh. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high vehicle-to-capacity (V/C) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Characterized by significant approach delays and average travel speeds of one-third the free-flow speed or lower. Such operations are caused by some combination of adverse progression, high signal density, extensive queuing at critical intersections, and inappropriate signal timing.	Describes operations with control delay greater than 55 and up to 80 s/veh. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent.

LOS	Roadways	Intersections
F	Characterizes arterial flow at extremely low speeds below one-third to one-quarter of the free-flow speed. Intersection congestion is likely at critical signalized locations, with resultant high approach delays. Adverse progression is frequently a contributor to this condition.	Describes operations with control delay in excess of 80 s/veh. This level, considered unacceptable to most drivers, often occurs with over saturation—that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high V/C ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

Source: TRB 2000

LOS Standards

LOS standards are used to evaluate the transportation impacts of long-term growth and to ensure concurrency. Jurisdictions must adopt standards by which the minimum acceptable roadway operating conditions are determined and deficiencies may be identified.

LOS standards for county arterials and state highways in Kitsap County involve three different policy approaches established by Kitsap County, and WSDOT. While somewhat diverse in application, all the standards and methodologies are consistent with the Highway Capacity Manual (Transportation Research Board 2010) definitions and procedures.

County Roadways Kitsap County’s LOS policy generally recognizes that urban areas are likely to have more congestion than rural areas. This reflects the different characteristics of land use and transportation in these areas. For purposes of defining LOS standards, all roadways within the Gorst UGA are considered urban.

In rural areas, the system of major roads must have sufficient access to the abutting land uses, but because of the low level of land development, rural roads have small capacity requirements. In contrast, urban areas typically attract and generate high volumes of traffic. In order to facilitate through traffic and minimize congestion, major roads may have limited access to adjacent land uses while the more minor roads serve as access points to the surrounding development. The increased density and activity in an urban area inherently results in higher levels of congestion. Drivers are aware of the differences in land use between urban and non-urban areas and generally are more tolerant of congestion and the associated lower LOS in urban areas than in rural areas.

The LOS standards shown in Table 3.11-3 *Roadway Capacity/Congestion LOS Standards* are based on the location and functional classification of the roadway facilities to which they apply. Kitsap County uses traditional engineering methodology to evaluate LOS of roadway segments, which are sections of roadway located between major intersections. LOS is based on the Volume-to-Capacity Ratio (V/C), which is calculated by dividing the traffic volume on a roadway by the roadway’s vehicle capacity. LOS methodologies are described in further detail in the Methodology section of this chapter.

Table 3.11-3
Roadway Capacity/Congestion LOS Standards

Functional Classification	Maximum V/C Ratio/LOS Standard	
	Urban ¹	Rural ²
Principal Arterial	0.89/D	0.79/C
Minor Arterial	0.89/D	0.79/C
Collector	0.89/D	0.79/C
Minor Collector	0.89/D	0.79/C
Residential/Local	0.79/C	0.79/C

Note: ¹ Urban area is located within UGA boundaries.

² Rural area is located outside UGA boundaries.

Source: Kitsap County Public Works Department 2003

City of Bremerton Roadways LOS standards are as follows: V=Volume and C= capacity.

- Maintain LOS E or better (v/C less than or equal to 1.0) in the SR 303 (Warren/Wheaton) corridor, Kitsap way (SR 310), Sylvan Way, and the Manette Bridge.
- Maintain LOS D or better (V/C less than or equal to 0.9) on all other arterial streets in the City of Bremerton.

WSDOT Standards for HSS Facilities WSDOT sets LOS standards for use in evaluating the performance of HSS facilities based on RCW 47.06.140 (2), which in the Gorst UGA consist of all or portions of SR 3, and SR 16.

Table 3.11-4 *LOS Standards for Highways of Statewide Significance* presents the congestion indices for urban and rural highways (freeway and arterial types) that equate to an urban LOS D and a rural LOS C for peak-hour travel.

Table 3.11-4
LOS Standards for Highways of Statewide Significance

Area / Facility Type	LOS	Congestion Index
Urban		
Freeway	D	10
Arterial	D	10
Rural		
Freeway	C	6
Arterial	C	6

Source: WSDOT 2010

The HSS standards make a distinction between urban and rural areas. For urban areas, the standard is LOS D, whereas the standard is LOS C in rural areas. Urban/Rural designation is based upon the federal urban area rather than by UGA.

Concurrency Management System

Kitsap County - GMA requires that Kitsap County adopt and enforce ordinances that prohibit development approval if the development causes the LOS on a transportation facility to decline below the standards adopted in the transportation chapter of the Comprehensive Plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development. This requirement, commonly referred to as *concurrency*, is described in WAC 365-196-840. Concurrency means that transportation infrastructure and services must be adequate to support land use, with adequacy defined by locally adopted

standards. Under GMA, transportation improvements needed to maintain concurrency must be in place within six years of the time that the need for those improvements is triggered by new development.

The purposes of concurrency management are summarized below.

- Provide adequate levels of service on transportation facilities for existing uses, as well as new development in the Gorst UGA.
- Provide adequate transportation facilities that achieve and maintain County LOS standards as provided in the Gorst Sub Area plan.
- Ensure that County LOS standards are maintained as new development occurs, as mandated by the concurrency requirements of the GMA.

The Kitsap County Concurrency Ordinance, codified in KCC Chapter 20.04, establishes a process for testing whether a development project meets concurrency. As established by the ordinance, concurrency is satisfied if no more than 15 percent of county road lane-miles exceed LOS standards.

By adopting an area-wide standard, the County acknowledges the fact that not every roadway facility or link in the network will meet the adopted facility LOS standards all the time. Measures of area-wide concurrency are conducted periodically, such as during updates of the comprehensive plan, for sub-area planning, and when corridor studies are conducted.

The 15 percent allowance relates to individual development proposals undergoing a concurrency test. If LOS is equal to or better than the adopted standard, the concurrency test is passed, and an applicant is issued a Capacity Reservation Certificate. For purposes of concurrency determination, the analysis of LOS adequacy would only be applied to County arterials and collectors in rural areas and urban areas under the County's jurisdiction. A Certificate of Concurrency is not issued to any proposed development if the standards in this section are not achieved and maintained within the 6-year period allowed by GMA for transportation concurrency. The applicant has the option of accepting the denial of application; appealing the denial of application; or accepting a 90-day reservation period and, within this time, revising the development proposal to bring transportation within concurrency requirements.

The ordinance allows for the concurrency test to be applied on either a countywide or sub-area level, but does not define methods for defining the area of impact at the sub-area level. Consequently, the concurrency test is currently only applied at the countywide level.

City of Bremerton - Over the longer term, the GMA requires that the level of transportation investment must keep pace with growth in traffic volumes so that the LOS thresholds established in the transportation element are maintained.

The LOS standards establish the maximum threshold of congestion on each facility. This relates to the concurrency definition in the GMA that requires adequate public facilities (operating better than the LOS standard) to be available when the impacts of development occur. "Concurrent with development" as applied to transportation means that "improvements or strategies are in place at the time of development, or that financial commitment is in place to complete the improvements or strategies within six years." Therefore, any development within the City of Bremerton or County that would cause a LOS standard to be exceeded could not be approved unless the financial commitment to improve the deficiency was in place within the required six-year timeframe. LOS would need to be monitored annually to ensure that the LOS standards established would not be exceeded.

The City of Bremerton also has a Transportation Development Code (BMC Chapter 11.12). The purpose of the Transportation Development Code is to implement the transportation element of the City of Bremerton Comprehensive Plan, and to provide an orderly process for the adoption, implementation, interpretation and modification of City of Bremerton transportation system development standards. (Chapter 11.12.020) The Transportation Development Code gives the City of Bremerton Engineer the authority to request traffic impact

analysis reports for proposed development projects if there is reason to believe the impact on the City of Bremerton's existing or planned future transportation facilities will be significant. The City of Bremerton Engineer shall impose conditions necessary to mitigate all impacts of traffic, circulation and parking resulting from a project. For segments, intersections, or other portions of the street system for which a LOS Standard has been adopted, mitigation measures shall be sufficient to assure that such segments, intersections or other portions of the street system continue to meet or exceed the adopted LOS standards after full project occupancy and operation. For segments, intersections or other portions of the street system for where the present LOS is below the adopted standard, the mitigation measure shall be sufficient to maintain or exceed the present LOS. (BMC Chapters 11.12.060 and 11.12.070)

Transit

Kitsap Transit is the public transportation provider in Kitsap County. Formally known as the Kitsap Public Transportation Authority, it was established by the voters in the fall of 1982. Its mission initially was to provide public transportation services in the greater Bremerton and Port Orchard areas. Since then, Kitsap Transit has expanded through a number of annexations to cover the entire county.

Kitsap Transit is a multi-program system that provides fixed route and paratransit bus service, manages a Park and Ride lot system, operates a passenger-only ferry service between Bremerton and Port Orchard, and supports transit-oriented development. The Kitsap Transit 2010-2016 Transit Development Plan (2010) assesses existing service and facilities and lays out its transit improvement plan.

Fixed Route Bus Service

Kitsap Transit operates 22 local bus routes throughout the county. Most routes provide everyday service. Saturday service is limited, and there are no Sunday operations. Typical headways (time between buses) range between 15 minutes and 90 minutes, but most commonly are 60 minutes.

Kitsap Transit operates 17 commuter bus routes. Service is provided to support commute travel patterns and times of day. These routes provide weekday service and focus on major employment centers and ferry terminal areas of the county.

There are no local or commuter bus routes that directly service the Gorst UGA. Transit riders from Gorst need to drive to park and ride lots located north and east of the Gorst UGA in order to utilize transit. The closest park and ride lot to the east is located approximately 5 miles from the center of Gorst in Port Orchard. The closest bus route to the north is Route 20 which follows Werner Road north of the Gorst UGA, while the closest bus to the east is route 5 which services Tremont Street in Port Orchard.

Paratransit Bus Service

Kitsap Transit operates ACCESS paratransit service for elderly and disabled people throughout most of the county. This service is designed to provide transportation for seniors and people with disabilities who are unable to use Kitsap Transit regular fixed route buses (Kitsap Transit 2010).

Foot Ferry Service

Kitsap Transit operates contract passenger ferries between Port Orchard and Bremerton and between Annapolis and Bremerton. The Port Orchard/Bremerton ferry operates weekdays and Saturdays at average headways of 30 minutes. The Annapolis/Bremerton ferry operates weekdays during the morning and evening commute periods at average headways of 10 minutes. In 2010, the foot ferries carried 444,296 riders (Kitsap Transit 2010).

Rideshare

Kitsap Transit operates a large rideshare program composed of worker/driver buses (subscription or bus pool service), vanpools, and a ride-matching service. The vanpool program provides service to and from major employment destinations in and near Kitsap County. Currently, vanpool commute destinations include Bangor;

Bellevue/Eastgate; Boeing in Eastgate, Everett, Kent, Renton, and Seattle; Everett Naval Station; Fort Lewis; Keyport; Mountlake Terrace; Naval Station Bremerton; PSNS; and numerous Seattle destinations.

Park and Ride

Kitsap Transit manages 24 Park and Ride lots located throughout the county. Collectively, these lots have a capacity of more than 2,563 parking stalls. None of these Park and Ride lots are located within the Gorst UGA. The closest Park and Ride lot is located 5 miles from the Gorst UGA. The closest park and ride lot to the east is located approximately five miles from the center of Gorst in Port Orchard. The closest park and ride to the north is also approximately five miles from the center of Gorst and is located in Bremerton.

Transportation Demand Management

TDM consists of strategies that seek to maximize the efficiency of the transportation system by reducing demand on the system. The results of successful TDM can include the following benefits.

- Travelers switching from driving alone in a SOV to HOV modes such as transit, vanpools, or carpools.
- Travelers switching from driving to non-motorized modes such as bicycling or walking.
- Travelers changing the time they make trips from more congested to less congested times of day.
- Travelers eliminating trips altogether either through means such as compressed workweeks, consolidation of errands, or use of telecommunications.

CTR Law

Passed in 1991 as part of the Washington Clean Air Act (Chapter 70.94 RCW), the CTR law seeks to reduce workplace commute trips in the 10 most populous counties in the state. This law requires that in designated high population counties, including Kitsap County and Bremerton, each employer with more than 100 employees will adopt a CTR plan. Programs provide various incentives or disincentives to encourage use of alternative transportation modes other than the SOV. City of Bremerton and County ordinances set goals for the reduction of SOV trips. Kitsap County maintains a CTR Plan, codified in KCC Chapter 20.08.

In 2006, the Legislature amended the CTR law with the CTR Efficiency Act to make the CTR program more effective, efficient, and targeted. The modified CTR program requires WSDOT to work with cities, counties, planning organizations, and transit systems to develop programs that reduce drive-alone trips and VMT per capita.

TDM Programs

Kitsap Transit serves as the TDM lead for the County, and is the agency responsible for the implementation of CTR Law requirements for major Kitsap employers. The agency works with local governments and state agencies to promote its services and alternatives to SOV, including pedestrian/bicycle access and the facilities and land use patterns that support alternative modes. Kitsap Transit also advocates for TDM programs and overall land use programs that will benefit the array of alternatives described above throughout the county. TDM programs are briefly described below.

- **Smart Commuter.** To be in the Smart Commuter Program, a person must regularly commute to work by walking, bicycling, riding a bus, carpooling, vanpooling, or riding a ferry as a foot passenger at least three times per week. Participants must register in the program, at which time they receive a Smart Commuter Discount Card from Kitsap Transit, which provides discounts on a variety of merchandise and services from more than 100 local merchants.
- **Guaranteed Ride Home.** Employers may participate in Kitsap Transit's Guaranteed Ride Home program. Under this program, for employees registered as Smart Commuters, Kitsap Transit will arrange guaranteed transportation in case of emergency.

- **Priority Parking.** Participants in carpool and vanpool programs receive priority parking at some public Park and Ride lots.
- **Smart Commuter Option of Today (SCOOT).** Kitsap Transit operates the SCOOT program, a membership-based mobility club in which members have access to cars located around Kitsap County. The mission of the SCOOT program is to encourage commuters who work in targeted areas in Kitsap County to use alternatives to driving to work alone by offering a ‘smart option’ for personal errands. Currently, cars are provided in the Bremerton Business District at the Bremerton Harborside Building, Norm Dick’s Government Center, Kitsap County Courthouse in Port Orchard, and Kitsap Mental Health. Members are given a key card that allows them access to any vehicle in the fleet. When a member needs to use a vehicle for personal errands or appointments, he or she makes a reservation via the web or phone. Users pick up the car at a convenient location and return the car once finished.

Rail

Burlington Northern–Santa Fe Railroad (BNSF) provides rail service in the county, but its use is restricted to the U.S. military and solid waste providers. The U.S. Navy owns the rail lines from Shelton to the PSNS and from Gorst north to the Bangor Naval Submarine Base. Under an agreement with the U.S. Navy, BNSF operates and maintains the lines, with major improvements funded by the Navy. The railroad in Kitsap County is maintained at Federal Railway Administration Class 3.

Washington State Ferries (WSF)

The WSF System is an important element of Kitsap County’s transportation system. Four WSF terminals are located in Kitsap County: at Bremerton, Bainbridge Island, Southworth, and Kingston. Service between Kitsap County and the Seattle metropolitan area is provided by four state ferry routes, with endpoints at each of these terminals.

Table 3.11-5 *WSF Traffic Statistics* summarizes ridership in 2010 and 2011 for each route.

Table 3.11-5
WSF Traffic Statistics

	2010				2011			
	Vehicles	Passengers	Total Riders	Percent Change from 2009	Vehicles	Passengers	Total Riders	Percent Change from 2010
Edmonds/ Kingston	2,156,875	1,916,642	4,073,517	0.0	2,063,102	1,818,530	3,881,632	(4.7)
Seattle/ Bremerton	656,979	1,859,050	2,516,029	3.6	642,839	1,718,724	2,361,563	(6.1)
Seattle/ Bainbridge Island	1,950,941	4,026,194	5,977,135	(2.3)	1,947,986	4,158,216	6,106,202	2.2
Fauntleroy/ Southworth	490,991	325,503	816,494	(4.9)	489,059	332,913	821,972	0.7
Vashon Island/ Southworth	98,388	76,646	175,034	5.4	90,980	72,540	163,520	(6.6)

Source: WSDOT 2011, 2012

Non-motorized Facilities

Non-motorized modes include all transportation that does not utilize a motor for movement. In Kitsap County, the main non-motorized modes are walking and bicycling. In addition, equestrian transportation is included in non-motorized modes.

Currently, there are limited developed designated non-motorized facilities in Kitsap County; however, a roadway shoulder-paving program has increased safety for pedestrians and bicyclists on numerous roads throughout the county.

The Kitsap County Greenways Plan provides a comprehensive review and recommendation list for all types of non-motorized travel, including separated walking and hiking facilities, multipurpose trails, separated bike facilities, and equestrian trails. The plan will integrate non-motorized facilities into the existing and future roadway network.

The transportation component of the Kitsap County Greenways Plan designates a system of bicycle facilities to address these concerns. These facilities seek to connect destinations of interest to the broad range of commuters, inter-community users, and local users. The main role of the Kitsap County Bicycle Facilities Plan is to provide non-motorized transportation alternatives to the existing County transportation system. This non-motorized system strives also to interconnect neighborhood communities, urban and rural areas, schools, parks, places of employment, and inter modal nodes such as transit stops, park and ride facilities and ferry terminals in order to create a viable non-motorized transportation system.

The City of Bremerton Non –Motorized Transportation Plan is a comprehensive document that provides an inventory and assessment of existing bicycle and pedestrian conditions with the City of Bremerton. It also provides recommendations and strategies for system-wide improvements and opportunities to connect to regional systems such as the Mosquito Fleet Trail. While the City of Bremerton Non-Motorized Transportation Plan does not specifically address the Gorst UGA, it does provide some routing options to the Mosquito Fleet Trail to provide and efficient non-motorized connection from Gorst to Bremerton.

Pedestrian Facilities

Pedestrian facilities are an integral part of the transportation system. For some citizens, particularly elderly residents and children, walking is the primary mode of travel. It is also a key link to transit service and between land uses in urban areas.

The Kitsap County Road Standards 2007 indicate that pedestrian facilities may be required as part of road improvements where there are anticipated or existing origins and destinations with acceptable pedestrian travel distances that will generate trips. If required sidewalk width is a minimum of five-feet wide.

The City of Bremerton Roadway Standards, indicate that sidewalks are required on all roadway classifications. The preferred location of the sidewalk is away from the roadway (separated by a landscape buffer). The minimum width of sidewalks in the City of Bremerton is five feet.

Bicycle Facilities

According to the Kitsap County Bicycle Facilities Plan, the only facility that currently exists or is planned within the Gorst UGA is the Mosquito Fleet Trail that is anticipated to follow along the shoreline with the Gorst UGA. As previously discussed, the Mosquito Fleet Trail is an integral part of the City of Bremerton Bicycle plan to provide a regional connection from the City of Bremerton to other areas within Kitsap County.

Multi-use Trails

For more than 20 years, the County has had planning programs for non-motorized modes, including several trail plans. Trails within the county include the Clear Creek Trail in central Kitsap, the Hansville Greenway Trails in north Kitsap, and the Mosquito Fleet Trail between north and south Kitsap. However, not much has been constructed with the Mosquito Fleet Trail.

Mosquito Fleet Trail

The Mosquito Fleet Trail Master Plan defines in greater detail a project that is both part of the Kitsap County Open Space Plan and the Kitsap County Bicycle Facilities Plan. The basic concept is that of a trail corridor for use by bicyclists and pedestrians that skirts the eastern shoreline of Kitsap County and Bainbridge Island, connecting

historic Mosquito Fleet docks along the way. It is a route for usage by commuters, school children, bicycle touring groups, recreational users, and tourists. It links cultural resources and scenic sites, parks and docks, businesses and schools, transit and public facilities, and communities and cities. It connects all four of the county's cities and 25 of the county's communities.

In fall 1999, the County began the planning process for this trail corridor with an extensive inventory of the route and an in-depth public process to ensure the development of a master plan that would reflect the needs and concerns of the citizens of Kitsap County.

The trail is an approximate 100-mile roadside hike and bike route along the shores of the Kitsap Peninsula. The route will be marked with distinctive signs, making it easy to follow on foot, by bicycle, or by automobile. It links the old Mosquito Fleet docks from Kingston to Southworth. It provides access to many other interesting stopping points including villages and towns, parks, historic sites, and scenic vistas (Kitsap County 2012).

The Mosquito Fleet Trail Master Plan identifies "Project 7 – Bremerton to Port Orchard". This section of the trail would connect Port Orchard with Bremerton through the Gorst UGA. The primary route would provide a separated path that would generally follow SR 16 and SR 3 through Gorst. A secondary route is also identified that would include paved shoulders on Sherman Heights Road, Kent Avenue, 3rd Avenue and Union Avenue. This secondary route would connect to the primary corridor at SR 3 and Sherman Heights road and continue north to Werner Road.

Gorst- Heins Creek Trails

The City of Bremerton is considering a number of options for a Gorst –Heins Creek trail system that would be ultimately be part of the Kitsap Regional Trail currently being considered as part of a non-motorized plan being developed by Kitsap County. This trail system would provide a connection to the Gorst UGA and would head north toward Heins Lake. Approximately 6.5 miles of trail alignments have been considered with options for additional connections and side trails as necessary. Approximately 1/4 of a mile of trail currently exists with Jarstad Park which would be the beginning of this proposed trail system.

Air Travel

Bremerton National Airport

Kitsap County is served by Bremerton National Airport, which is the county's major public airport. It is considered a Washington State Public Use Airport identified in the Washington State Aviation System Plan. WSDOT guidelines address airport land use compatibility for public use airports.

The Bremerton National Airport is approximate four miles south of the Gorst UGA and is owned and operated by the Port of Bremerton. Charter, rental, flight instruction, maintenance, and avionics services are available at the airport. The airport has two runways, only one of which is now in use. This runway has the capacity of more than twice the current number of takeoffs and landings. In addition, the runway is sufficiently long to handle planes that are larger than the current aircraft size using this facility; the Navy has expressed an interest in upgraded facilities to support even larger aircraft.

Seattle-Tacoma (Sea-Tac) International Airport

Sea-Tac International Airport, located in King County, is the principal passenger air terminal serving Kitsap County residents and businesses. Access to the airport from the Gorst UGA is via SR 16 and the Tacoma Narrows Bridge to Interstate 5, as well as via ferry service to Edmonds, Seattle, and Fauntleroy and then ground transportation to the airport via SR 99 or Interstate 5. Travel time from the Gorst UGAS to Sea-Tac via Tacoma is slightly more than one hour during nonpeak travel times. An airport shuttle service operates hourly from Bremerton and other points in Kitsap County to the airport.

Planned Future Roadway Improvements

Analysis of future conditions assumes the completion of transportation improvement projects to which commitment has been made by the implementing agency. The reason for this is that if committed capacity improvement projects are not assumed in place, potential exists for future impacts to be over-predicted. For the analysis presented in this SEIS, future improvements were identified for county roadways and state highways as described below.

- County roadway improvements were identified if they are included in the County's TIP and had committed funding in place.
- State highway improvements were identified if they were included in the WTP.

The following improvements to State and County Roadways that are assumed in place for the 2035 transportation model analysis that would affect the Gorst UGA:

- SR 3 and SR 304 interchange assume an additional lane is in place on SR 3. WSDOT is currently studying this interchange to finalize the improvements need to this interchange.
- SKIA Connector from Lake Flora Road to SR 3 – New 2 lane roadway

The assumed transportation improvements needed to meet the adopted Kitsap County roadway segment LOS as shown in the Kitsap County's Capital Facility Plan in the Gorst vicinity include:

- Belfair Valley Rd (W), Mason County Line - Bremerton City Limits Widen to undivided four lanes: 2019-2025
- Belfair Valley Rd (W), Bremerton City Limits - Sam Christopherson Ave W, Widen to undivided 4 lanes

These improvements are not in the base model but were developed as mitigation measures for the Kitsap County Comprehensive Plan amendments in 2012.

The Washington Department of Transportation Bremerton Economic Development Study has developed a number of transportation improvement projects along SR 3 and SR 16 within the Gorst area. While these projects were not included in the County Transportation model many of them are or will be included in the PSRC Transportation 2040 plan and amendments. The following are a summary of these projects:

- SR 3 from Belfair to Gorst: Widen to four lanes with inside and outside shoulders. Widening will also include improved intersections and access management.
- SR 16/SR 3 from Sedgwick Road Interchange to Loxie Eagans Boulevard Interchange: Widen to provide a six lane, divided, limited access highway with HOV lanes. Improved access management will be included throughout this segment.
- Sam Christopherson Avenue/SR 3: Construct a four lane bridge with shoulders over Sam Christopherson Avenue.
- As part of the improvements for the SR16/SR 3 intersection area, WSDOT is in the process of evaluating whether a roundabout would be feasible at this location to eliminate the existing merging, weaving, and access issues.

Impacts

Methodologies

Travel Demand Forecasts

The Kitsap County travel demand forecasting model was updated in 2011 using TransCAD software. The model was calibrated using 2010 data. A primary goal of the Kitsap County model has been to maintain the highest compatibility with the PSRC regional travel demand forecasting model. To achieve this goal, the core structure of

the PSRC model was maintained as much as possible. The major components of the Kitsap County model are listed below.

1. Existing Land Use
2. TAZ
3. Transportation Network
4. Trip Generation
5. Trip Distribution
6. Mode Choice
7. Network Assignment
8. Model Calibration
9. Model of Future Traffic Conditions

A detailed description of the Kitsap County model is provided in the technical report *Kitsap County Travel Demand Model Development Report*, 2012. Each major component of the model, as described in the technical memorandum, is summarized in the following sections.

Existing Land Use

Land use data were compiled for Kitsap County for 2010. For purposes of transportation modeling, land use data are categorized as residential and nonresidential. Each category is further divided into several land use types. Residential land use is divided into single-family and multi-family households. This was developed from 2010 US Census block data.

Non-residential land use is converted into employment data, which are divided into the following categories (units are employees), based on State Employment Security Department Data provided to the PSRC:

- Financial, insurance, and real estate
- Manufacturing
- Government
- Warehouse, communication, transportation, utility
- Education employment
- Full-time equivalent college student

The PSRC database was used because the Kitsap County system did not include employment data. The PSRC employment database did not include data for the major military bases, such as the PSNS and Bangor Submarine Base, so an adjustment was made to include military employment based on the latest data compiled by Kitsap County.

Transportation Analysis Zones

For purposes of transportation modeling, the entire county, including the Gorst UGA, is divided into TAZs. One of the main objectives for this model was to maintain as much consistency as possible to the previous Kitsap model, as well as the PSRC model from which it was derived. To achieve this, the PSRC TAZ outside of the county were aggregated to develop 10 external zones. PSRC to Kitsap TAZ equivalencies were maintained for consistency in data aggregation. This reduced the size of the model and improved operating efficiency. Past Kitsap models had disaggregated the Kitsap zones in the PSRC model to develop a 411 internal zone system. This 411 zone system, which added much needed detail to the model, was maintained. The Gorst UGA encompasses 8 of these zones.

These zone systems provide the Kitsap model the geographic detail needed to better estimate and forecast local traffic, while maintaining consistency with the PSRC model for data input, such as trip rates, population and land use forecasts, etc.

Within the Gorst UGA, the proposed land used assumptions for each model were broken down to each of the eight zones that make up the Gorst UGA. The trips that the model generated from these land use assumptions were distributed to the roadway network via centroid connectors. Depending on the number of local roadways that pass through the various zones, more than one centroid connector was included to provide a clear direction as to location of the origin and/or destination of the trips.

Transportation Network

The roadway network is represented in the computer as a series of links (roadway segments) and nodes (intersections). Characteristics such as capacity, length, speed, and turning restrictions at intersections are coded into the network. The approach taken in developing the transportation network was similar to that employed in TAZ development. It started with the PSRC network as the base, but a more detailed network was developed inside Kitsap County. Within the Gorst UGA each of the existing roadways that provided a connection to either arterial roadways and/or state highways was included. Roadway that serviced a small residential community without a direct connection to larger roadways was not included in the network. It is assumed that these types of roadways are best replicated in a group and reflected as centroid connectors.

Trip Generation

The trip generation step estimates the total number of trips produced by and attracted to each TAZ in the study area. The trips are estimated using statistical data that take into account population and household characteristics, employment information, economic model output, and land use information. Trip generation in the Kitsap model is based on the procedures developed by PSRC. The PSRC model is a cross-classification model, which requires land uses to be cross-classified by income groups, number of workers, number of college-aged persons, and number of school-aged persons. For non-residential land uses, it uses a linear regression procedure. The PSRC procedure applied only to the Kitsap internal zones (1 through 411). For other zones outside the county border, trip data from the PSRC model were directly imported.

Trips generated are categorized by their general purpose; these are listed below.

- Home based work trips—any trip with home as one end and work as the other end
- Home based college trips—any trip with home as one end and college as the other end
- Home based other trips—any non-work trip with home as one end
- Non-home-based trips—any trip that does not have home as either end

The trip generation model generally estimates the number of trips that are generated per household during the analysis period for each of the purposes under consideration. For its output, the trip generation model estimates the total number of trips produced in each TAZ and the total number of trips attracted to each TAZ, categorized by trip purpose.

Trip Distribution

The trip distribution step allocates the trips estimated by the trip generation model to create a specific zonal origin and destination for each trip. This is accomplished through use of the gravity model, which distributes trips according to two basic assumptions:

1. More trips will be attracted to larger zones (the size of a zone is defined by the number of attractions estimated in the trip generation phase, not the geographical size).

2. More trips will take place between zones that are closer together than will take place between zones that are farther apart. The result is a trip matrix (for each of the trip purposes specified in trip generation) that estimates how many trips are taken from each zone (origin) to every other zone (destination).

Modal Choice

The modal choice model reflects the total zone-to-zone person trips resulting from the trip distribution model, split into trips using each available mode between each zone pair. Modes included in the Kitsap County model are listed below.

- Automobile—drive alone
- Automobile—carpool
- Transit —drive access
- Transit—walk access

Factors that are considered in the modal choice model are travel time and distance; out-of-vehicle time (including walk, wait, and transfer time); and cost (transit fare, parking cost). The mode-specific trip tables are converted into vehicle trips by using auto-occupancy factors, and loaded onto the roadway network in the trip assignment process.

Network Assignment

The arterial street system is represented in the computer model as a series of links, which represent roadways; and nodes, which represent the intersection of those roadways. Each roadway link and intersection node is assigned a functional classification, with associated characteristics of length, capacity, and speed. The computer model uses this information to determine the optimum path between all the zones based on travel time and distance. The model then distributes the trips from each of the zones onto the street network.

Model Calibration

A crucial step in the modeling process is the calibration of the model. The modeling process can generally be described as defining the existing street system as a model network and applying trip patterns based on existing land use. The model output, which consists of estimated traffic volumes on each roadway segment, is compared to existing traffic counts and observed travel patterns. Adjustments are made to the model inputs until the modeled existing conditions replicate actual existing conditions within accepted parameters. Once the model is calibrated for existing conditions, it can be used as the basis for analyzing future traffic conditions, as well as potential future improvements to address existing and future deficiencies.

Model of Future Traffic Conditions

Using the same general process described for modeling existing conditions, the forecast land use data are used to estimate the number of trips that will be generated in future travel. The forecast land use was based on a land capacity analysis for the UGAs (including the Gorst UGA - the focus of this analysis), city estimates of growth in city limits based on their comprehensive plans, and a distribution of rural growth based on 2010 patterns, but grown to the CPP rural growth target. These trips are then distributed among the TAZs and assigned to the street network. The result is a model of projected future traffic conditions under the projected future land use scenario.

Allocation of future land use under the different alternatives is based upon overall population projections, overall employment projections, the zoning of each TAZ, and the available capacity for the TAZ.

LOS Methodologies

As described earlier in this chapter, LOS designations are qualitative measures of congestion that describe operational conditions within a traffic stream and take into consideration such factors as volume, speed, travel time, and delay. LOS is represented by letter grades A through F. LOS A through C imply traffic flows with minimal

delay, while LOS D and E imply conditions that approach capacity, and LOS F implies unstable flow with potential for substantial delays (Transportation Research Board 2000). The characteristics of the six levels of service designations for roadway segments and intersections are summarized in Table 3.11-2 *LOS Descriptions*. The following sections describe the methods applied to calculate LOS for roadway segments and intersections.

Roadway Segment LOS

Kitsap County uses a traditional engineering methodology to evaluate LOS of roadway segments, which are sections of roadway located between major intersections. LOS is based on V/C ratios, by which roadway travel volumes are compared to roadway capacity. The V/C ratio relates directly to measures of LOS. Table 3.11-6 *V/C Ratio Ranges as They Relate to LOS* shows the relationships between LOS, V/C ratios, peak hour, and free-flow speed on a roadway segment.

To calculate V/C ratio on a roadway segment, the projected daily traffic volume that travels on the roadway is divided by its capacity. For planning-level estimates such as those presented in this SEIS, capacities are calculated on the basis of characteristics such as functional classification, access characteristics, number of lanes, presence of medians, and whether the roadway is located in an urban or a rural setting.

Table 3.11-6
V/C Ratio Ranges as They Relate to LOS

LOS	V/C Range	Percent of Free-Flow Speed (Peak Hour)
A	0.50 and below	90 or greater
B	0.60 to 0.69	70 to 90
C	0.70 to 0.79	50
D	0.80 to 0.89	40
E	0.90 to 0.99	33
F	1.00 and above	25 or less

Source: Kitsap County 2012.

In addition to the roadway segment LOS that is used by Kitsap County, the City of Bremerton also applies the LOS to intersections. LOS for intersections considers the control delay experienced for each vehicle whether it be a stop or signalized intersection and relates the delay to the LOS.

IMPACTS COMMON TO ALL ALTERNATIVES

The three alternatives are expected to experience common types of impacts, with the intensity of the impacts increasing as population and employment levels increase. This section provides a side-by-side summary of travel demand and roadway LOS impacts projected to result from each of the three alternatives. Potential impacts on other modes of travel are also discussed.

System-wide Travel Impacts

Table 3.11-7 *Summary of Gorst Area Travel Statistics* summarizes a number of numerical measures that have been defined for the alternatives based upon the Gorst UGA population and employment projections, the proposed land use plan for each alternative, planned infrastructure improvements, and travel demand modeling results. Since the Gorst UGA is a relatively small area compared to the overall county, the Daily Vehicle Trips and Daily Vehicle Miles of Travel shown in the table are for the entire county. The differences between the three alternatives are the result of the varying land use assumptions for the Gorst UGA. Table 3.11-7 *Summary of Gorst Area Travel Statistics* indicates that the daily trips and daily vehicle miles are very similar for all three alternatives. Alternative 1 results in the fewest trips in 2035 while Alternative 2 generates the most trips. Alternative 2 results in 2,823 more daily trips than Alternative 1 while Alternative 3 produces 2,031 more trips than Alternative 1.

Table 3.11-7 Summary of Gorst Area Travel Statistics

Category	Alternative 1	Alternative 2	Alternative 3
Gorst Area Population¹			
Existing (2010)	2,108	2,108	2,108
2035	3,288	4,191	4,289
Percent Increase	56	99	103
Gorst Area Employment¹			
Existing	786	786	786
2035	2,126	1,991	1,718
Percent Increase	170	153	118
Lane-Miles of Gorst Area Roadways²			
Existing	8.16	8.16	8.16
2035	8.16	8.16	8.16
Percent Increase	0	0	0
Countywide Model Daily Vehicle Trips			
Existing	666,968	666,968	666,968
2035	884,937	887,760	886,968
Trips attributed to Gorst Alts 2&3		2,823	2,031
Percent Increase	32.68	33.10	32.98
Countywide Model Daily Vehicle Miles of Travel (VMT)			
Existing	5,064,708	5,064,708	5,064,708
2035	6,602,656	6,615,322	6,604,458
Percent Increase	30.36	30.61	30.40
Countywide Model Daily Rideshare Vehicle Trips			
Existing	14,854	14,854	14,854
2035	19,511	19,578	19,560
Percent Increase	30.35	31.80	31.68
Countywide Model Daily Transit Person Trips			
Existing	11,309	11,309	11,309
2035	14,467	14,495	14,533
Percent Increase	27.92	28.17	28.50
Countywide Model PM Peak Hour Vehicles			
Existing	64,029	64,029	64,029
2035	84,954	85,225	85,149
Trips attributed to Gorst Alts 2&3		271	195
Percent Increase	32.68	33.10	32.98

Note: ¹ Based on TAZ encompassing the Gorst UGA. Net differences are due to land use changes in the Gorst UGA.

² Includes functionally classified arterial and collector roadways, does not include State Highways.

³ Kitsap county-wide travel demand model, with updated Gorst area population and employment data, and updated SKIA employment data matching City of Bremerton SKIA Subarea Plan December 2012. Net differences are due to land use changes in the Gorst UGA.

Source: Kitsap County 2013

LOS Impacts

Operational impacts were assessed by calculating the LOS of roadways and intersections in 2035 under traffic conditions projected to result from build-out of each of the three alternatives.

Roadway segments

Table 3.11-8 *Projected Roadway Segment Deficiencies under Two Alternatives by 2035* summarizes the lane-miles of deficient roadway segments within the Gorst UGA projected by 2035 under the three alternatives. As noted earlier in this chapter, a county roadway is considered deficient if the projected V/C ratio exceeds the County's adopted standards (Table 3.11-6 *V/C Ratio Ranges as they Relate to LOS*).

Table 3.11-8
Projected Roadway Segment Deficiencies under Alternatives by 2035

	Alternative 1	Alternative 2	Alternative 3
Gorst Area Total Deficient Lane-Miles	0.46	0.46	0.46
Total 2025 Gorst Roadway Lane-Miles	8.16	8.16	8.16
Percent of Deficient Lane-miles	5.6	5.6	5.6

Source: Kitsap County 2013

Table 3.11-8 *Projected Roadway Segment Deficiencies under Alternatives by 2035* shows that all three alternatives are projected to have a similar number of deficient lane miles. The projected 2035 volume on Belfair Valley Road between Sam Christopherson Avenue and the UGA limits is expected to increase with all three alternatives to a point where this section of roadway will be deficient by 2035. It is noted that this section of roadway was identified as needing improvement in the Kitsap County UGA Remand SEIS. None of the alternatives are expected to result in a percentage of deficient lane-miles of roadway that exceeds the County concurrency standard of 15 percent when considering either the Gorst UGA or for the entire County.

Intersections

Due to the uncertainty in timing and configuration of the state highway improvements within the Gorst UGA, an intersection analysis was not performed. It is recommended that as land is developed in the future, a traffic impact analysis be prepared for the development that will look at the intersections within the area as well as those intersections outside of the Gorst UGA that could be affected.

Impacts on State Facilities

State Highways

Table 3.11-9 *Projected State Highway Deficiencies by 2035* summarizes the miles of deficient state highway segments projected by 2035 under each alternative. As noted earlier in this chapter, a county roadway is considered deficient if its operations are projected to exceed adopted highway standards (Table 3.11-8 *Projected Roadway Segment Deficiencies under Alternatives by 2035*).

This table shows that Alternative 3 will have the least impact on the State Highways within the Gorst UGA in terms of the length of deficient roadway length with the Gorst area. Table 3.11-9 *Projected State Highway Deficiencies by 2035* shows that 1.87 miles of the 2.7 miles of SR 3 that is located in the Gorst Area will be deficient with Alternative 1 and 2 while 1.66 miles will be deficient with Alternative 3. None of the 1.14 miles of SR 16 within the Gorst UGA is projected to be deficient by 2035.

The table shows that 63 percent of the state highway miles in Kitsap County are projected to be deficient under Alternative 1 and 63 percent are projected to be deficient under Alternative 2.

Table 3.11-9
Projected State Highway Deficiencies by 2035

State Highway	Total Length (miles)	Alternative 1		Alternative 2		Alternative 3	
		Length of Deficient Segments (miles)	Percentage of Total Length	Length of Deficient Segments (miles)	Percentage of Total Length	Length of Deficient Segments (miles)	Percentage of Total Length
SR 3	2.7	1.87	69.25	1.87	69.25	1.66	61.48
SR 16	1.14	0	0	0	0	0	0
Total	3.84	1.87	48.67	1.87	48.67	1.66	43.22

Source: Kitsap County 2013

WSF

Long-range capacity and service needs for state ferry routes are identified by the Washington State Department of Transportation (WSDOT) Ferries Division in its Long-Range Plan (WSDOT Ferries Division 2009). Forecasts are based on the regional population and employment projections that form the basis for the other projections presented in this SEIS; as well as financial analysis of projected future ferry fares. The WSDOT Ferries Division projects that system-wide, annual ferry ridership will increase from 23.7 million (based upon 2006 counts) to 32.3 million passengers per year; and vehicle demand will increase from 10.8 million to 14.1 million vehicles per year. (WSDOT Ferries Division 2009) Table 3.11-10 *Projected PM Peak Ferry Demand for Kitsap Service Area* summarizes the peak hour demand projected by WSF for the Kitsap service area within this time period. The table shows that total ridership is projected to increase by approximately one-third by 2030.

Table 3.11-10
Projected PM Peak Ferry Demand for Kitsap Service Area

Ridership	Existing(based on 2006)	Projected 2030 Demand	Percentage Increase
Vehicles	4,980	6,490	30
Walk-On Passengers	4,790	6,420	34
In-vehicle Passengers	2,440	3,370	38
Total Ridership	12,210	16,280	33

Note: Represents ridership totals for Vashon-Southworth, Fauntleroy-Southworth, Seattle-Southworth, Seattle-Bremerton, Seattle-Bainbridge Island, and Edmonds-Kingston routes.

Source: WSDOT 2009

The methodology utilized for these projections, as well as the WSF's plan for accommodating projected future demand is presented in the Long-Range Strategic Plan (Washington State Ferries 2009). Regular review and update of this plan will help ensure that capacity and services needed to meet the increased demand will be identified. As the ferry routes serve the entire Kitsap service area, changes to the land use with the Gorst UGA will have a negligible effect on projected ferry demand.

Impacts on Other Modes of Travel

Non-Motorized

Increases in population and employment levels are expected to increase the demand for additional facilities; thus, all three alternatives would affect non-motorized facilities through increased demand for additional trails and bikeways. The increase in urbanized area would result in more trail and bicycle facility demands in those areas. These bicycle and trail facilities may either be located along roadways as bike lanes/sidewalks or as separated facilities and would provide opportunities for both recreational and commuter users. As development occurs, the

development of connections from residential areas to regional trail systems should be identified to promote increase use of these facilities.

Infrastructure needs for non-motorized transportation/commuter and mixed bicycle/pedestrian user groups are identified in the Kitsap County Bicycle Facilities Plan. Planning programs for trails are maintained in trail plans, such as the Mosquito Fleet Trail Master Plan. Regular review and update of these plans will help ensure that infrastructure and services needed to meet increased demand for non-motorized facilities will be identified.

Transit

Transit operations and facilities would be affected by the increase in travel demand created by any of the alternatives. The travel statistics summarized in Table 3.11-7 *Summary of Gorst Area Travel Statistics* indicate that transit person trips would increase by about 28 percent county wide. These increases would require a substantial increase in hours of operations and some capital facilities such as park and ride lots. Expansion of the urban areas would result in new or extended bus routes in addition to more frequent service. Commuter routes would also see increased demand, affecting park and ride lots, transit centers, and flyer stops. As discussed previously, the Gorst Area currently is not served directly by Kitsap Transit. With the projected county wide increase in transit person trips, it is conceivable that new routes could be added which could include the Gorst area.

Rail and Airports

Projected growth in the county would affect demand on rail and airports in Kitsap County. In general as employment and population increase, the requirement for these services would also increase.

Rail activity would be affected by an increase in commerce reflected in increased employment and is owned by the U.S. Department of Defense. Airport activity would increase as recreational and employment activities increase.

The demand on rail and airports from the Gorst UGA is considered negligible when compared to the overall demand from the county.

Impacts of Alternative 1

Alternative 1 retains the existing highway-oriented commercial and industrial center as well as the large mineral resource along Sinclair Heights. This land use results in the projections for employment being 74 percent higher than the projected number of households. From a transportation perspective, this land use promotes trips into the Gorst Area to the various employers from other area in the County. The largest employment densities will remain in the center part of the Gorst Area near the intersection of SR 3 and SR 16. WSDOT has indicated that the junction of SR 3 and SR 16 is the most congested location in Kitsap County. This alternative will only further degrade this intersection due to access to and from the highways to the local business located on both sides of the highways.

As this alternative does not provide as much housing as Alternatives 2 and 3, the projected traffic on the county roadways will be less with this alternative as there would less work to home trips that originate outside of the Gorst Area.

Impacts of Alternative 2

The commercial area envisioned for Alternative 2 is similar to the commercial areas in Alternative 1 with the exception that the mineral resource area along Sinclair Heights would be would developed as medium density residential. With this change, Alternative 2 is projected to have 479 additional households compared to Alternative 1 and 135 fewer jobs. With the majority of the housing being added to the north portion of the Gorst UGA, the home-work trips associated with this development are primarily routed on the existing county roadways rather than the highways. The traffic projections for this alternative show that the majority of the trips generated from the new residential developments are directed north toward Werner Road to access employment areas to the north and east while the remaining trips are directed to the southwest and east via Belfair Road and Sam Christopherson Avenue.

While some of the commercial areas near the waterfront are converted to open space with this alternative, the density of the type of commercial developments envisioned for this alternative will result in similar traffic operational concerns on SR 3 and SR 16 in the center of the Gorst UGA as Alternative 1. Trips accessing this commercial area will be employment trips originating from outside of the Gorst Area as well as number of trips originating outside of the area that are destined to the various commercial developments along the state highways.

The inclusion of pedestrian friendly commercial developments between SR 3 and Sinclair inlet will result in an increased pedestrian demand from the residential areas to the waterfront. This increase in demand will create a safety concern for pedestrians crossing the highway at grade.

Impacts of Alternative 3

Alternative 3 would convert the resource area along Sinclair Heights to residential but with a different mix of residential than Alternative 2. Under this alternative, an additional 536 housing units would be added in comparison to Alternative 1. However due to the presence of small scale commercial developments near the residential development as well as the inclusion of trails and pedestrian facilities, these additional housing units would actually result in a reduction in the volumes on the local county roadway as compared to Alternative 2. As with Alternative 2, the traffic projections for this alternative show that the majority of the trips generated from the new residential developments are directed north toward Werner Road to access employment areas to the north and east while the remaining trips are directed to the southwest and east via Belfair Road and Sam Christopherson Avenue.

The biggest change with this Alternative is the change in the type and intensity of commercial developments with the central area of the Gorst UGA. This lower intensity development will result in 408 fewer jobs in the Gorst UGA as compared with Alternative 1. The combination of lower density commercial and the change in the land use along the waterfront such that access control along SR 3 can be more readily implemented, the traffic operations along the state highways with this alternative is expected to be the least disruptive with this alternative than the other 2 alternatives.

The inclusion of pedestrian friendly commercial developments between SR 3 and Sinclair inlet will result in an increased pedestrian demand from the residential areas to the waterfront. This increase in demand will create a safety concern for pedestrians crossing the highway at grade.

Mitigation Measures

Incorporated Plan Features

All alternatives would implement City of Bremerton and County Comprehensive Plan Transportation Elements including adopted policies regarding levels of service, concurrency, TDM, etc.

The Draft Gorst Creek Watershed Characterization & Framework Plan and Draft Gorst Subarea Plan include the following policies that would address transportation impacts:

- Manage land use and growth to avoid increases in traffic congestion, and create opportunities for improvements to existing congestion.
- Improve safety and circulation, and improve transportation mode choices including transit, bicycle, pedestrian, and automobiles.
- Encourage improved Kitsap Transit service such as added park and ride facilities.
- Design roads to incorporate gateway treatments, boulevard style streetscape improvements, and access improvements to invite the community to Gorst and allow convenient travel to regional businesses.

Applicable Regulations and Commitments

Current adopted County or City of Bremerton regulations or programs as described in the Affected Environment of this section.

Other Potential Mitigation Measures

As discussed previously, Belfair Road is projected to operationally deficient prior to 2035. This roadway was identified in the Kitsap County UGA Remand SEIS as needing widening from 2 to 4 lanes. All of the other County roadways within the Gorst Sub Area have capacity to support the additional traffic associated with all three alternatives.

Due to the lack of capacity on SR 3 and SR 16 within the center of Gorst as well as a variety of merging and diverging movements, any new developments or redevelopments should be designed to direct traffic either north (Sherman Heights) or west (Sam Christopherson Avenue or Belfair Valley Road) of the SR 3/ SR 16 junction.

While access to the north via Sherman Heights Road does not provide the most direct route to Werner Avenue and SR 3, this corridor (including Sherman Heights Road, Kent Avenue, 3rd Avenue and Union Avenue) should be evaluated for spot intersection improvements to make this route and attractive route for traffic originating in the Gorst UGA to head north to avoid having to access SR 3 in central Gorst.

While Werner road is north of the Gorst UGA, this roadway is considered an important route for Gorst UGA traffic to access SR 3. The Werner Road corridor between Union Avenue and SR 3 should be evaluated as part of traffic impact analysis reports prepared for new development in order to optimize the traffic flow on this corridor.

To address increased pedestrian demand between the proposed residential areas and the waterfront commercial and recreation land uses associated with Alternatives 2 and 3, consideration should be made to construct grade separated pedestrian overpasses that would connect the both the residential and walkable commercial areas that are on both sides of SR 3 and SR 16. The exact location(s) of these overpasses need to be determined in conjunction with any proposed highway improvements in this area.

Significant Unavoidable Adverse Impacts

Implementation of any of the growth alternatives would result in increased traffic within the Gorst UGA and networks in south Kitsap County and Bremerton, with the lowest increase occurring under Alternative 3 and greater increases under Alternatives 1 and 2 (however, Alternative 2 is no greater than Alternative 1 No Action in terms of State Route congestion). Due to the large volume of regional "pass through" traffic that uses both SR 3 and SR 16, all three alternatives contribute a relatively small amount to cumulative volumes on state routes. While WSDOT has long range plans to address capacity on SR 3, the amount of widening of this roadway will be limited by the presence of Sinclair Inlet on the east side of the roadway, a steep hillside on the west side of the roadway and a railway crossing with abutments that limit widening.

3.12 Public Services

The purpose of this section is to review existing levels of service, estimated needs and demand for service, and projected levels of service under each alternative for police and fire protection, parks, schools, and libraries.

It should be noted that for the purposes of this Draft EIS, the future countywide population growth targets for 2025 are presumed to apply to the year 2035, with the only difference being the increase in population studied in Gorst. Currently the Kitsap Regional Coordinating Council (KRCC) is developing new growth targets for the year 2035 which are anticipated to be similar to year 2025 target. However, if the population targets are changed, some additional analysis may be needed with the County and City of Bremerton Comprehensive Plan updates due in 2016.

Facility Inventory

Figure 3.12-1 *Gorst Watershed Planning Area Public Facilities* shows the location of public facilities in relationship to the study area.

Levels of Service

One of the aspects of this public services analysis is the potential for the Gorst UGA to be annexed by the City of Bremerton, which would move its public services from unincorporated county services to city levels of service. Table 3.12-1 *Summary of Adopted LOS Standards by Jurisdiction* summarizes the adopted levels of service for each of the public services analyzed in this section. For most of the services, the adopted levels of service units of measure are different between the County and the City of Bremerton, so it is difficult to compare directly. However, cities generally provide a higher LOS expectation than unincorporated areas of the County.

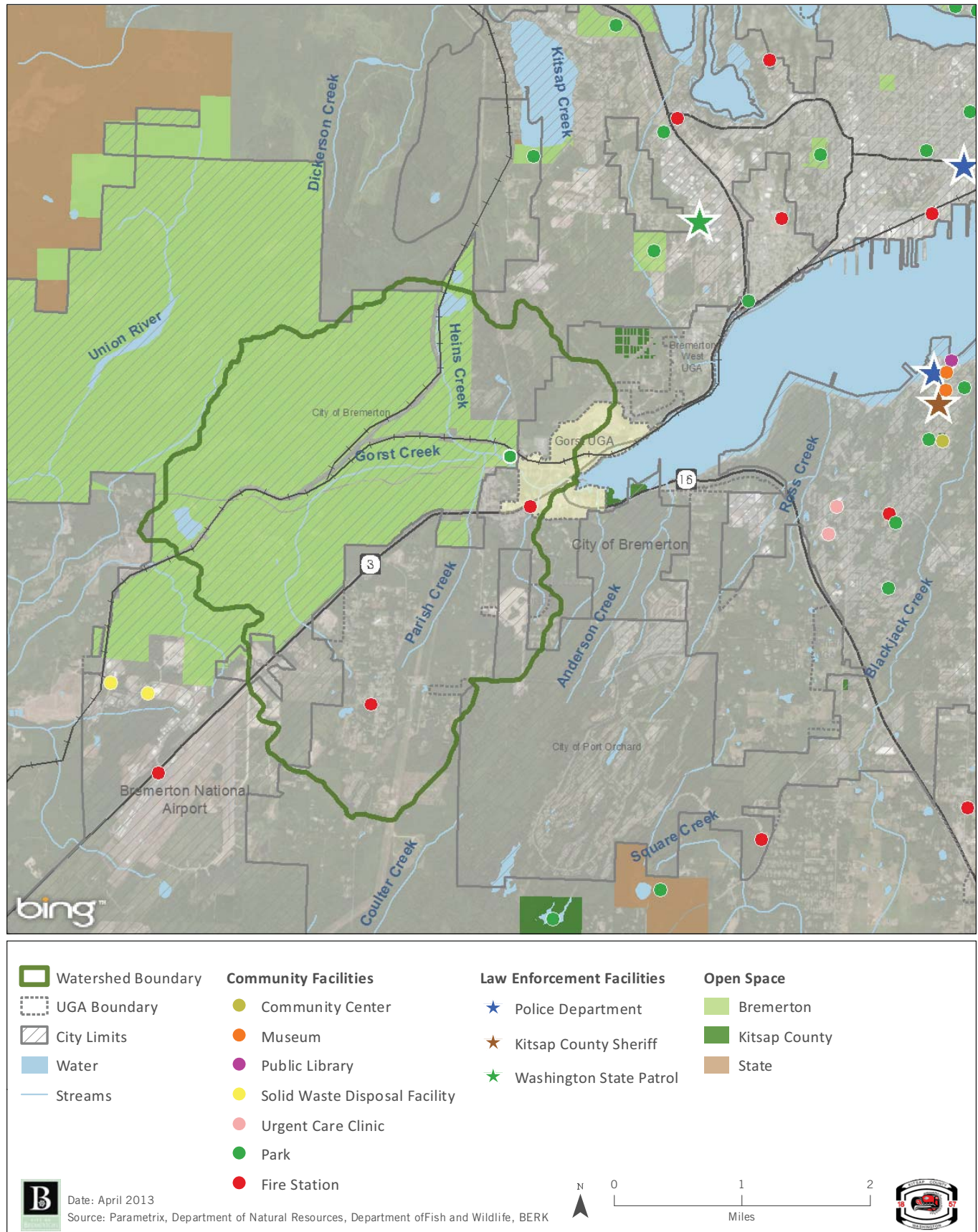
**Table 3.12-1
Summary of Adopted LOS Standards by Jurisdiction**

	<u>City of Bremerton</u>		<u>Kitsap County</u>	
	<u>Provider</u>	<u>LOS</u>	<u>Provider</u>	<u>LOS</u>
Fire & EMS	Bremerton Fire Department	Response Times - Fire: 4.0 minutes - EMS: 4.0 min. (BLS) - EMS: 8.0 min. (ALS)	South Kitsap Fire and Rescue	0.36 fire units per 1,000 pop
Police Protection	Bremerton Police Department	250 sq.ft. per officer 1.8 officers per 1,000 pop	Kitsap County Sheriff	Sq. Ft per 1,000 Pop: - Sheriff offices: 129 Beds per 1,000 Pop: - County Jail: 1.43 - Work Release: 0.15 - Juvenile: 0.084
Schools	South Kitsap School District	Adequate student capacity	South Kitsap School District	Adequate student capacity
Parks, Recreation, and Open Space	City of Bremerton	Acres per 1,000 Pop: - Local: 1.48 - Regional: 14.64 - Open Space: 2.21	Kitsap County	Acres per 1,000 Pop: - Open Space: 57.1 - Regional: 8.9 - Heritage: 11.5 - Community: 3.5 Miles Per 1,000 Pop: - Shoreline: 0.61 - Trails: 0.20
Libraries	Kitsap County Public Libraries	N/A	Kitsap County Public Libraries	N/A

Source: City of Bremerton Comprehensive Plan, 2010; 2012 Kitsap County Comprehensive Plan Capital Facilities Element, 2012; and BERK, 2013

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FIGURE 3.12-1 GORST WATERSHED PLANNING AREA: PUBLIC FACILITIES



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3.12.1. Fire Protection and EMS

Affected Environment

Watershed

Fire protection and EMS within the Gorst Creek watershed is provided by the Bremerton Fire Department and South Kitsap Fire and Rescue (SKFR). Bremerton Fire Department serves those areas within the corporate limits of the City of Bremerton, and SKFR serves the unincorporated portions of the watershed, as well as the City of Port Orchard and the Bremerton National Airport under contractual agreements.

Bremerton Fire Department

The Bremerton Fire Department provides fire protection and EMS within the limits of the City of Bremerton and maintains a response force of 51 professional line personnel, as well as five staff personnel. The Department serves about 37,729 people.

Facility Inventory

Stations and equipment. The Department has three staffed fire stations, but does not maintain any fire stations within the Gorst Creek watershed. Fire protection and EMS services are provided from other stations located within the City of Bremerton. The closest station is Station 2 located near the intersection of SR 3 and Kitsap Way (5005 Kitsap Way), approximately four miles from the center of the Gorst UGA. The equipment housed at Station 2 includes two engine units and two medic units.

LOS

The levels of service for EMS and fire protection is measured in terms of response time (to understand location needs) and call volumes (to understand staffing levels). Response time is defined as the amount of time that elapses between the initial call for assistance and arrival of the first emergency unit on site. Response time planning is tied to the geographic distribution of stations, the equipment housed at each facility, and the level of staffing.

Bremerton Fire Department's currently adopted LOS for fire protection is a 4.0 minute response time. For EMS, the LOS is a 4.0 minute response time for basic life support (BLS) and an 8.0 minute response time for advanced life support (ALS).

South Kitsap Fire and Rescue

SKFR covers approximately 118 square miles in southern Kitsap County and, at the end of 2012, employed 102 career personnel, supplemented by approximately 76 volunteer firefighters and support staff. The district serves an estimated population of approximately 72,046 residents.

Facilities Inventory

Fire Stations and equipment. SKFR responds to all types of fire, medical and related emergency situations from 16 stations throughout the district. SKFR maintains two fire stations within the Watershed:

- Station 6 – A volunteer fire station in the Sunnyslope area, located at 6170 SW Rhododendron Drive which houses one engine and one water tender.
- Station 16 – A professional station just outside of Gorst, located at 4058 W. State Highway 3, which houses one engine, one medic unit and one brush truck with the capability to fight fires in forested areas.

LOS

Kitsap County has adopted levels of service based on fire/emergency units per 1,000 population in its CFP. Fire/emergency units include fire engines, water tenders, and medic units. Fire stations are included in the CFP

when considering capital facilities housing fire units and personnel; however, fire stations themselves are not included in the LOS calculation. Although personnel is an integral component to the operation of any fire district, personnel is not considered a capital facility item under the requirements of the GMA.

In comparison to the Bremerton Fire Department's LOS, the County's adopted LOS addresses fire units, not response time. However, SKFR does monitor its service levels in terms of response times because the state statute Chapter 52.33 RCW requires substantially career fire districts to adopt and annually report response time objectives. SKFR has adopted a number of detailed response metrics. Regarding turnout time, the district has a goal of ninety seconds (90) or less 90 percent of the time. In 2010 and 2011, the district did not meet this standard with an actual performance of 2:30 minutes in 2010 and 2:17 minutes in 2011. The District has a number of travel time standards to urban, suburban, and rural areas for both fire units and EMS units. These travel times range for fire units from 5:00 to 10:50 depending on the urban, suburban, or rural nature of the call. In 2010, the Department met its suburban and rural travel times for fire units but not its urban travel times. In 2011, the Department met its suburban travel time but not its urban and rural travel times. The Department's travel times for EMS services ranged from 6:20 to 11:15 minutes in 2010 depending on the urban, suburban, or rural nature of the call and likewise met its suburban and rural goals and came very close to its urban goals (missing by 2 seconds) in 2010 (SKFR 2011). In 2011, the EMS response improved to meet all urban, suburban, and rural standards, showing a range of actual response times of 6.50, 8.48, and to 13.57 minutes, all within the urban, suburban, and rural goals respectively (SKFR 2012). The County will be working with the SKFR and other districts to update LOS standards for its 2016 Comprehensive Plan Update.

Table 3.12-2 *Current SKFR LOS Requirements* shows the adopted LOS for SKFR in fire units per 1,000 population and whether or not the district is currently meeting the County's adopted standard in the CFP. Determination of a LOS using the fire unit's per capita method is calculated by dividing the number of fire units operated in a district by the district's population. Multiplying the established LOS by future population projections is a proven method for reasonably predicting growth-related fire and emergency service capital facilities requirements.

Table 3.12-2
Current SKFR LOS Requirements

Time Period	District Service Area Population	Fire Units Needed to Meet LOS standard	Fire Units Available	Net Reserve or (Deficiency)
LOS = 0.36 FIRE UNITS PER 1,000 POPULATION				
2010	72,329	26.0	36.0	10.0

Source: SKFR, 2012; *Kitsap County Comprehensive Plan Capital Facilities Element*, 2012; Washington State Office of Financial Management, 2012; and BERK, 2013

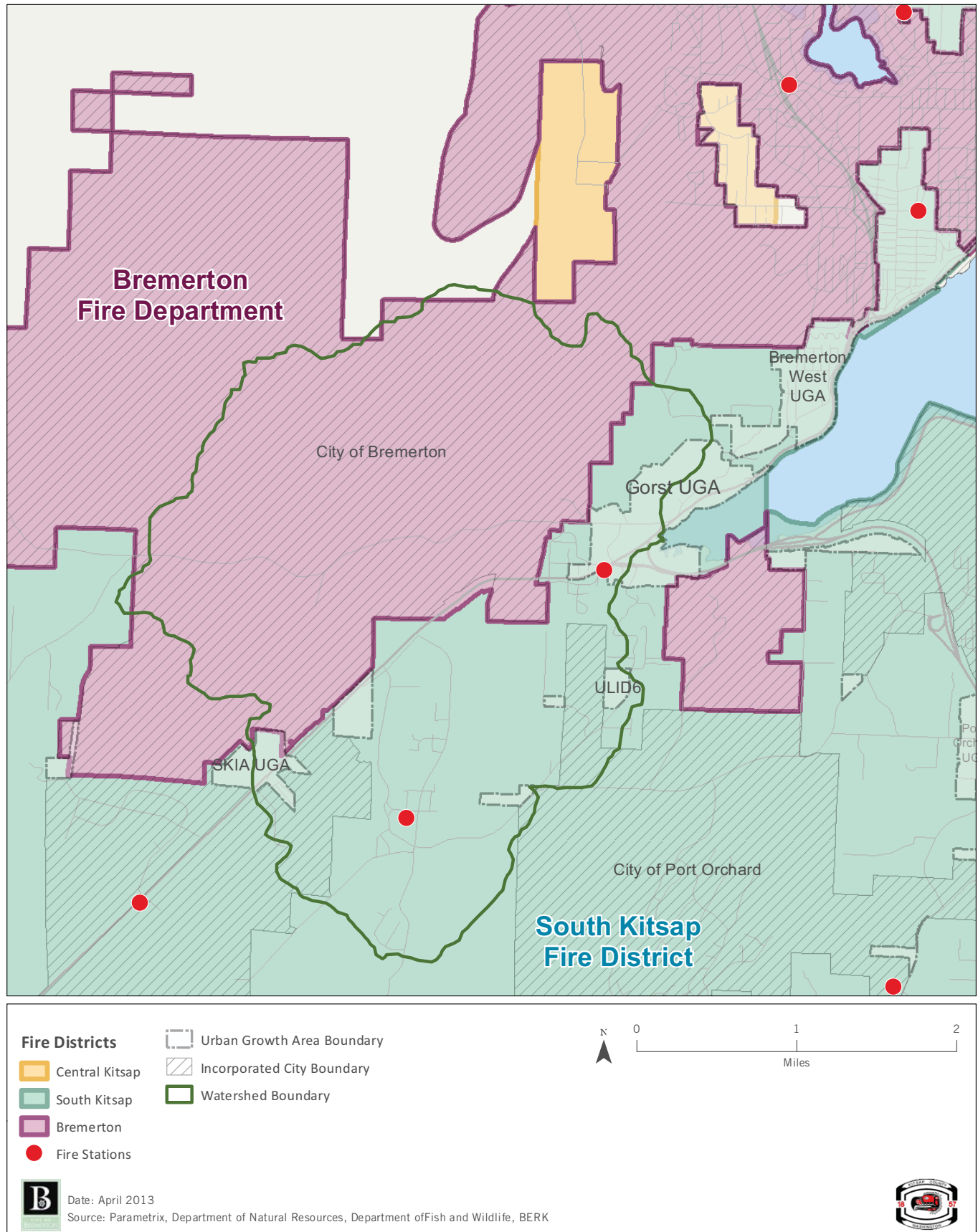
SKFR has a LOS of 0.36 fire units per 1,000 population. It is currently exceeding this standard by more than ten units.

Gorst UGA

Fire protection and EMS within the Gorst UGA are provided by SKFR. This is a regional service, and is described above for the Gorst Creek watershed. SKFR maintains one fire station that serves this area just outside of the Gorst UGA area, located at 4058 W. State Highway 3, just west of the SR-3/SR-16 interchange. This station is manned full-time by career firefighting staff.

Figure 3.12-2 *Gorst Creek Watershed: Fire Station Map for the Gorst Creek Watershed and Gorst UGA* shows the current locations of the South Kitsap Fire Department and Bremerton Fire Department's fire stations that serve the Watershed and Gorst Creek UGA areas.

FIGURE 3.12-2 GORST CREEK WATERSHED: FIRE STATION MAP



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Impacts

IMPACTS COMMON TO ALL ALTERNATIVES

Watershed

No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA. Growth would occur based on adopted plans, which already have been accounted for in County and City of Bremerton Comprehensive Plans and associated capital facility plans. Updated stormwater and habitat regulations in this area are not anticipated to have any effect on the demand for fire protection and EMS services. Therefore, no significant impacts to these services are anticipated under any of the alternatives that aren't already accounted for in existing planning documents.

Gorst UGA

Alternative 1

Under the No Action Alternative, population in the Gorst UGA would grow by approximately 82 people through 2035. This Alternative is identical to the Preferred Alternative adopted in the 2010 *Kitsap County UGA Sizing and Composition Remand Final Supplemental Environmental Impact Statement*.

County Impacts. The estimated 82 additional residents would have minimal impact on the LOS for SKFR, although the specific need for personnel services, equipment, and facilities would be determined through ongoing planning within SKFR. In the 2012 Kitsap County Comprehensive Plan CFP, the County adopted an LOS standard that will serve all No Action growth through 2035, as shown in Table 3.12-3 *SKFR Projected LOS – Alternative 1*.

Table 3.12-3
SKFR Projected LOS – Alternative 1

Time Period	District Service Area Population	Fire Units Needed to Meet LOS standard	Fire Units Available	Net Reserve or (Deficiency)
LOS = 0.36 FIRE UNITS PER 1,000 POPULATION				
2010	72,329	26.0	36.0	10.0
2035 Alternative 1	99,212	35.7	36.0	0.3

Source: SKFR, 2012; *Kitsap County Comprehensive Plan Capital Facilities Element*, 2012; Washington State Office of Financial Management, 2012; and BERK, 2013

There will be no change to the impacts from the Gorst UGA under the No Action Alternative. The County LOS can be met.

City of Bremerton Impacts. If the Gorst UGA were to be annexed by the City of Bremerton before 2035, the current population of the Gorst UGA and the projected growth of 82 residents would come under the jurisdiction of the Bremerton Fire Department, for a total population of about 304 people over the next 20-30 years. Under the Kitsap County Final SEIS prepared in 2012 for the Kitsap County UGA Resizing and Composition Remand, the City of Bremerton was estimated to grow by about 14,288 residents over the next 20 years without annexing Gorst or any other assigned UGA. The additional population from a Gorst annexation would only represent an approximately 2 percent additional population growth increase, which would not be expected to affect the level of fire and EMS services in the City of Bremerton.

Since the growth from the Gorst UGA is both small and spread out over time, the City of Bremerton would have adequate time to plan for service changes as population increases impact levels of service. Interim demand needs could be served through mutual aid agreements with SKFR, who currently serves the population. As mentioned in the affected environment discussion, the closest City of Bremerton fire station is approximately 4 miles away, almost all of which is travel along a state highway.

Fire district fire protection service, equipment and facilities are funded almost exclusively by levies. If annexation occurs, Bremerton Fire Department would have access to additional revenues and could be funded by the City of Bremerton's general fund, with revenue from property and other taxes. This revenue increase could partially or fully offset any increased need for services and facilities. Alternatively, the City of Bremerton could contract with the SKFR for continued service provision from SKFP Station 16 which is located just outside the Gorst UGA boundary. In this case there would also likely be sufficient revenues from the area to fund the contracted services.

Alternative 2

Alternative 2 models a moderate growth level for the Gorst UGA, higher than under the Alternative 1 but lower than under Alternative 3. Alternative 2 assumes a 2035 Gorst UGA population of 1,207, which is an increase of 985 residents over current population levels.

County Impacts. The estimated 985 additional residents would have minimal impact on the LOS for SKFR, although the specific need for personnel services, equipment, and facilities would be determined through ongoing planning within SKFR. The County Fire LOS in the 2012 Final Comprehensive Plan CFP will serve all Alternative 2 growth through 2035, as shown in Table 3.12-4 *SKFR Projected LOS – Alternative 2*.

**Table 3.12-4
SKFR Projected LOS – Alternative 2**

Time Period	District Service Area Population	Fire Units Needed to Meet LOS standard	Fire Units Available	Net Reserve or (Deficiency)
LOS = 0.36 FIRE UNITS PER 1,000 POPULATION				
2010	72,329	26.0	36.0	10.0
2035 Alternative 2	100,115	36.0	36.0	-

Source: SKFR, 2012; Kitsap County Comprehensive Plan Capital Facilities Element, 2012; Washington State Office of Financial Management, 2012; and BERK, 2013

Although the assumed population is higher than under the No Action Alternative, SKFR will have adequate capacity to serve the additional residents under Alternative 2.

City of Bremerton Impacts. If the Gorst UGA were to be annexed by the City of Bremerton before 2035, the current population of the Gorst UGA and the projected growth of 985 residents would come under the jurisdiction of the Bremerton Fire Department, for a total population of about 1,207 people over the next 20-30 years. Under the Kitsap County Final SEIS prepared in 2012 for the Kitsap County UGA Resizing and Composition Remand, the City of Bremerton was estimated to grow by about 14,288 residents without annexing Gorst or any other assigned UGA. The additional population from a Gorst annexation would only represent about eight percent additional population growth, which would not be expected to affect the level of fire and EMS services in the City of Bremerton.

As with Alternative 1, there would be time for the City of Bremerton to plan for any additional growth from the Gorst UGA and the total impact is still relatively small in terms of overall growth in the City of Bremerton. As the area grew there would be opportunities to assess the best operational approach to meeting the fire needs, which could include options involving mutual aid agreements with SKFR, who currently serves the population.

Fire district fire protection service, equipment and facilities are funded almost exclusively by levies. If annexation occurs, Bremerton Fire Department would have access to additional revenues and could be funded by the City of Bremerton's general fund, with revenue from property and other taxes. This revenue increase could partially or fully offset any increased need for services and facilities. Also, if it was determined that it was more efficient to continue to serve the fire and EMS needs of the Gorst UGA from the SKFP station 16, then the revenues from the annexation and new growth in the area would likely be adequate to support contracted services for this area.

Alternative 3

Alternative 3 models the highest growth level for the Gorst UGA, and assumes a 2035 Gorst UGA population of 1,304, which is an increase of 1,082 residents over current population levels.

County Impacts. The estimated 1,082 additional residents would have minimal impact on the LOS for SKFR, although the specific need for personnel services, equipment, and facilities would be determined through ongoing planning within SKFR. The County Fire LOS adopted in the 2012 Final Kitsap County Comprehensive Plan CFP will nearly serve all Alternative 3 growth through 2035, as shown in Table 312-5 *SKFR Projected LOS – Alternative 3*.

Table 3.12-5
SKFR Projected LOS – Alternative 3

Time Period	District Service Area Population	Fire Units Needed to Meet LOS standard	Fire Units Available	Net Reserve or (Deficiency)
LOS = 0.36 FIRE UNITS PER 1,000 POPULATION				
2010	72,329	26.0	36.0	10.0
2035 Alternative 3	100,212	36.1	36.0	(0.1)

Source: SKFR, 2012; Kitsap County Comprehensive Plan Capital Facilities Element, 2012; Washington State Office of Financial Management, 2012; and BERK, 2013

Under this alternative, the current LOS would be deficient by about one-tenth of a fire unit in 2035. This is a minor discrepancy between the required LOS level and actual service levels that would likely have no impact on actual service to County residents.

City of Bremerton Impacts. If the Gorst UGA were to be annexed by the City of Bremerton before 2035, the current population of the Gorst UGA and the projected growth of 1,082 residents would come under the jurisdiction of the Bremerton Fire Department, for a total population of about 1,304 people over the next 20-30 years. Under the Kitsap County Final SEIS prepared in 2012 for the Kitsap County UGA Resizing and Composition Remand the City of Bremerton was estimated to grow by about 14,288 residents without annexing Gorst or any other assigned UGA. The additional population from a Gorst annexation would only represent about nine percent additional population growth, which would not be expected to affect the level of fire and EMS services in the City of Bremerton.

Since the growth from the Gorst UGA is both small and spread out over time, the City of Bremerton would have adequate time to plan for service changes as population increases impact levels of service. Interim demand needs could be served through mutual aid agreements with SKFR, who currently serves the population.

Fire district fire protection service, equipment and facilities are funded almost exclusively by levies. If annexation occurs, Bremerton Fire Department would have access to additional revenues and could be funded by the City of Bremerton's general fund, with revenue from property and other taxes. This revenue increase could partially or fully offset any increased need for services and facilities. Also, if it was determined that it was more efficient to continue to serve the fire and EMS needs of the Gorst UGA from the SKFP station 16, then the revenues from the annexation and new growth in the area would likely be adequate to support contracted services for this area.

Mitigation Measures

Incorporated Plan Features

- The County CFP determines LOS standards for fire protection/EMS. Future needs and costs can be determined based on these standards. Under the CFP, the County fire and rescue districts would continue to improve fire protection efficiency by focusing on eliminating overlapping responsibilities and system inefficiencies, as well as coordinating service provision with population growth.

- From the County perspective, the No Action Alternative levels of growth are already accounted for in existing planning documents due to the adoption of the 2012 Final Kitsap County Comprehensive Plan and CFP.
- Alternatives 2 and 3 focus growth and concentrate densities, allowing for improved efficiency of service, such as potentially lower response times.

Applicable Regulations and Commitments

- New development would be required to meet City of Bremerton and County codes, as well as International Fire Code and International Building Code regulations, regarding the provision of fire hydrants, fire flow, alarm systems, sprinklers, and emergency vehicle access.

Other Potential Mitigation Measures

- If the City of Bremerton experiences unexpected demand needs due to annexation of Gorst, the City of Bremerton could work with SKFR to develop a Mutual Aid Agreement to serve the Gorst UGA area. This agreement could include information on sharing levy revenues generated within the Gorst UGA boundaries.

Significant Unavoidable Adverse Impacts

Future population growth and development will continue to increase the need for fire protection/EMS services under any studied alternative, and particularly the action alternatives. With mitigation, significant, unavoidable adverse impacts would not be anticipated.

3.12.2. Law Enforcement

Affected Environment

Watershed

Police service within the Gorst Creek watershed is provided by a mixture of City of Bremerton and County law enforcement personnel. The watershed covers portions of the Cities of Bremerton and Port Orchard, as well as unincorporated Kitsap County. Those portions of the watershed Bremerton and Port Orchard corporate limits are served by the police departments of those municipalities, and the Kitsap County Sheriff's Office oversees law enforcement in the unincorporated portions of the watershed, including the Gorst UGA. None of these law enforcement agencies currently maintain any precinct offices or other facilities within the watershed.

Bremerton Police Department

The Bremerton Police Department consists of 12 civilian personnel and 57 sworn police personnel, including one chief, two captains, two lieutenants, seven sergeants, and 45 officers. In addition, there are five volunteer chaplains that assist the department. The Department provides law enforcement services, and contracts with Kitsap County to provide jail services.

Facilities Inventory

The Department is spread over three facilities: Administrative functions in City Hall, Patrol Division in the West Precinct, and a Special Operations Group house in another facility. See Table 3.12-6 *Bremerton Police Department Facility Inventory*.

**Table 3.12-6
Bremerton Police Department Facility Inventory**

Name	Location	Size/Quantity
City Hall/Police	239 4th Street	7,085 sq ft
West Precinct/Patrol Headquarters	4846 Auto Center Way	3,700 sq ft
Capital Hills Fire Station/Special Investigative Unit	3001 6th Street	5,400 sq ft
Department Total		16,185 sq ft

Source: *City of Bremerton Comprehensive Plan City Service Appendix*, 2010; and BERK, 2013

LOS

The LOS for the Bremerton Police Department is a function of two different measures:

1. The number of officers per 1,000 population
2. The number of facility square feet per officer. The currently adopted LOS standards are 1.8 officers per 1,000 population and 250 square feet per officer.

Currently, the City of Bremerton is below its LOS standard for officers by 11 positions (see Table 3.12-7 *Bremerton Police Department – Current Law Enforcement LOS Requirements*). While there is adequate facility square footage to serve the existing number of officers, the City of Bremerton would be deficient in square feet per officer if it increased staffing to 68 officers.

**Table 3.12-7
Bremerton Police Department – Current Law Enforcement LOS Requirements**

Time Period	Service Need	Needed to Meet LOS Standard	Available	Net Reserve or (Deficiency)
OFFICERS (LOS = 1.8 OFFICERS PER 1,000 POPULATION)				
2010	37,729	68	57	(11)
FACILITIES (LOS = 250 SQUARE FEET PER OFFICER)				
2010	57	14,250	16,185	1,935

Source: *City of Bremerton Comprehensive Plan City Service Appendix*, 2010; and BERK, 2013

Port Orchard Police Department

The Port Orchard Police Department consists of 27 personnel, including one chief, one commander, three sergeants, three detectives, 15 officers, two records/evidence staff, and one public service officer. The Department provides law enforcement services, and contracts with Kitsap County to provide jail services.

The Port Orchard Police Department serves a very small section of the watershed; there are no facilities located directly in the watershed and the Department will not be impacted by any of the growth alternatives.

Kitsap County Sheriff's Office

The Kitsap County Sheriff's Office (Sheriff's Office) serves the unincorporated portion of the county. The major responsibilities of the Sheriff's Office are law enforcement, maintenance of order, crime investigation and prevention, traffic control, marine enforcement, process and service of civil papers for the courts, service of criminal warrants, and emergency services. The Sheriff's Office is made up of several divisions, which are under the administration of the sheriff. Separate from the Sheriff's Office are the County correctional facilities, which are made up of a jail, a work release facility, and a juvenile facility.

The Sheriff's main office facility located in Port Orchard houses the Sheriff, Undersheriff, records, detectives, patrol, patrol chief, administration, corrections, and the evidence/storage rooms. The Central Office located in Silverdale houses a patrol division, while the patrol chief maintains his administrative office at the courthouse. The Silverdale office space includes the patrol captain, reception area, civil and records extension, patrol shift supervisor offices, and the deputies' report/meeting room. The north office located in Kingston and the Kitsap Mall Office are satellite stations. The Readiness Center houses training classrooms and office space.

The Sheriff's office currently employs 114 Commissioned Deputies, 83 Corrections Officers and 31 support personnel that are supplemented by well over 150 volunteers. Over time, the Sheriff's office has seen crime rates go down, generally as staffing has increased. The Total Crime Index Rate has decreased from a rate of 31.24 per 1,000 population in 2002 to 24.70 per 1,000 population in 2010. (Kitsap County 2012; Kitsap County 2010)

The County correctional facilities, which serve the population of incorporated cities and the unincorporated county, consist of a jail, a work release facility, and a juvenile facility. The correctional facilities, which are located on the courthouse campus in Port Orchard, are primarily two separate structures: the jail and the work release building. The jail is attached to the second floor of the courthouse and is accessible from the sheriff's main office.

The work release facility is a separate two-story building on the courthouse campus. The capacity of the facility is approximately 48 people. Unlike the facilities of the Sheriff's Office, the work release facility is used by all law enforcement agencies in the county. These facilities include corrections administration, warrant service, prisoner booking, prisoner housing, reception and visiting, food service, medical and psychiatric care, recreation, and library.

Facilities Inventory

Law enforcement facilities include sheriff administration and operations offices (28,010 square feet), corrections facility (472 beds), work release facility (48 beds), and juvenile facility (35 beds). Table 3.12-8 *Kitsap County Sheriff's Office-Facility Inventory* lists the facilities along with their current capacity and location. There are no facilities located directly within the watershed.

**Table 3.12-8
Kitsap County Sheriff's Office-Facility Inventory**

Name	Location	Size/Quantity
Sheriff		
Main Office	614 Division Street, Port Orchard, WA	16,500 sq ft
Central Office	3951 Randall Way, Silverdale, WA	5,800 sq ft
North Office	26076 Illinois Street, Kingston, WA	1,200 sq ft
Kitsap Mall Office	10315 Silverdale Way NW, Silverdale, WA	1,200 sq ft
Readiness Center Office Space	North Kitsap	3,200 sq ft
Fire District 17 Office	McCormick Woods	110 sq ft
Total Sheriff		28,010 sq ft
Corrections		
Jail (lease)	614 Division Street, Port Orchard	472 beds
Work Release Facility (lease)	Courthouse Campus, Port Orchard	48 beds
Juvenile Facility (lease)	1338 Old Clifton Road, Port Orchard	35 beds
Total Corrections		555 beds

Source: Kitsap County Sheriff's Office, 2012; and BERK, 2013

LOS

Sheriff Offices. In the 2012 Kitsap County Comprehensive Plan CFP, the County adopted an LOS of 129 square feet of sheriff offices per 1,000 unincorporated countywide population. There is no LOS standard established for the number of commissioned officers.

County Jail. In the 2012 Kitsap County Comprehensive Plan CFP, the County adopted an LOS of 1.43 county jail beds per 1,000 total countywide population.

Work Release Facility. In the 2012 Kitsap County Comprehensive Plan CFP, the County adopted an LOS of 0.15 work release facility beds per 1,000 total countywide population.

Juvenile Facility. In the 2012 Kitsap County Comprehensive Plan CFP, the County adopted an LOS of 0.084 juvenile facility beds per 1,000 total countywide population.

Table 3.12-9 *Kitsap County Sheriff's Office – Current Law Enforcement LOS Requirements* shows how the County's current LOS compares to its adopted standard.

Table 3.12-9
Kitsap County Sheriff's Office – Current Law Enforcement LOS Requirements

Time Period	Population Served	Needed to Meet LOS Standard	Available	Net Reserve or (Deficiency)
SHERIFF OFFICES (LOS = 129 SQUARE FEET PER 1,000 POPULATION)				
2010	168,172	21,694	28,010	6,316
COUNTY JAIL (LOS = 1.43 BEDS PER 1,000 POPULATION)				
2010	251,133	359	472	113
WORK RELEASE FACILITY (LOS = 0.15 BEDS PER 1,000 POPULATION)				
2010	251,133	38	48	10
JUVENILE FACILITY (LOS = 0.084 BEDS PER 1,000 POPULATION)				
2010	251,133	21	35	14

Source: Kitsap County Sheriff's Office, 2012; and BERK, 2013

The Sheriff's Office is currently exceeding all of its adopted LOS standards related to law enforcement.

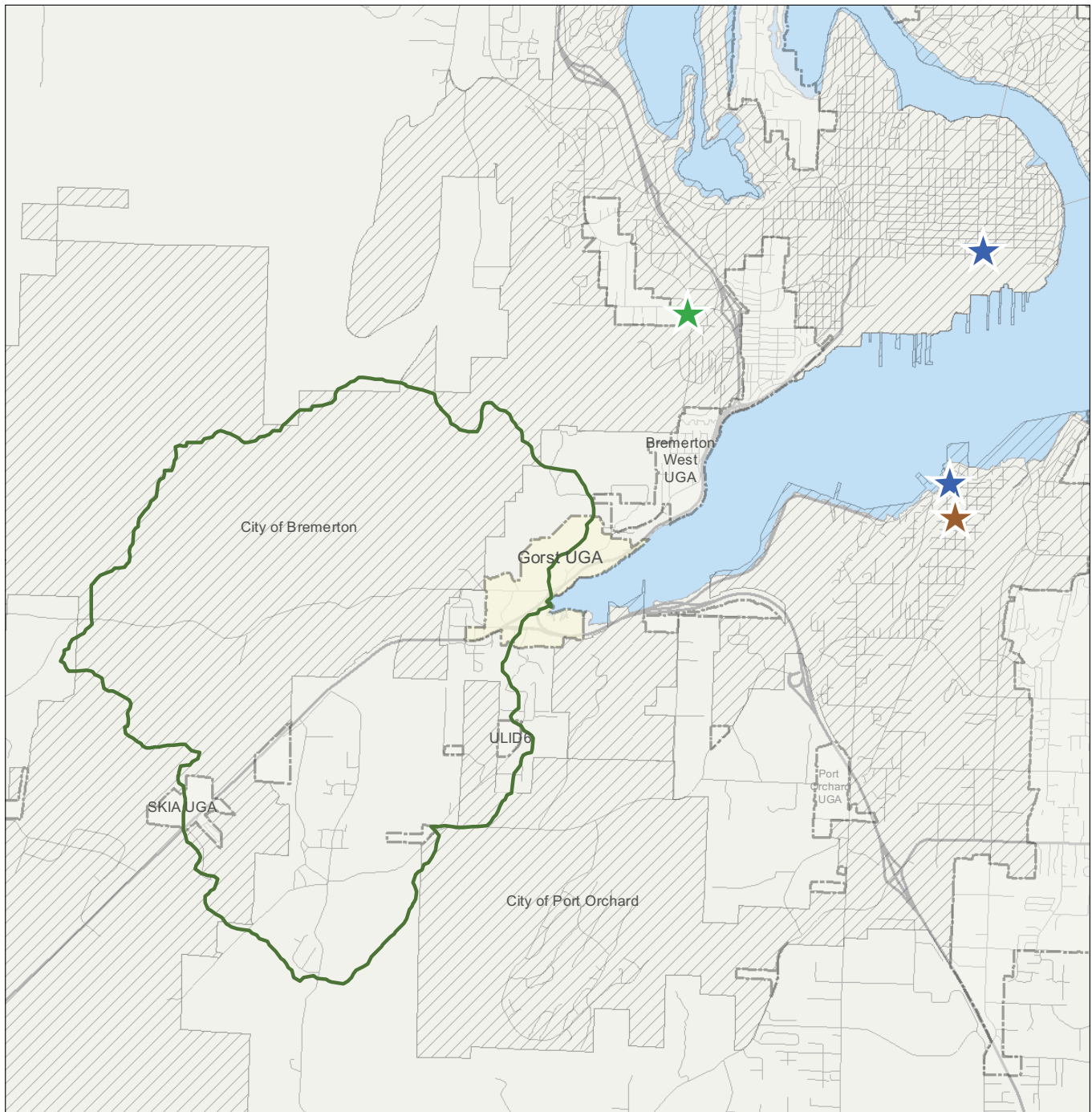
Gorst UGA

Law enforcement services within the Gorst UGA are provided by the Kitsap County Sheriff's Office. This is a regional service, and is described above for the Gorst Creek watershed.



Figure 3.12-3 *Gorst Creek Watershed: Map of Law Enforcement Facilities* shows the current locations of the Bremerton and Port Orchard Police Departments and Kitsap County Sheriff's Office Facilities, including police stations.




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FIGURE 3.12-3 GORST CREEK WATERSHED: LAW ENFORCEMENT FACILITIES MAP



Law Enforcement Facilities

-  Police Department
-  Kitsap County Sheriff
-  Washington State Patrol

-  Urban Growth Area Boundary
-  Incorporated City Boundary
-  Watershed Boundary



Date: May 2013
Source: Kitsap County Sheriff, Bremerton Police Department, Washington State Patrol, Port Orchard Police Department



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Impacts

IMPACTS COMMON TO ALL ALTERNATIVES

Watershed

No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA. Updated stormwater and habitat regulations in this area are not anticipated to have any effect on the demand for police protection. Therefore, no significant impacts to law enforcement services are anticipated under any of the alternatives that aren't already accounted for in existing planning documents.

Gorst UGA

Alternative 1

Under the No Action Alternative, population in the Gorst UGA would grow by approximately 82 people through 2035. This Alternative is identical to the Preferred Alternative adopted in the 2010 *Kitsap County UGA Sizing and Composition Remand Final Supplemental Environmental Impact Statement*.

County Impacts. The estimated 82 additional residents would have minimal impact on the LOS for the Kitsap County Sheriff's Office. The County's will be able to meet nearly all of its adopted LOS standards through 2035 under Alternative 1, although it should consider adding an additional work release facility bed for full compliance. LOS impacts for Alternative 1 are shown in Table 3.12-10 *Kitsap County Sheriff's Office Projected LOS – Alternative 1*.

Table 3.12-10
Kitsap County Sheriff's Office Projected LOS – Alternative 1

Time Period	Population Served	Needed to Meet LOS Standard	Available	Net Reserve or (Deficiency)
SHERIFF OFFICES (LOS = 129 SQUARE FEET PER 1,000 POPULATION)				
2010	168,172	21,694	28,010	6,316
2035 Alternative 1	216,250	27,896	28,010	114
COUNTY JAIL (LOS = 1.43 BEDS PER 1,000 POPULATION)				
2010	251,133	359	472	113
2035 Alternative 1	329,473	471	472	1
WORK RELEASE FACILITY (LOS = 0.15 BEDS PER 1,000 POPULATION)				
2010	251,133	38	48	10
2035 Alternative 1	329,473	49	48	(1)
JUVENILE FACILITY (LOS = 0.084 BEDS PER 1,000 POPULATION)				
2010	251,133	21	35	14
2035 Alternative 1	329,473	28	35	7

Source: Kitsap County Sheriff's Office, 2012; Kitsap County Comprehensive Plan Capital Facilities Element, 2012; Washington State Office of Financial Management, 2012; and BERK, 2013

There will be no change to the impacts from the Gorst UGA under the No Action Alternative.

City of Bremerton Impacts. If the Gorst UGA were to be annexed by the City of Bremerton before 2035, the current population of the Gorst UGA and the projected growth of 82 residents would come under the jurisdiction of the Bremerton Police Department, for a total population of about 304 people over the next 20-30 years. Under the adopted Kitsap County Final prepared in 2012 for the Kitsap County UGA Resizing and Composition Remand the City of Bremerton was estimated to grow by about 14,288 residents without annexing Gorst or any other UGA.

The additional population from a Gorst annexation would only represent an approximately two percent additional population growth increase.

If the annexation were to occur in the relatively near future, the impact on police LOS would be a relatively modest additional need for 0.4 commissioned officers. This impact would grow only marginally under Alternative 1, as the additional 82 residents would require 0.15 commissioned officers. Since the growth from the Gorst UGA is both small and spread out over time, the City of Bremerton would have adequate time to plan for service changes as population increases impact levels of service. However, the City of Bremerton acknowledges in its 2010 CFP that the City of Bremerton already has a staffing level that is too low, and would generally benefit from increased staffing, especially if required to take on additional geography and population. Though, an additional 82 residents would be unlikely to have a substantial impact on overall demand for police services.

The County and City of Bremerton LOS standards are not based on employment growth, but it is likely the caseload could increase due to calls for service related to commercial businesses.

Alternative 2

Alternative 2 models a moderate growth level for the Gorst UGA, higher than under the No Action Alternative but lower than under Alternative 3. Alternative 2 assumes a 2035 Gorst UGA population of 1,207, which is an increase of 985 residents over current population levels.

County Impacts. The estimated 985 additional residents would have minimal impact on the LOS for the Kitsap County Sheriff's Office. The County's will be able to meet nearly all of its adopted LOS standards through 2035 under Alternative 2. LOS impacts for Alternative 2 are shown in Table 3.12-11 *Kitsap County Sheriff's Office Projected LOS – Alternative 2*.

Table 3.12-11
Kitsap County Sheriff's Office Projected LOS – Alternative 2

Time Period	Population Served	Needed to Meet LOS Standard	Available	Net Reserve or (Deficiency)
SHERIFF OFFICES (LOS = 129 SQUARE FEET PER 1,000 POPULATION)				
2010	168,172	21,694	28,010	6,316
2035 Alternative 2	217,153	28,013	28,010	(3)
COUNTY JAIL (LOS = 1.43 BEDS PER 1,000 POPULATION)				
2010	251,133	359	472	113
2035 Alternative 2	330,376	472	472	-
WORK RELEASE FACILITY (LOS = 0.15 BEDS PER 1,000 POPULATION)				
2010	251,133	38	48	10
2035 Alternative 2	330,376	50	48	(2)
JUVENILE FACILITY (LOS = 0.084 BEDS PER 1,000 POPULATION)				
2010	251,133	21	35	14
2035 Alternative 2	330,376	28	35	7

Source: Kitsap County Sheriff's Office, 2012; Kitsap County Comprehensive Plan Capital Facilities Element, 2012; Washington State Office of Financial Management, 2012; and BERK, 2013

The small increase in population growth in Alternative 2 drives a few potential needs for additional facilities. The Sheriff Offices LOS would be deficient by only three square feet, which is not a meaningful difference from meeting the standard and would not need to be addressed. However, the County should consider adding a couple work release facility beds in order to meet the LOS fully by 2035 under Alternative 2. Since the County does not have an adopted standard for police personnel, the potential impacts on police service delivery cannot be evaluated.

City of Bremerton Impacts. If the Gorst UGA were to be annexed by the City of Bremerton before 2035, the current population of the Gorst UGA and the projected growth of 985 residents would come under the jurisdiction of the Bremerton Police Department, for a total population of about 1,207 people over the next 20-30 years. Under the Kitsap County Final SEIS prepared in 2012 for the Kitsap County UGA Resizing and Composition Remand, the City of Bremerton was estimated to grow by about 14,288 residents without annexing Gorst or any other UGA. The additional population from a Gorst annexation would only represent an approximately eight percent additional population growth increase.

If the annexation were to occur in the relatively near future, the impact on police LOS would be a relatively modest additional need for 0.4 commissioned officers. This impact would be higher under this alternative as the additional 985 residents would require 1.8 commissioned officers. While this level of additional growth would imply the need to add 2.2 commissioned police officers at the adopted LOS, the growth from the Gorst UGA will likely be relatively modest and spread out over time, giving the City of Bremerton adequate time to plan for service changes as population increases impact levels of service. In addition, the incremental tax revenues that would come with an annexation would be available to at least partially fund incremental public safety costs.

However, the City of Bremerton acknowledges in its 2010 CFP that the City of Bremerton already has a staffing level that is too low, and would generally benefit from increased staffing, especially if required to take on additional geography and population.

The County and City of Bremerton LOS standards are not based on employment growth, but it is likely the caseload could increase due to calls for service related to commercial businesses.

Alternative 3

Alternative 3 models the highest growth level for the Gorst UGA, and assumes a 2035 Gorst UGA population of 1,304, which is an increase of 1,082 residents over current population levels.

County Impacts. The estimated 1,082 additional residents would have minimal impact on the LOS for the Kitsap County Sheriff's Office. The County's will be able to meet nearly all of its adopted LOS standards through 2035 under Alternative 3. LOS impacts for Alternative 3 are shown in Table 3.12-12 *Kitsap County Sheriff's Office Projected LOS – Alternative 3*.

Table 3.12-12
Kitsap County Sheriff's Office Projected LOS – Alternative 3

Time Period	Population Served	Needed to Meet LOS Standard	Available	Net Reserve or (Deficiency)
SHERIFF OFFICES (LOS = 129 SQUARE FEET PER 1,000 POPULATION)				
2010	168,172	21,694	28,010	6,316
2035 Alternative 3	217,250	28,025	28,010	(15)
COUNTY JAIL (LOS = 1.43 BEDS PER 1,000 POPULATION)				
2010	251,133	359	472	113
2035 Alternative 3	330,473	473	472	(1)
WORK RELEASE FACILITY (LOS = 0.15 BEDS PER 1,000 POPULATION)				
2010	251,133	38	48	10
2035 Alternative 3	330,473	50	48	(2)
JUVENILE FACILITY (LOS = 0.084 BEDS PER 1,000 POPULATION)				
2010	251,133	21	35	14
2035 Alternative 3	330,473	28	35	7

Source: Kitsap County Sheriff's Office, 2012; Kitsap County Comprehensive Plan Capital Facilities Element; Washington State Office of Financial Management, 2012; and BERK, 2013

The small increase in population growth in Alternative 3 drives a few potential needs for additional facilities. The Sheriff Offices LOS would be deficient by about 15 square feet, which is not a meaningful difference from meeting the standard and would not need to be addressed. However, the County should consider adding a couple work release facility beds and one county jail bed in order to meet the LOS fully by 2035 under Alternative 3.

City of Bremerton Impacts. If the Gorst UGA were to be annexed by the City of Bremerton before 2035, the current population of the Gorst UGA and the projected growth of 1,082 residents would come under the jurisdiction of the Bremerton Police Department, for a total population of about 1,304 people over the next 20-30 years. Under the Kitsap County Final SEIS prepared in 2012 for the Kitsap County UGA Resizing and Composition Remand, the City of Bremerton was estimated to grow by about 14,288 residents without annexing Gorst or any other UGA. The additional population from a Gorst annexation would only represent an approximately nine percent additional population growth increase.

If the annexation were to occur in the relatively near future, the impact on police LOS would be a relatively modest additional need for 0.4 commissioned officers. This impact would be highest among the alternatives as the additional 1,082 residents would require 1.95 commissioned officers. While this level of additional growth would imply the need to add almost 2.4 commissioned police officers at the adopted LOS, the growth from the Gorst UGA is likely to be out over time, giving the City of Bremerton adequate time to plan for service changes as population increases impact levels of service. However, the City of Bremerton acknowledges in its 2010 CFP that the City of Bremerton already has a staffing level that is too low, and would generally benefit from increased staffing, especially if required to take on additional geography and population.

The County and City of Bremerton LOS standards are not based on employment growth, but it is likely the caseload could increase due to calls for service related to commercial businesses.

Mitigation Measures

Incorporated Plan Features

- Alternatives 2 and 3 focus growth and concentrate densities, allowing for improved efficiency of service. Creating a more compact development pattern allows for smaller patrol areas and faster response times.

- If urban areas are annexed into adjoining cities or incorporated into new cities, patrol-related functions may be assumed by the cities, while joint use of some facilities (e.g., jails) could be retained at the County level.

Applicable Regulations and Commitments

- Police departments and the Sheriff's Office are maintained primarily through the general fund, which is funded through sales and property tax revenues. The increased tax base associated with increased population and development would increase tax revenues and bonding potential, providing additional funding for law enforcement services and facilities.

Other Potential Mitigation Measures

- In order to address future deficiencies, the Kitsap County Sheriff's Office could choose to adjust their LOS standards to reflect the likely service levels in 2035, given estimated population growth and planned facilities.
- The City of Bremerton and County could pursue implementation of mutual aid agreements if increasing Gorst population impacts levels of service.

Significant Unavoidable Adverse Impacts

Future population growth and development will continue to increase the need for law enforcement services and facilities under all alternatives. With mitigation, significant, unavoidable adverse impacts would not be anticipated.

3.12.3. Schools

Affected Environment

Watershed

Kitsap County Districts. There are six school districts within Kitsap County: North Kitsap, Central Kitsap, South Kitsap, Bremerton, Bainbridge Island, and North Mason School District. Only the SKSD is affected by the different subarea alternatives, as it encompasses the Gorst UGA and the Gorst Creek watershed. All other districts would be unaffected by varying levels of growth within the Gorst UGA.

Enrollment and Capacity Methodology. Enrollment data is measured by the Washington State Office of the Superintendent of Public Instruction (OSPI). They conduct semi-annual student counts in October and May of each school year. The enrollment data presented here reflects the October 2011 student counts for the SKSD.

Facility Inventory

Facility Capacity. The inventories and analysis of capacity are presented in two ways:

1. With interim facilities, such as portables
2. Without interim facilities. Districts base their capital improvement projects on the capacity without interim facilities because portables have significant limitations in areas such as heating, ventilation, noise, security, restrooms, storage cupboards, and intercom communications. For these reasons, portables are not considered permanent capacity by either the state or the districts. The capacity of portable rooms is presented in order to show the interim facilities that the districts use to meet short-term enrollment fluctuations or to serve as temporary facilities until permanent facilities are built.

Finally, capacity figures are generally based on teacher-to-student ratios (expressed as students per classroom) that the school district determines to be most appropriate to accomplish its educational program. These ratios are often contained in employment agreements between districts and their teachers.

The Gorst Creek watershed is served by the SKSD. The district includes 10 elementary schools, three junior high schools, and one alternative and one comprehensive high school. The majority of the schools are located throughout the southern portion of unincorporated Kitsap County, while South Kitsap High School, Cedar Heights

Junior High School, and Sidney Glen Elementary are located within the Port Orchard city limits. The grade configuration is based on grades K–6, elementary; grades 7–9, junior high; and grades 10–12, senior high school.

Current School Inventory. Table 3.12-3 *SKSD Enrollment Capacity* lists the schools of the SKSD and their enrollment capacity.

Table 3.12-13
SKSD Enrollment Capacity

School	Current Enrollment Capacity
Elementary Schools (K–6)	
Burley-Glenwood	528
East Port Orchard	467
Hidden Creek	526
Manchester	441
Mullenix Ridge	480
Olalla	408
Orchard Heights	729
Sidney Glen	467
South Colby	216
Sunnyslope	417
Total Elementary Permanent Facilities	4,679
Total Elementary Interim (Portables) Facilities	1,008
Explorer Alternative Program – Interim (Portable) Facilities	48
Total Elementary Permanent and Interim Facilities	5,735
Junior High Schools (7–9)	
Cedar Heights	605
John Sedgwick	839
Marcus Whitman	796
Total Junior High Permanent Facilities	2,240
Total Junior High – Interim (Portable) Facilities	443
Explorer Alternative Program – Interim (Portable) Facilities	26
Total Junior High Permanent and Interim Facilities	2,709
Senior High Schools (10–12)	
South Kitsap	1,972
Alternative	174
Total Senior High Permanent Facilities	2,146
Total Senior High Interim (Portables) Facilities	218
Explorer Alternative Program – Interim (Portable) Facilities	26
Total Senior High Permanent and Interim Facilities	2,390

Source: SKSD, 2012

LOS

A LOS capacity analysis was applied to SKSD based on a student to household ratio that was developed by comparing 2011 Office of the Superintendent of Public Instruction (OSPI) enrollment numbers to 2011 estimates of

households by school district. The results, expressed in the number of students a school is able to accommodate based on the enrollment capacity inventories noted above are shown below. Where numbers are shown as positive, the district has a net reserve of school capacity in terms of the number of students it can accommodate. Where numbers are shown in the negative, the district has a deficit of school capacity in terms of the number of students it can accommodate.

SKSD's current LOS summary is shown in Table 3.12-14 *SKSD Current LOS Requirements*. The district has adequate capacity to serve its existing students with its interim facilities included in total capacity.

Table 3.12-14
SKSD Current LOS Requirements

Time Period	Student per Household Ratio ¹	Households	Enrollment ²	Perm. Capacity	Net Reserve or (Deficiency)	Total Capacity ³	Net Reserve or (Deficiency)
2011	0.38	25,860	9,742	9,065	(677)	10,834	1,092

¹ LOS analysis compares student capacity to enrollment. Where information is available, total capacity includes portable facilities.

² October 2011 student count.

Source: SKSD, 2012; Washington State OSPI, 2012; Washington State Office of Financial Management (OFM), 2012; and BERK, 2013

Gorst UGA

The Gorst UGA is also served by the SKSD. The inventory and current levels of service are as noted above for the Gorst Creek watershed.

Impacts

IMPACTS COMMON TO ALL ALTERNATIVES

Watershed

No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA beyond already adopted Comprehensive Plans. Updated stormwater and habitat regulations in this area are not anticipated to have any effect on the number of students in the SKSD.

Gorst UGA

Annexation by Bremerton of the Gorst UGA would not change the district boundaries for children living in Gorst. Under both circumstances, these students would attend SKSD.

The alternatives will affect SKSD by increasing residential development, and consequently the number of students enrolled in SKSD. Under all alternatives, the number of students generated is fairly minimal and should not increase demand much beyond that addressed in the Preferred Alternative adopted in the 2012 *Kitsap County UGA Sizing and Composition Remand Final Supplemental Environmental Impact Statement*.

While SKSD has its own growth projections based on the needs of its own services, this analysis starts with the 2010 Census and projects future growth to 2035 using the Kitsap County urban land capacity analysis methodology consistent with other regional planning efforts. This analysis bases future enrollment levels on a student-per-household ratio using the number of households projected from the land capacity analysis described in Chapter 3. The net change in household growth for each alternative was added to the 2010 base household number from OFM's small area estimates. The student-per-household ratios were then applied to the increase in households from 2010 to 2035.

Each school district has adopted its own CFP, which was reviewed for this analysis and augmented with personal communication to surface any updates since the last CFP was adopted. Funding for each district is generated from a variety of sources including impact fees, city and county property taxes, and state and federal funding based on student enrollment. SKSD is planning two capacity projects: the first will result in two new double portables, for a capacity increase of about 100 students by 2018, and the second will result in a new high school that will add permanent capacity for about 1,800 students. Non-capacity projects include myriad improvements to existing facilities, and modernization or replacement of three elementary schools, Cedar Heights Junior High School, and South Kitsap High School. The district also plans to modernize some administrative buildings. Costs and funding for most projects are yet to be determined.

Per KCC 4.110.100 D, each school district is to establish an impact fee for new housing built within the district. Impact fees for SKSD are collected by Kitsap County from development in unincorporated areas of the County, but are not collected within the City of Bremerton for its areas served by SKSD.

Impact fee revenue from unincorporated development can be used to make system improvements listed in the CFP, which may include school planning, land acquisition, site improvements, offsite improvements such as sidewalks, and construction and engineering. Fees are \$962.60 for each single-family dwelling unit or manufactured home and \$555.35 for each multifamily dwelling unit for all districts. If in the judgment of the school district, none of the fee categories or fee amounts set forth in KCC 4.110.220 accurately describe or capture the impacts of a new development on schools, the school district may conduct independent fee calculations and submit such calculations to the director.

The following tables summarize projected capacity surpluses and deficits in 2035 based on current capacity and future enrollment under the alternatives. Estimated enrollment in 2035 is district-wide, including both unincorporated and incorporated areas.

Alternative 1

Table 3.12-15 *Projected SKSD LOS – Alternative 1* summarizes projected capacity for SKSD in 2035 based on current capacity, planned capacity improvements, and projected enrollment based on household growth. The analysis is shown based on both permanent capacity and capacity including interim facilities. This Alternative is identical to the Preferred Alternative adopted in the 2012 *Kitsap County UGA Sizing and Composition Remand Final Supplemental Environmental Impact Statement*.

Table 3.12-15
Projected SKSD LOS – Alternative 1

Time Period	Student per Household Ratio ¹	Households	Enrollment ²	Perm. Capacity	Net Reserve or (Deficiency)	Total Capacity ³	Net Reserve or (Deficiency)
2011	0.38	25,860	9,742	9,065	(677)	10,834	1,092
<i>Additional Planned Capacity Through 2035</i>				1,900		1,900	
2035 Alternative 1	0.42	35,653	14,927	10,965	(3,962)	12,734	(2,193)

Note: ¹ This is the effective ratio calculated by applying the multifamily and single family generation rates to growth in those specific types of households.

² October 2011 headcount from OSPI.

³ Includes permanent and interim (portables) facilities.

Source: SKSD, 2012; Washington State OSPI, 2012; Washington State OFM, 2012; and BERK, 2013

By 2035, SKSD is estimated to have a deficit of about 2,200 student spaces under Alternative 1.

Alternative 2

Table 3.12-16 *Projected SKSD LOS – Alternative 2* summarizes projected capacity for SKSD in 2035 based on current capacity, planned capacity improvements, and projected enrollment based on household growth. The analysis is shown based on both permanent capacity and capacity including interim facilities. This Alternative has a higher level of projected growth than Alternative 1, but less than Alternative 2.

Table 3.12-16
Projected SKSD LOS – Alternative 2

Time Period	Student per Household Ratio ¹	Households	Enrollment ²	Perm. Capacity	Net Reserve or (Deficiency)	Total Capacity ³	Net Reserve or (Deficiency)
2011	0.38	25,860	9,742	9,065	(677)	10,834	1,092
<i>Additional Planned Capacity Through 2035</i>				1,900		1,900	
2035 Alternative 2	0.42	36,158	15,139	10,965	(4,174)	12,734	(2,405)

Note: ¹ This is the effective ratio calculated by applying the multifamily and single family generation rates to growth in those specific types of households.

² October 2011 headcount from OSPI.

³ Includes permanent and interim (portables) facilities.

Source: SKSD, 2012; Washington State OSPI, 2012; Washington State OFM, 2012; and BERK, 2013

By 2035, SKSD is estimated to have a deficit of about 2,400 student spaces under Alternative 2. This is about 200 additional students that the District would need to plan for above the No Action level of growth.

Alternative 3

Table 3.12-17 *Projected SKSD LOS – Alternative 3* summarizes projected capacity for SKSD in 2035 based on current capacity, planned capacity improvements, and projected enrollment based on household growth. The analysis is shown based on both permanent capacity and capacity including interim facilities. This Alternative has a higher level of projected growth than Alternative 1, but less than Alternative 2.

Table 3.12-17
Projected SKSD LOS – Alternative 3

Time Period	Student per Household Ratio ¹	Households	Enrollment ²	Perm. Capacity	Net Reserve or (Deficiency)	Total Capacity ³	Net Reserve or (Deficiency)
2011	0.38	25,860	9,742	9,065	(677)	10,834	1,092
<i>Additional Planned Capacity Through 2035</i>				1,900		1,900	
2035 Alternative 3	0.42	36,217	15,164	10,965	(4,199)	12,734	(2,430)

Note: ¹ This is the effective ratio calculated by applying the multifamily and single family generation rates to growth in those specific types of households.

² October 2011 headcount from OSPI.

³ Includes permanent and interim (portables) facilities.

Source: SKSD, 2012; Washington State OSPI, 2012; Washington State OFM, 2012; and BERK, 2013

By 2035, SKSD is estimated to have a deficit of about 2,430 student spaces under Alternative 3. This is about 230 additional students the District would need to accommodate by 2035, compared to the adopted No Action level of growth.

Mitigation Measures

Incorporated Plan Features

- The County's regular review of the CFP in coordination with the school districts should allow for ongoing long-range planning for educational services.

Applicable Regulations and Commitments

- School districts are required to plan for growth over time by regularly updating their six-year capital improvement program.
- Adopted school impact mitigation fees would be collected for new residential development within Gorst if it remains in unincorporated Kitsap County.

Other Potential Mitigation Measures

- To address enrollment changes on an ongoing basis, prior to reaching the level of demand that would necessitate construction of a new facility; districts can use portable classrooms to temporarily meet growth demands. Portables can be funded by impact fees paid by residential developers.
- The County, cities, and school districts could work together to identify potential sites for new school development in areas where higher amounts of growth are planned.

Significant Unavoidable Adverse Impacts

The demand for school services and facilities will increase as new development occurs and the number of families with school-aged children increases. With mitigation, significant, unavoidable adverse impacts would not be anticipated.

3.12.4. Parks, Recreation, and Open Space

Affected Environment

Watershed

Parks and recreational opportunities within the Gorst Creek watershed are provided by several agencies, including the City of Bremerton, Kitsap County, and the City of Port Orchard, as well as private owners. The majority of the watershed is located within Bremerton city limits, and the City of Bremerton owns a large portion of the land.

Facility Inventory

The City of Bremerton currently provides its residents with about 680 acres of parks and open space, while Kitsap County owns and manages about 6,700 acres of parks and open space, seven miles of shoreline access, and 74 miles of trails.

Major public parks and private recreational facilities within and near the watershed include the following:

- **Gold Mountain Golf Club.** Located north of the Bremerton National Airport, Gold Mountain Golf Club is a public golf club, owned by the City of Bremerton that includes two 18-hole courses. The club also includes a restaurant, which is available for weddings and other private events.
- **McCormick Woods.** McCormick Woods is a master-planned community in Port Orchard, located just east of Bremerton National Airport. The community features an 18-hole golf course, a clubhouse restaurant, and homes near the course. Membership to the golf club is available for a monthly fee.
- **Otto Jarstad Park.** Located on Gorst Creek within the City of Bremerton's City Utility forest lands, Otto Jarstad Park was the site of stream restoration project in 2000. The park features covered picnic areas, restrooms, barbecue grills, horseshoe pits, volleyball courts, running water, and electrical outlets. Reservations can be made through the Bremerton Department of Public Works and Utilities.

LOS

City of Bremerton. The City of Bremerton set LOS standards for open space, regional parks, and local parks as part of its most recent comprehensive plan, adopted in 2010. Its LOS standards are:

- **Open Space.** The adopted LOS for open space is 2.21 acres per 1,000 population. Currently, the City of Bremerton provides about 82 acres of open space, which is one acre fewer than the 83 acres needed to meet population-driven LOS standard.
- **Regional Parks.** The adopted LOS for regional parks is 14.64 acres per 1,000 population. Currently, the City of Bremerton provides about 544 acres of regional parks, which is about eight acres fewer than the 552 acres needed to meet the population-driven LOS standard.
- **Local Parks.** The adopted LOS for local parks is 1.48 acres per 1,000 population. The City of Bremerton currently provides about 52 acres of local parks. In order to meet the adopted LOS standard, the City of Bremerton should provide about 56 acres, which would involve adding an additional four acres of local parks.

Kitsap County. The levels of service analyzed in this section are based on those adopted in the 2012 Kitsap County Comprehensive Plan CFP. The County CFP adopted two levels of LOS standard for parks, recreation, and open space:

1. “Target” LOS based on the 2012 Kitsap County PROS Plan
2. “Base” LOS, which reflects a fiscally constrained CFP and the likely ability to acquire and develop park lands over time. Should the County secure additional funding, projects may be added that would move the County closer to the Target LOS.

The County is currently meeting its Base LOS for all categories as shown in Table 3.12-18 *Current Kitsap County Parks, Recreation, and Open Space LOS Requirements*. The County is meeting its higher Target LOS for shoreline access and trails.

Table 3.12-18
Current Kitsap County Parks, Recreation, and Open Space LOS Requirements

	“Target” LOS (per 1,000 pop)	2010 Achieved LOS (per 1,000 pop)	“Base” LOS (per 1,000 pop)
Open Space	71.0 acres	74.2 acres	57.1 acres
Regional Parks	16.0 acres	11.6 acres	8.9 acres
Heritage Parks	19.0 acres	15.1 acres	11.5 acres
Community Parks	4.65 acres	4.58 acres	3.5 acres
Shoreline Access	0.061 miles	0.096 miles	0.061 miles
Trails	0.20 miles	0.29 miles	0.20 miles

Source: Kitsap County Comprehensive Plan Capital Facilities Element, 2012; and BERK, 2013

Gorst UGA

The Gorst UGA is served by the Kitsap County Parks and Recreation Department, whose facility inventory and current levels of service are noted above in the Gorst Creek watershed section. The Gorst UGA contains very little designated park or recreational land within the UGA, but some recreational opportunities are in close proximity:

- **Sinclair Inlet Wildlife Area.** Kitsap County owns approximately 15 acres of shoreline property immediately adjacent to the eastern boundary of the Gorst UGA. This park is programmed for passive use, primarily wildlife viewing and habitat restoration. The park features a wildlife viewing platform that provides visual access to the Sinclair Inlet mudflats.

Figure 3.12-4 *Gorst Creek Watershed: Parks, Recreation, and Open Space Map* shows the location of publicly and privately owned parks, recreation areas, and open space near the Gorst Creek watershed and Gorst UGA.

Impacts

IMPACTS COMMON TO ALL ALTERNATIVES

Watershed

No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA beyond adopted Comprehensive Plan. Updated stormwater and habitat regulations in this area are not anticipated to have any effect on the demand for parks, recreation, and open space. Therefore, no significant impacts to these services are anticipated under any of the alternatives.

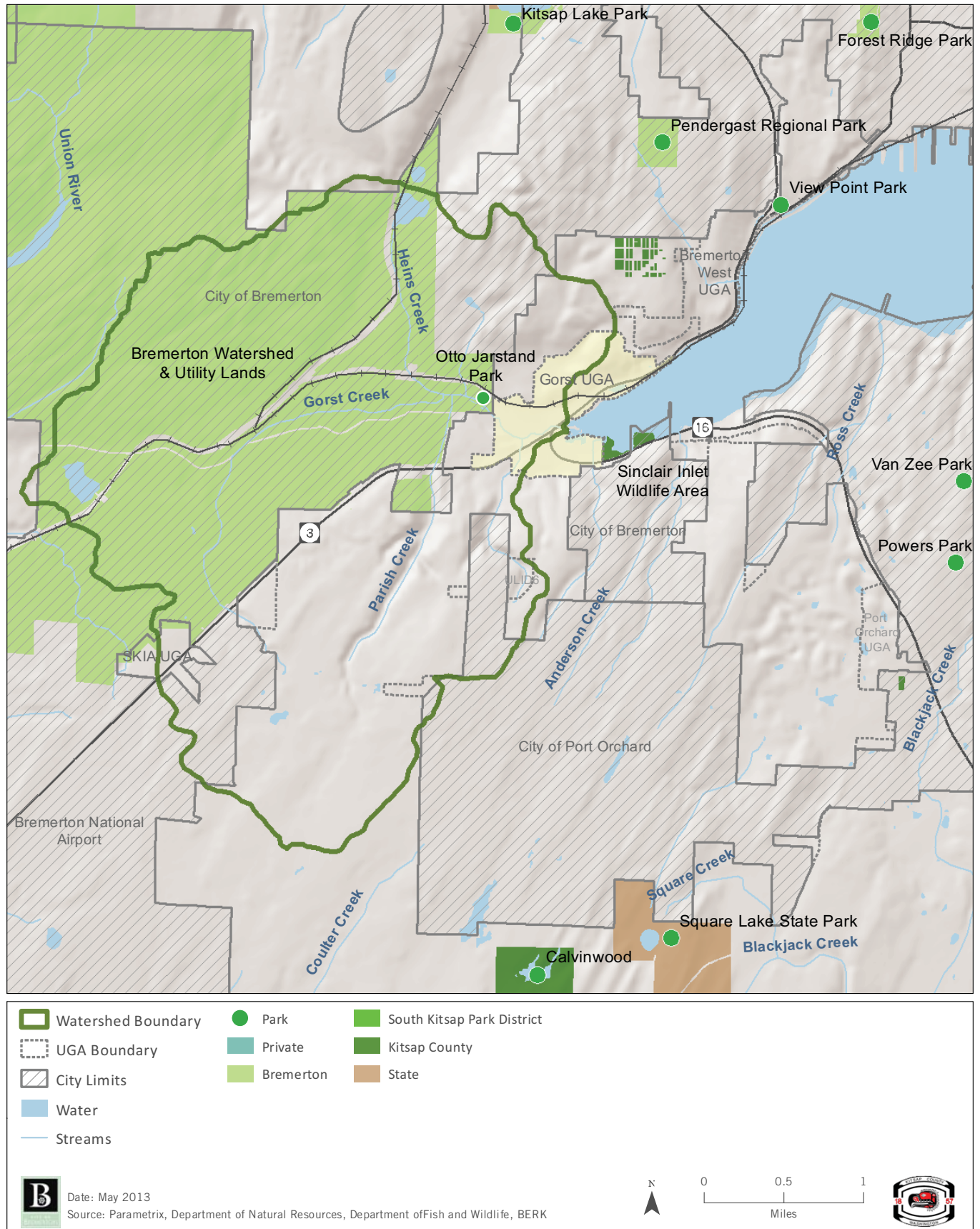
Gorst UGA

County Impacts. If the Gorst UGA remains in the County, all alternatives would result in a marginal increase in demand for County park and recreation facilities. The specific facilities impacted or the geographic need for new facilities would depend in part on the location of growth, which will vary by alternative.

Per KCC Chapters 410.110.020 and 410.110.210, the County collects a parks impact fee for each new housing unit developed in unincorporated areas. Impact fee revenues are directed toward park planning, land acquisition, site improvements, construction and engineering, mitigation costs, and capital equipment. New development under the alternatives would also generate revenue from REET, which can be used for any type of capital project in the County. A portion of increased tax revenues could be used to fund acquisition and development of new parks and recreation facilities, as well as operation and maintenance of new and existing facilities under all alternatives.

City of Bremerton Impacts. If the City of Bremerton were to annex the Gorst UGA, the current population and projected population growth within the UGA would drive some additional demand for Parks services. While the City of Bremerton does not charge a parks impact fee to offset the demand from new development, the City of Bremerton could require that any master planned development include park or open space land for its residents.

FIGURE 3.12-4 GORST CREEK WATERSHED: PARKS, RECREATION, AND OPEN SPACE



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Table 3.12-19
City of Bremerton Open Space LOS Impacts – Alternative 1

Time Period	City of Bremerton Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 2.21 ACRES PER 1,000 POPULATION				
2010	37,729	83	82	(1)
2035 City w/o Gorst	52,017	115	82	(33)
2035 Alternative 1	52,321	116	82	(33)

Source: Washington State OFM, 2012; *Bremerton Parks, Recreation, and Open Space Plan*, 2007; *City of Bremerton Comprehensive Plan*, 2010; and BERK, 2013

Table 3.12-20
City of Bremerton Regional Parks LOS Impacts – Alternative 1

Time Period	City of Bremerton Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 14.64 ACRES PER 1,000 POPULATION				
2010	37,729	552	544	(8)
2035 City w/o Gorst	52,017	762	544	(217)
2035 Alternative 1	52,321	766	544	(222)

Source: Washington State OFM, 2012; *Bremerton Parks, Recreation, and Open Space Plan*, 2007; *City of Bremerton Comprehensive Plan*, 2010; and BERK, 2013

Table 3.12-21
City of Bremerton Local Parks LOS Impacts – Alternative 1

Time Period	City of Bremerton Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 1.48 ACRES PER 1,000 POPULATION				
2010	37,729	56	52	(4)
2035 City w/o Gorst	52,017	77	52	(25)
2035 Alternative 1	52,321	77	52	(25)

Source: Washington State OFM, 2012; *Bremerton Parks, Recreation, and Open Space Plan*, 2007; *City of Bremerton Comprehensive Plan*, 2010; and BERK, 2013

Alternative 1

Under the No Action Alternative, population in the Gorst UGA would grow by approximately 82 people through 2035. This Alternative is identical to the Preferred Alternative adopted in the 2012 Kitsap County Comprehensive Plan CFP. Since this alternative assumes mostly employment growth and very little housing growth, there is a negligible effect on a population-based service like parks and recreation.

County Impacts. Given that the Base LOS standards were adopted to meet growth projections from the current Comprehensive Plan, the County will be able to meet its parks LOS measures under Alternative 1 with the projected growth in the Gorst UGA.

City of Bremerton Impacts. If the City of Bremerton annexes the Gorst UGA, it would have the following impacts on demand for City of Bremerton parks services as compared to the adopted LOS:

- Additional demand for about one acre of open space by 2035. (Shown in Table 3.12-19 *City of Bremerton Open Space LOS Impacts – Alternative 1*).
- Additional demand for about two acres of regional parks by 2035. (Shown in Table 3.12-20 *City of Bremerton Regional Parks LOS Impacts – Alternative 1*).
- No additional demand for local parks. (Shown in Table 3.12-21 *City of Bremerton Local Parks LOS Impacts – Alternative 1*). Although the LOS may be met on a citywide basis, the City of Bremerton should consider regional assessments of its parks services to ensure that new development within the Gorst UGA would be served by local parks.

Alternative 2

Alternative 2 models a moderate growth level for the Gorst UGA, higher than under the No Action Alternative but lower than under Alternative 3. Alternative 2 assumes a 2035 Gorst UGA population of 1,207, which is an increase of 985 residents over current population levels.

County Impacts. Given that Alternative 2 population projections are higher than Alternative 1, the growth in the Gorst UGA would drive the following additional needs for parks and recreation services if the Gorst UGA remains unincorporated:

- Thirty one additional acres of open space. (Shown in Table 3.12-22 *Kitsap County Open Space LOS Impacts – Alternative 2*).
- Eight additional acres of regional parks. (Shown in Table 3.12-23 *Kitsap County Regional Parks LOS Impacts – Alternative 2*).
- Seven acres of community parks. (Shown in Table 3.12-24 *Kitsap County Community Parks LOS Impacts – Alternative 2*).
- No need for additional heritage parks, shoreline access, or trails.

Table 3.12-22
Kitsap County Open Space LOS Impacts – Alternative 2

Time Period	Kitsap Countywide Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 57.1 ACRES PER 1,000 POPULATION				
2010	251,133	14,340	18,640	4,300
<i>Additional Planned Capacity through 2035</i>			193	
2035 Alternative 2	330,376	18,864	18,833	(31)

Source: Kitsap County Comprehensive Plan Capital Facilities Element, 2012; and BERK, 2013.

Table 3.12-23
Kitsap County Regional Parks LOS Impacts – Alternative 2

Time Period	Kitsap Countywide Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 8.9 ACRES PER 1,000 POPULATION				
2010	251,133	2,235	2,932	697
<i>Additional Planned Capacity through 2035</i>			0	
2035 Alternative 2	330,376	2,940	2,932	(8)

Source: Kitsap County Comprehensive Plan Capital Facilities Element, 2012; and BERK, 2013

Table 3.12-24
Kitsap County Community Parks LOS Impacts – Alternative 2

Time Period	Kitsap Countywide Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 3.5 ACRES PER 1,000 POPULATION				
2010	251,133	879	1,149	270
<i>Additional Planned Capacity through 2035</i>			0	
2035 Alternative 2	330,376	1,156	1,149	(7)

Source: Kitsap County Comprehensive Plan Capital Facilities Element, 2012; and BERK, 2013

City of Bremerton Impacts. If the City of Bremerton annexes the Gorst UGA, it would have the following impacts on demand for City of Bremerton parks services as compared to the adopted LOS:

- Additional demand for about two acres of open space by 2035. (Shown in Table 3.12-25 *City of Bremerton Open Space LOS Impacts – Alternative 2*).
- Additional demand for about 17 acres of regional parks by 2035. (Shown in Table 3.12-26 *City of Bremerton Regional Parks LOS Impacts – Alternative 2*).
- Additional demand for about one acre of local parks. (Shown in Table 3.12-27 *City of Bremerton Local Parks LOS Impacts – Alternative 2*).

Table 3.12-25
City of Bremerton Open Space LOS Impacts – Alternative 2

Time Period	City of Bremerton Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 2.21 ACRES PER 1,000 POPULATION				
2010	37,729	83	82	(1)
2035 City w/o Gorst	52,017	115	82	(33)
2035 Alternative 2	53,224	118	82	(35)

Source: Washington State OFM, 2012; *Bremerton Parks, Recreation, and Open Space Plan*, 2007; *City of Bremerton Comprehensive Plan*, 2010; and BERK, 2013

Table 3.12-26
City of Bremerton Regional Parks LOS Impacts – Alternative 2

Time Period	City of Bremerton Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 14.64 ACRES PER 1,000 POPULATION				
2010	37,729	552	544	(8)
2035 City w/o Gorst	52,017	762	544	(217)
2035 Alternative 2	53,224	779	544	(235)

Source: Washington State OFM, 2012; *Bremerton Parks, Recreation, and Open Space Plan*, 2007; *City of Bremerton Comprehensive Plan*, 2010; and BERK, 2013

Table 3.12-27
City of Bremerton Local Parks LOS Impacts – Alternative 2

Time Period	City of Bremerton Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 1.48 ACRES PER 1,000 POPULATION				
2010	37,729	56	52	(4)
2035 City w/o Gorst	52,017	77	52	(25)
2035 Alternative 2	53,224	79	52	(26)

Source: Washington State OFM, 2012; *Bremerton Parks, Recreation, and Open Space Plan*, 2007; *City of Bremerton Comprehensive Plan*, 2010; and BERK, 2013

Alternative 3

Alternative 3 models the highest growth level for the Gorst UGA, and assumes a 2035 Gorst UGA population of 1,304, which is an increase of 1,082 residents over current population levels.

County Impacts. Given that Alternative 3 population projections are higher than Alternative 1 and slightly higher than Alternative 2, the growth in the Gorst UGA would drive the following additional needs for parks and recreation services if the Gorst UGA remains unincorporated:

- 37 additional acres of open space. (Shown in Table 3.12-28 *Kitsap County Open Space LOS Impacts – Alternative 3*).
- Nine additional acres of regional parks. (Shown in Table 3.12-29 *Kitsap County Regional Parks LOS Impacts – Alternative 3*).
- One acre of heritage parks (Shown in Table 3.12-30 *Kitsap County Heritage Parks LOS Impacts – Alternative 3*).
- Eight acres of community parks. (Shown in Table 3.12-31 *Kitsap County Community Parks LOS Impacts – Alternative 3*).
- No need for additional shoreline access, or trails.

Table 3.12-28
Kitsap County Open Space LOS Impacts – Alternative 3

Time Period	Kitsap Countywide Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 57.1 ACRES PER 1,000 POPULATION				
2010	251,133	14,340	18,640	4,300
<i>Additional Planned Capacity through 2035</i>			193	
2035 Alternative 3	330,473	18,870	18,833	(37)

Source: Kitsap County Comprehensive Plan Capital Facilities Element, 2012; and BERK, 2013

Table 3.12-29
Kitsap County Regional Parks LOS Impacts – Alternative 3

Time Period	Kitsap Countywide Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 8.9 ACRES PER 1,000 POPULATION				
2010	251,133	2,235	2,932	697
<i>Additional Planned Capacity through 2035</i>			0	
2035 Alternative 3	330,473	2,941	2,932	(9)

Source: Kitsap County Comprehensive Plan Capital Facilities Element, 2012; and BERK, 2013

Table 3.12-30
Kitsap County Heritage Parks LOS Impacts – Alternative 3

Time Period	Kitsap Countywide Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 11.5 ACRES PER 1,000 POPULATION				
2010	251,133	2,888	3,799	911
<i>Additional Planned Capacity through 2035</i>			0	
2035 Alternative 3	330,473	3,800	3,799	(1)

Source: Kitsap County Comprehensive Plan Capital Facilities Element, 2012; and BERK, 2013

Table 3.12-31
Kitsap County Community Parks LOS Impacts – Alternative 3

Time Period	Kitsap Countywide Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 3.5 ACRES PER 1,000 POPULATION				
2010	251,133	879	1,149	270
<i>Additional Planned Capacity through 2035</i>			0	
2035 Alternative 3	330,473	1,157	1,149	(8)

Source: Kitsap County Comprehensive Plan Capital Facilities Element, 2012; and BERK, 2013

City of Bremerton Impacts. If the City of Bremerton annexes the Gorst UGA, it would have the following impacts on demand for City of Bremerton parks services as compared to the adopted LOS:

- Additional demand for about three acres of open space by 2035. (Shown in Table 3.12-32 *City of Bremerton Open Space LOS Impacts – Alternative 3*).
- Additional demand for about 20 acres of regional parks by 2035. (Shown in Table 3.12-33 *City of Bremerton Regional Parks LOS Impacts – Alternative 3*).
- Additional demand for about two acres of local parks. (Shown in Table 3.12-34 *City of Bremerton Local Parks LOS Impacts – Alternative 3*).

Table 3.12-32
City of Bremerton Open Space LOS Impacts – Alternative 3

Time Period	City of Bremerton Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 2.21 ACRES PER 1,000 POPULATION				
2010	37,729	83	82	(1)
2035 City w/o Gorst	52,017	115	82	(33)
2035 Alternative 3	53,321	118	82	(36)

Source: Washington State OFM, 2012; *Bremerton Parks, Recreation, and Open Space Plan*, 2007; *City of Bremerton Comprehensive Plan*, 2010; and BERK, 2013

Table 3.12-33
City of Bremerton Regional Parks LOS Impacts – Alternative 3

Time Period	City of Bremerton Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 14.64 ACRES PER 1,000 POPULATION				
2010	37,729	552	544	(8)
2035 City w/o Gorst	52,017	762	544	(217)
2035 Alternative 3	53,321	781	544	(237)

Source: Washington State OFM, 2012; *Bremerton Parks, Recreation, and Open Space Plan*, 2007; *City of Bremerton Comprehensive Plan*, 2010; and BERK, 2013

Table 3.12-34
City of Bremerton Local Parks LOS Impacts – Alternative 3

Time Period	City of Bremerton Population	Acres to Meet LOS Standard	Acres Available	Net Reserve or (Deficiency)
LOS = 1.48 ACRES PER 1,000 POPULATION				
2010	37,729	56	52	(4)
2035 City w/o Gorst	52,017	77	52	(25)
2035 Alternative 3	53,321	79	52	(27)

Source: Washington State OFM, 2012; *Bremerton Parks, Recreation, and Open Space Plan*, 2007; *City of Bremerton Comprehensive Plan*, 2010; and BERK, 2013

Mitigation Measures

Incorporated Plan Features

- Gorst Alternatives 2 and 3 show County-purchased Open Space/Recreation land along Sinclair Inlet. The property on the south shore could allow for some recreation activities consistent with environmental limitations. Property on the north shore is inaccessible but provides open space and environmental protection.
- **Kitsap County.** The County's 2012 PROS Plan sets forth strategies, goals, and objectives for development and management of parks, open space, and recreational facilities for a 5-year planning period.
 - **Acquisition.** The County plans to acquire new trails, shoreline, and open space as part of the Parks Plan. One of its highest priorities is a partnership to acquire 7,000 acres known as the Kitsap Forest and Bay Project, which would effectively double the County's current park ownership and allow the County to meet all of its LOS standards in the next 20+ years with this increase in Open Space. This potential acquisition is not included in the analysis above because the details have not been finalized and therefore it is not included in the Parks CFP.
 - **Partnerships.** In cases where the County has identified a need and has determined they will not be able to provide adequate capacity to meet demand, they will work to partner with other agencies to meet the demand. Partner agencies can assist with acquisition, funding upgrades, and providing technical expertise.
- **City of Bremerton.** The City has also developed a PROS Plan that aims to refine and improve its LOS standards going forward. Under this Plan, the City would create LOS standards that are geographically based in order to better measure how accessible parks are to residents. If the City adopts this Plan, it should review its LOS standards in relation to the location of the Gorst UGA to ensure its residents are being adequately served.

Applicable Regulations and Commitments

- **Kitsap County.** Impact fees are applied to all new housing developments. Fees could be reassessed to reflect increased costs of land for park acquisition, or increased impacts within areas of significant intensification such as the Silverdale or Port Orchard UGAs.

Other Potential Mitigation Measures

- **Kitsap County.** The County could adopt updated Base LOS targets that will accommodate the eventual preferred alternative's growth in the Gorst UGA through 2035. This would involve changing the Base LOS for open space, regional parks, community parks, and potentially heritage parks, depending on the adopted alternative. The County would not need to adjust levels of service for shoreline access or trails.
- **City of Bremerton.** The City could require that master planned developments within the Gorst UGA provide parks and/or open space as part of the development in order to serve the residents of that development and offset the need for the City to acquire and develop additional facilities.

Significant Unavoidable Adverse Impacts

With the increase in population and urbanization of the Watershed and UGA under any of the alternatives, and particularly the action alternatives, there would be greater demand for parks, recreational facilities, and programs. To avoid impacts, the County and City could work with other agencies and regularly monitor population growth, service levels, and demand to bring supply and demand into balance; this can be accomplished with regular CFP updates as appropriate.

Neighborhoods surrounding existing, new or expanded parks would experience more activity in the form of vehicles and pedestrians. Cost for acquiring parks is expected to rise with the increased demand for urban land in the UGA over time.

3.12.5. Libraries

Affected Environment

Watershed

Library service throughout Kitsap County is provided by the Kitsap Regional Library System (KRLS). The system serves approximately 251,000 people countywide and has an annual countywide circulation of over 2.27 million books, audio items, videos, and periodicals. In addition to its nine permanent library locations, KRLS operates a traveling bookmobile, provides outreach services for youth and the homebound, and provides online access to many library materials and services.

None of the KRLS's permanent library locations are within the Gorst Creek watershed. The two closest locations are in downtown Bremerton and Port Orchard:

- The Downtown Bremerton Library building was constructed in 1938 and is owned by the City of Bremerton. This 5,514 square-foot facility was renovated in 2006 and serves an average of 62,140 patrons each year. Annual circulation for this library is approximately 88,746 items.
- The Port Orchard Library operates out of a buildings owned by the City of Port Orchard. Built in 1954, the 8,000 square-foot facility serves an average of 197,814 patrons annually and has an approximate annual circulation of 381,592 items.

No new library facilities are planned in the Gorst area for the immediate future, nor are any major renovations planned for either the Bremerton or Port Orchard libraries.

LOS

For the purpose of this Draft EIS, LOS for libraries is calculated based on two factors: annual per capital circulation and total facility square footage. Because circulation is shared between all library branches, per capita circulation is calculated based on total countywide circulation and population. While not formally adopted by the KRLS, these metrics are useful in tracking how the library system is serving the local population. Table 3.12-35 *Current and Projected Library Levels of Service* illustrates the levels of service for libraries in Kitsap County under present conditions and under each alternative, assuming no additional circulation or facility square footage.

Table 3.12-35
Current and Projected Library Levels of Service

	2012	Alt. 1	Alt. 2	Alt. 3
Countywide Population	254,500	254,582	255,485	255,582
Annual Countywide Library Circulation	2,277,703	2,277,703	2,277,703	2,277,703
Total Facility Square Footage	88,969	88,969	88,969	88,969
<i>Annual Circulation per capita</i>	<i>8.95</i>	<i>8.95</i>	<i>8.92</i>	<i>8.91</i>
<i>Square Footage per capita</i>	<i>0.35</i>	<i>0.35</i>	<i>0.35</i>	<i>0.35</i>

Source: Office of Financial Management 2013, BERK 2012

Gorst UGA

Library service is provided on a regional basis, which is described above for the Gorst Creek watershed. Residents of the Gorst UGA patronize either the Downtown Bremerton or Port Orchard libraries.

Impacts

IMPACTS COMMON TO ALL ALTERNATIVES

Watershed

No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA beyond adopted Comprehensive Plan. Updated stormwater and habitat regulations in this area are not anticipated to have any effect on the demand for library service. Therefore, no significant impacts to library service are anticipated under any of the alternatives.

Gorst UGA

Alternative 1

Under the No Action Alternative, population in the Gorst UGA would grow by approximately 82 residents, which would have minimal effect on the countywide LOS for the KRLS. While the Downtown Bremerton and Port Orchard local branches may experience a small increase in patronage from the Gorst community, it is unlikely that such a small increase in population will have any significant effects on the KRLS's ability to adequately serve the public.

Alternative 2

Under Alternative 2, the Gorst UGA would experience moderate population growth, adding 985 residents during the planning period. To maintain existing levels of service, this increase in population would require an additional 8,816 items in annual circulation and an additional 345 square feet of library facility space, while this level of growth would not significantly affect the countywide library LOS, it is likely that the Downtown Bremerton and Port Orchard branches would each experience a slight increase in patronage over time. How many of these new residents would make use of the available library resources is unknown, as is the proportion of them who would patronize the Bremerton branch versus the Port Orchard branch, making it difficult to quantify the precise level of impact. While Alternative 2 would have a greater effect on demand for library services than the No Action Alternative, it would have a lower impact than Alternative 3.

Alternative 3

Under Alternative 3, the Gorst UGA would experience greater population growth than under Alternatives 1 or 2, adding 1082 residents during the planning period. To maintain existing levels of service, this increase in population would require an additional 9,684 items in annual circulation and an additional 379 square feet of library facility space. While this level of growth would not significantly affect the countywide library LOS, it is likely that the Downtown Bremerton and Port Orchard branches would each experience a slight increase in patronage over time. How many of these new residents would make use of the available library resources is unknown, as is the proportion of them who would patronize the Bremerton branch versus the Port Orchard branch, making it difficult to quantify the precise level of impact. Because it would generate the greatest growth in population, Alternative 3 is anticipated to have a greater effect on demand for library services than either the No Action Alternative or Alternative 2.

Mitigation Measures

Incorporated Plan Features

None.

Applicable Regulations and Commitments

- With additional development and population in the Gorst UGA, property tax revenues, which are the primary source of funding for the Kitsap Regional Library, would increase over time. These additional revenues could be used to purchase additional circulation materials for the Downtown Bremerton and Port Orchard libraries to offset the additional demand generated by growth.

Other Potential Mitigation Measures

- The Kitsap Regional Library could partner with the Cities of Bremerton and Port Orchard to acquire additional circulation materials or expand their local branches to accommodate growth in Gorst.
- The Kitsap Regional Library could increase the amount of circulation materials and services that are available online to reduce demand for physical library space and offset new growth in Gorst.

Significant Unavoidable Adverse Impacts

As population increases within the watershed and Gorst UGA, the demand for library services will also increase. The library system as a whole will experience increased demand as more people require greater collections of materials and other resources. With advanced coordination between the Library District, County, and City of Bremerton; significant, unavoidable, adverse impacts are not anticipated.

3.13 Utilities, Water, Wastewater, Stormwater

3.13.1. Power

Affected Environment

Watershed

Electricity – Puget Sound Energy (PSE)

Electric service in the Gorst Creek watershed is provided by PSE. PSE, an investor-owned private utility, was formed in a 1997 merger between Puget Sound Power & Light Company and Washington Natural Gas. PSE serves over 115,000 electric customers in Kitsap County and maintains over 132 miles of transmission and distribution lines throughout the county.

The electricity serving the Gorst Creek watershed arrives in Kitsap County via 230 kilovolt (kV) transmission lines operated by the Bonneville Power Administration (BPA). These 230 kV lines arrive at a BPA substation just north of the Gorst UGA and then connect to PSE's South Bremerton switching station, located northeast of the Gorst UGA. From this substation, 115kV distribution lines provide power to PSE customers throughout the area.

PSE began construction on a series of upgrades to the South Bremerton switching station in 2011 to increase operational flexibility during outages. The upgrades are proceeding in phases and are scheduled for completion by 2014. While the improvements will provide increased consistency in the local power distribution system, they do not increase the capacity of the current electrical infrastructure.

Natural Gas – Cascade Natural Gas (CNG)

Headquartered in Kennewick, the CNG serves more than 260,000 customers in nearly 100 communities across Washington and Oregon, covering more than 32,000 square miles of service area. CNG maintains a district office in Bremerton and serves customers throughout the Kitsap Peninsula, including Gorst. CNG initiates connections at the request of customers; therefore, not every property within the service area is currently served with natural gas. CNG does not plan for customer connections in advance of customer requests.

Gorst UGA

Electricity – Puget Sound Energy

Electric service in the Gorst UGA is provided by PSE, as described above for the Gorst Creek watershed. Power is provided to the area by regional 230 kV transmission lines that arrive at the BPA substation adjacent to the northern edge of the Gorst UGA (north of SR 3 at the end of Solid Lane West). From here, the power is transferred to the PSE switching station adjacent to the northern edge of the existing mine. From here, electricity is distributed via 115 kV distribution lines to the surrounding region, including the Gorst UGA.

Natural Gas – CNG

As described above for the Gorst Creek watershed, natural gas service is provided to the Gorst community by CNG. CNG supplies natural gas service within its service area upon customer request.

Impacts

IMPACTS COMMON TO ALL ALTERNATIVES

Watershed

No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA. Updated stormwater and habitat regulations in this area are not anticipated to have significant effects on the rate of population growth in this area or the demand for power. Therefore, no significant impacts to power service are anticipated under any of the alternatives.

Gorst UGA**Alternative 1**

Under the No Action Alternative, residential, commercial, and industrial growth in the Gorst UGA would continue according to adopted land use designations and zoning, bringing an additional 82 residents and 742 jobs to the area. Growth in the UGA would increase demand for electric and natural gas service. Neither PSE nor CNG have adopted a formal LOS standard, but both utilities conduct ongoing supply planning to ensure adequate service to customers. While the No Action Alternative would result in the least increase in residential power consumption, it would increase commercial and industrial power consumption to a greater degree than either of the Action Alternatives. Compared with the size of PSE and CNG's regional customer bases, the anticipated growth in the Gorst UGA is relatively small and is unlikely to have any significant impacts on the regional provision of electric or natural gas service in Kitsap County.

Alternative 2

Under Alternative 2, residential and commercial growth in the Gorst UGA would increase in accordance with the proposed land use designations and zoning, bringing an additional 985 residents and 606 jobs to the area. Growth in the UGA would increase demand for electric and natural gas service connections, as well as overall consumption of electricity and natural gas. Neither PSE nor CNG have adopted a formal LOS standard, but both utilities conduct ongoing supply planning to ensure adequate service to customers. While the Gorst UGA is already served by both PSE and CNG, the increased number of connections is likely to require the installation of additional transmission and distribution infrastructure or upgrades to existing infrastructure, particularly in previously undeveloped portions of the UGA, such as the existing mine site. This infrastructure would be upgraded or installed at the time new development occurs, and connections would be made at the time of customer request.

While Alternative 2 would create a higher demand for residential electric and natural gas service than the No Action Alternative, it would create less demand than Alternative 3. Alternative 2 would create greater commercial demand for power than Alternative 3, but less than the No Action Alternative. Compared with the size of PSE and CNG's regional customer bases, the growth anticipated in the Gorst UGA under Alternative 2 is relatively small and is unlikely to have any significant impacts on the regional provision of electric or natural gas service in Kitsap County.

Alternative 3

Under Alternative 3, residential and commercial growth in the Gorst UGA would increase in accordance with the proposed land use designations and zoning, bringing an additional 1,082 residents and 333 jobs to the area. Growth in the UGA would increase demand for electric and natural gas service connections, as well as overall consumption of electricity and natural gas. Neither PSE nor CNG have adopted a formal LOS standard, but both utilities conduct ongoing supply planning to ensure adequate service to customers. While the Gorst UGA is already served by both PSE and CNG, the increased number of connections is likely to require the installation of additional transmission and distribution infrastructure or upgrades to existing infrastructure, particularly in previously undeveloped portions of the UGA, such as the existing mine site. This infrastructure would be upgraded or installed at the time new development occurs, and connections would be made at the time of customer request.

While Alternative 3 would create a higher residential demand for electric and natural gas service than the No Action Alternative or Alternative 2, it would create the least commercial power demand of the three alternatives. Compared with the size of PSE and CNG's regional customer bases, the growth anticipated in the Gorst UGA under Alternative 3 is relatively small and is unlikely to have any significant impacts on the regional provision of electric or natural gas service in Kitsap County.

Mitigation Measures

Incorporated Plan Features

- Mixed-use and clustered development is encouraged in select areas under Alternative 3, and both Alternatives 2 and 3 would result in increased residential density over existing conditions. Providing power to higher-density and cluster development is often more efficient than provision of power to low-density development.

Applicable Regulations and Commitments

- All future development of energy resources and transmission facilities would be required to comply with federal and state laws, the regulations of the Northwest Power Planning Council, and the WUTC.

Other Potential Mitigation Measures

- As development permits are issued for future development in the Gorst UGA, either by Kitsap County or the City of Bremerton, PSE and CNG should be advised of large development or redevelopment projects and allowed to provide input on their ability to adequately serve the project.

Significant Unavoidable Adverse Impacts

Population and employment growth under all studied alternatives, and particularly the action alternatives, will increase demands for energy that in turn will increase the need for additional facilities. Planning efforts to manage growth should reduce the demand and/or accommodate growth in a coordinated fashion than would otherwise occur.

3.13.2. Solid Waste

Affected Environment

Watershed

KCPW provides solid waste management in the Gorst Creek watershed area. KCPW contracts with Waste Management Washington Incorporated (WMWI) to provide curbside collection of garbage, recycling, and yard and food waste to residents and businesses in the Cities of Bremerton and Port Orchard as well as unincorporated areas within the watershed.

Within the Cities of Bremerton and Port Orchard, garbage collection is mandatory, while it is voluntary within the unincorporated county. WMWI offers collection of garbage and recycling to all residents of the watershed. Yard and food debris collection is available to residents of Bremerton and Port Orchard and to county residents within the burn ban boundary.

Facility Inventory

Capital facilities are an integral part of the solid waste management system, and within Kitsap County they are owned and operated by a variety of entities. Table 3.13-1 *Solid Waste Facility Inventory* shows the major solid waste disposal facilities in the County. Olympic View Transfer Station serves the study area.

Table 3.13-1
Solid Waste Facility Inventory

Name	Owner	Operator	Location
Disposal			
OVTS	KCPW	WMWI	City of Bremerton
Solid Waste Collection			
Olalla RAGF	KCPW	WMWI	South Kitsap
Hansville RAGF	KCPW	KCPW	North Kitsap
Silverdale RAGF	KCPW	WMWI	Central Kitsap
Bainbridge Island Transfer Station	COBD	Bainbridge Disposal	City of Bainbridge Island
Household Hazardous Waste Collection Facility	KCPW	KCPW	City of Bremerton
Residential Recyclables Collection			
OVTS Recycling Area	KCPW	WMWI	South Kitsap
Olalla RAGF	KCPW	WMWI	South Kitsap
Hansville RAGF	Kitsap County	KCPW	North Kitsap
Silverdale RAGF	KCPW	WMWI	Central Kitsap
Bainbridge Island Transfer Station	Bainbridge Disposal	Bainbridge Disposal	Bainbridge Island
Poulsbo Recycle Center	KCPW	KCPW	City of Poulsbo

Notes: Olympic View Transfer Station (OVTS), Recycling & Garbage Facility (RAGF), Kitsap County Public Works (KCPW), Waste Management Washington, Inc. (WMWI), City of Bainbridge Island Disposal (COBD)

Source: Kitsap County Solid Waste Division, 2012; and BERK, 2013

LOS

The existing LOS is calculated based on estimated service population and the average per-capita generation rates for solid waste and recycling, as shown in Table 3.13- 2 *Current Solid Waste LOS Requirements*. The figures in this table were taken from Kitsap County's Solid Waste and Hazardous Waste Management Plan *Wise Communities: The Future of Solid and Hazardous Waste Management in Kitsap County* (Kitsap County, 2011).

Table 3.13-2
Current Solid Waste LOS Requirements

Time Period	Countywide Population	SW Generation	SW Tons Generated Per Year ²	SW Recycling	Recycled Tons Per Year
		Rate ¹ (lbs/cap/day)		Rate (lbs/cap/day)	
2010	251,133	5.0	229,000	2.0	92,000

Note: ¹ SW Generation Rate shown is calculated from SW produced within Kitsap County and North Mason County.

² SW generated does not include recycled waste.

Source: Kitsap County Solid Waste Division, 2012 communication; and BERK, 2013

The County is in the middle of a 20-year contract that took effect in 2002 to send waste to a landfill owned by WMWI. The landfill has capacity for 50 to 100 years and has additional acreage that could be permitted to increase its capacity further. Planning at the County level with WMWI occurs on a yearly basis based on future projected needs. The County will have adequate time to plan for 2035 levels of waste generation, and projected levels, as noted below, could be accommodated at the current landfill site if a new or extended contract is enacted.

Gorst UGA

As noted above, solid waste management is managed by Kitsap County Public Works (KCPW) in contract with WMWI. This is a regional service, and the facilities and levels of service are as noted above for the Gorst Creek watershed.

Impacts**IMPACTS COMMON TO ALL ALTERNATIVES*****Watershed***

No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA. Updated stormwater and habitat regulations in this area are not anticipated to have significant effects on solid waste management needs in this area.

Gorst UGA

Since solid waste service is provided on a regional level, impacts to the service provider (Waste Management) and management organization are nearly identical whether or not Gorst is annexed by the City of Bremerton.

The additional population capacity generated under the three alternatives would marginally increase demand for solid waste capacity. The County, through contracts with private haulers, will continue to be able to provide solid waste management for an increased population regardless of the alternative ultimately chosen. The County would have adequate time to plan for landfill capacity for solid waste generation under all alternatives, and the County's current contracted landfill location is expected to have sufficient capacity through 2025 and beyond if a new or extended contract is enacted.

Alternative 1

Under the No Action Alternative, population in the Gorst UGA would grow by approximately 82 people through 2035. This Alternative is identical to the Preferred Alternative adopted in the 2012 Kitsap County Comprehensive Plan CFP.

Assuming a solid waste generation rate of 5 lbs/capita/day and recycling rate of 2 lbs/capita/day results in about 301,000 tons of solid waste and 120,000 tons of recycling per year. These totals could be managed with existing landfill capacity.

Alternative 2

Alternative 2 models a moderate growth level for the Gorst UGA, higher than under the No Action Alternative but lower than under Alternative 3. Alternative 2 assumes a 2035 Gorst UGA population of 1,207, which is an increase of 985 residents over current population levels.

Assuming a solid waste generation rate of 5 lbs/capita/day and recycling rate of 2 lbs/capita/day results in about 301,000 tons of solid waste and 121,000 tons of recycling per year. These totals could be managed with existing landfill capacity.

Alternative 3

Alternative 3 models the highest growth level for the Gorst UGA, and assumes a 2035 Gorst UGA population of 1,304, which is an increase of 1,082 residents over current population levels.

Assuming a solid waste generation rate of 5 lbs/capita/day and recycling rate of 2 lbs/capita/day results in about 301,000 tons of solid waste and 121,000 tons of recycling per year. These totals could be managed with existing landfill capacity.

Mitigation Measures

Incorporated Plan Features

- Focusing growth in existing UGAs and cities where solid waste services already exist would reduce impacts related to providing curbside pickup for added population and promote more curbside customers. There would also be less need for additional RAGFs.

Applicable Regulations and Commitments

- Coordination and monitoring at transfer facilities and RAGFs would be ongoing to ensure adequate solid waste capacity. Service levels for curbside collection as outlined in the CFP would continue or improve to encourage recycling.

Other Potential Mitigation Measures

- Based on available landfill capacity at the County's current contracted landfill location a new or extended contract could be enacted to provide landfill capacity well beyond the 2025 planning horizon.

Significant Unavoidable Adverse Impacts

Future population growth and development would continue to increase the amount of solid waste generated in the county under any alternative, especially the action alternatives. With Solid Waste Management Plans, regularly updated as appropriate, no significant unavoidable adverse impacts are anticipated.

3.13.3. Water, Wastewater, and Stormwater

This section describes the environmental considerations related to utilities in the study area. An evaluation and review of existing levels of service, estimated needs and demand for service, and projected levels of service under each alternative for water, wastewater, and stormwater is provided. Surface water, groundwater, and water quality was previously described in Section 3.2 *Water Resources*. The utilities analysis is based on the stormwater plan and capital improvement program. Utilities information was collected from the City of Bremerton City Services Element of the Comprehensive Plan (City of Bremerton 2010) and City of Bremerton GIS data. Other sources used in this analysis include: Gorst Creek Watershed Characterization Report (City of Bremerton 2012), Gorst Creek Watershed Inventory and Characterization Technical Memorandum (Parametrix 2011), and Kitsap County's 2013-2025 CFP (Kitsap County 2012).

Affected Environment

Watershed

Water

Water (drinking) for residents in the watershed is supplied from City of Bremerton utility lands and also the Anderson Creek aquifer. Primary water service is provided by both the City of Bremerton and Port Orchard in the study area. The Sunnyslope Water District No. 15 provides water to unincorporated rural areas in the watershed. The Gorst aquifer currently has five wells and six wellhead protection areas. The City of Bremerton supplies water to the Gorst UGA and portions of the SKIA UGAs (City of Bremerton 2012). The City of Bremerton partially supplies water to the McCormick Woods area. There is one reservoir in the watershed, which is not in the City of Bremerton, located near the Twin Lakes area, just upstream from the Gold Mountain Golf Course. There are two major water mains in the watershed. One of the water mains is a 28-inch diameter pipe installed in 1950 along W Belfair Valley Road and Gorst Creek that supplies water from the Union River reservoir and surrounding wells form the Gorst UGA. The other 18-inch water main, which was installed in 1976, follows the shoreline of Alexander Lake and then heads along Heins Creek to the Gorst UGA. Two water pump stations are located in the watershed, one in the central portion of Gorst Creek (Pump Station #3) and the other along W Belfair Valley Road near Division

Avenue W (Pump Station #17). The two major water mains converge at this pump station, which is near the confluence of Gorst Creek with Heins and Parish creeks. The 18-inch is the discharge pipe for Pump Station #17.

See Figure 3.13-1 *Gorst: Drinking Water and Wastewater Systems* for a map of water facilities water mains and wells in the Gorst UGA vicinity.

Wastewater

Wastewater (sanitary sewer) in the watershed is managed on most parcels with on-site septic systems. Two wastewater systems exist in the watershed. One wastewater system, maintained by the City of Port Orchard Public Works and West Sound Utility District, is located in the southeastern portion of the watershed and serves developments connected to SW Old Clifton Road. The other wastewater system, maintained by the City of Bremerton, includes two sewer pump stations and is associated with the Gorst UGA and described later.

See Figure 3.13-1 *Gorst: Drinking Water and Wastewater Systems* for a map of pump stations and sewer mains in the Gorst UGA vicinity.

Stormwater

In 2006, Kitsap County analysis of its Comprehensive Plan indicated the level of impervious area in different watersheds (Kitsap County 2012a). The Gorst Creek Watershed was found to have approximately nine percent impervious area, which is relatively low due to the Bremerton CULs that remain forested, as well as the as yet undeveloped SKIA, which is slated for much employment growth in the future.

The urban areas of Port Orchard, part of Bremerton, and Gorst currently occupy 6,650 acres (24 percent) of the larger Sinclair Inlet watershed encompassing the Gorst Creek Watershed and other territory including the City of Bremerton and the PSNS occupying the majority of the north shoreline, and the City of Port Orchard centrally located on the south shore. Other commercial centers in the watershed include Annapolis, Manchester, and Sunnyslope

Stormwater runoff in the watershed that is not naturally dispersed and infiltrated is conveyed over impervious surfaces including roofs, streets, and parking lot into roadside ditches that eventually discharge directly to streams water bodies including Gorst Creek and Sinclair Inlet. Currently, only the McCormick Woods development has water quality treatment ponds. No other formal water quality facilities or flow control structures in the watershed. As previously stated in Section 3.2 *Water Resources* and Section 3.4 *Plants and Animals* the majority of the upper and central portions of the watershed is forested and owned by the City of Bremerton. The forested land naturally disperses and infiltrates stormwater, recharging groundwater in the Gorst aquifer. In the lower portion of the watershed, stormwater runoff from roads including SR 3 and scattered rural residences is conveyed through roadside ditches and culverts. Sediment accumulation occurs at culverts and sediment removal occurs often as a maintenance practice.

Existing conditions of water flow and habitat were analyzed in the Gorst Creek Characterization Report (City of Bremerton 2012). The water flow assessment is based on the major watershed-scale hydrologic processes that naturally contribute to and affect stream flows; the subcomponents of the water flow process include an analysis of surface water delivery, storage, discharge, and recharge capacity (Stanley et al. 2010). Stormwater runoff from pollutant generating impervious surfaces often impact water resources including water flow. The characterization report (City of Bremerton 2012) included a model that integrated individual components of the water flow process, as well as human activities that are impairments to the process and contribute to stormwater runoff. The report divided the watershed into assessment units and identify areas for protection, restoration, conservation, and development.

In general, the characterization report (City of Bremerton 2012) and model output provided data that supported land use planning for protection of the north central portion of the watershed, the tributaries, and the estuary, while allowing for additional growth and development in the south, and southeastern portions of the watershed.

Specifically, areas in the City of Bremerton Utility Lands and near Heins and Jarstad creeks are highly important for water flow processes and are subject to relatively low degradation and pollution generating impervious surface and stormwater runoff (City of Bremerton 2012).

Areas of lower relative importance for water flow processes but also have relatively low levels of degradation are located west of the City of Bremerton Utility Lands and north of the golf course and the headwaters of Gorst and Parish creeks (City of Bremerton 2012). Generally, due to these conditions, these areas require a relatively low level of active management, provided that land uses and activities are not allowed to degrade processes. The areas near the Gold Mountain Golf Club, along the Gorst Unnamed Tributary 1, and the Gorst UGA area areas identified by the model that require the most active management (City of Bremerton 2012). They denote areas which have a relatively high importance to water flow processes but are highly degraded. These are focal areas for active management.

The model maps these areas as of relatively low importance to the water flow process and high degradation. In the context of model output results (City of Bremerton 2012), these are typically areas within which continued development will have the least effect on water flow processes, as compared to other locations within the watershed. These areas include portions of the SKIA UGA, and the Sunnyslope Area.

Gorst UGA

Water

Water (drinking) in the Gorst UGA is supplied by the City of Bremerton. Water mains are located along W Belfair Valley Road, W Frone Drive, Feigley Road W, West Sherman Heights Road, SR 3, and SR 16. Most water mains were installed between 1986 and 1990. A few water lines, such as those along West Sherman Heights Road, were installed in 1940.

The Kitsap County CFP (August 2012) coordinates water improvements planned by the County, cities, and special districts. Within the Gorst UGA, the City of Bremerton identified the following improvement:

- Project #2 – 36" Transmission Main McKenna Falls to Gorst

Wastewater

In 2010, a wastewater (sanitary sewers) collection system was built in the Gorst UGA. Wastewater is conveyed through several 8-inch gravity mains located along W Belfair Valley Road, W Frone Drive, Feigley Road W, SR 3, and SR 16. These mains tie into two sewer pump stations and an 18-inch force main that connects to a wastewater treatment plant on Oyster Bay Avenue in Bremerton. As previously described in Section 3.2 *Water Resources*, Kitsap County Public Health found 7 water quality hotspot areas in the Gorst UGA. After the wastewater collection system was constructed in 2010, 6 of the 7 areas were downgraded to a level of no significance. A total of 125 residences and commercial properties have connected to the Gorst wastewater system as of August 2011. Remaining parcels in the UGA manage wastewater through on-site septic systems. The high ground water and poor draining soils in the area tend to cause septic systems to fail prematurely, resulting in the discharge of untreated sanitary sewage into Gorst Creek and its tributaries (City of Bremerton 2009).

The Kitsap County CFP (August 2012) coordinates wastewater improvements planned by the County, cities, and special districts. Within the Gorst UGA, the City of Bremerton identified the following improvement:

- Project #1 – Pump Station SB 3 (Gorst) Upgrade: 2019-2025 period

Stormwater

Similar to facilities in the greater watershed, stormwater facilities in the Gorst UGA consist primarily of roadside drainage ditches with culverts located at road crossings. In addition, most of the UGA near the Sinclair Inlet is developed, with two highways and several commercial developments. Stormwater in these areas is impounded or

conveyed as sheet flow over impervious surfaces that discharge to ditches and eventually to fish-bearing streams and estuarine wetlands in Sinclair Inlet.

Stormwater infrastructure deficiencies identified in the UGA include the lack of flow control measures for attenuating peak flows and low capacity for stormwater conveyance, as well as several undersized and crushed culverts which impound stormwater and accumulate sediment that results in flooding of areas in the UGA (Parametrix 2011, City of Bremerton 2013)

The Watershed Characterization Report and model identified the Gorst UGA as an area of relatively high importance to water flow processes but is highly degraded (City of Bremerton 2012). Given that this area is already developed with urban uses, Creeks in the UGA are channelized with a reduced riparian cover that has impacted water flow and increased stormwater runoff and degraded stream corridor discharge processes (City of Bremerton 2012).

The Gorst Creek Watershed Existing Drainage Deficiencies Technical Memorandum (City of Bremerton 2013) documents the existing drainage infrastructure deficiencies within the Gorst Creek Watershed and has been prepared as part of the Watershed Characterization Plan. Drainage system problems and untreated stormwater runoff currently impact areas in the UGA. Drainage system problems were identified and categorized by type as chemical, biological and physical. Some of the problems identified include erosion, pollution loading, flooding, and fish passage barriers within the watershed. To identify system deficiencies, the City of Bremerton and K drainage complaint records were reviewed; discussions were held with the K Surface and Stormwater Management Division; and the Kitsap County Public Health District; and discussions were held with business and home owners near identified problem areas on the day after a food rainfall event of 4.09 inches within 24 hours on November 19th, 2012. Drainage infrastructure deficiencies are identified at 16 sites (see Figure 3.2-3 *Gorst Creek Identified Infrastructure Existing Drainage Deficiencies*).

As previously described in Section 3.2, *Water Resources*, stormwater related problems included Elite Exterior and Betos Tires, development along W. Belfair Valley Road, and Peninsula Subaru. Elite Exterior has frequent flooding when high tides coincide with storm events. Businesses and residences along W. Belfair Valley Road have experienced increased flooding from high groundwater in combination with hill slope seepage and insufficient stormwater conveyance from degraded roadside ditches. Peninsula Subaru has drainage issues associated with undersized stormwater drain pipes and culverts with sink holes and slumps occurring on the property.

Other stormwater runoff and drainage deficiencies during storm events included lanes of SR 3 closed down for several hours from when high tides coincide with storm events. Drainage ditches near Washington Cedar lumber yard and the Walidbilig properties are insufficient for conveyance of stormwater and sandbagging are required to protect homes from overflowing banks. A drainage complaint was received by the K where the two residences flood due to installation of private driveway culvert upstream along Sam Christopherson Road. The County inspected the site and noted that the culvert and driveway was on private property. The Kitsap County Public Health District cited an owner claimed a residence loss from streambank erosion in Gorst Creek three to four years ago. Properties southeast of Old Belfair Valley Road and Sam Christopherson Avenue W. and west of Navy City Metal reported past flooding. Many homes in the area are now abandoned.

Impacts

This utilities analysis is based on guidance provided by WAC 197-11-960 (SEPA environmental checklist) regarding identification, characterization, and mitigation of impacts. The analysis of environmental consequences of the project alternatives on utilities within the study area includes a description of the methods and summary of impacts.

The City of Bremerton is compiling watershed data for several models that would identify and prioritize mitigation measures that would restore, enhance, and protect water resources and optimize investment in infrastructure such as water quality facilities.

The following is a description of each model for evaluating stormwater-related impacts. The watershed characterization model used is described in Ecology publication #10-06-05, "Puget Sound Watershed Characterization Project: Description of Methods, Models and Analysis". The document provides guidance on how to conduct a coarse-scale characterization for multiple watershed processes. Application and analysis of the Gorst Creek Watershed Characterization was undertaken by a project team from the Department of Ecology. The initial step involves identifying the geographic area upon which the analysis was run, and selecting GIS map units that correspond to the area of interest. The GIS model brings together the attributes that contribute to water flow in the landscape where stormwater runoff is a factor in the model.

Another model developed for the specifically for the Gorst Watershed as a tool to improve stormwater related impacts is a HSPF Model. HSPF is a mathematical model designed to simulate the hydrology and movement of contaminants in a basin (Bicknell et al. 2000). Runoff from a basin is quantified by the continuous simulation of the hydrologic response to rainfall and other meteorological records. In HSPF, a basin is represented by a collection of hydrologically similar areas referred to as hydrologic response units (HRUs) that drain to a stream network. HRUs reflect areas of similar land use, soil, subsurface geology, and other factors that respond the same way hydrologically to climatic conditions. Runoff is predicted separately for each HRU (inch per hour per acre) and routed to obtain the total runoff for the watershed. This output for this model is a quantified discharge rate that can be used with different land use scenarios to predict stormwater runoff and optimize investment stormwater infrastructure. These models are used in identifying opportunities for improving stormwater deficiencies. The SUSTAIN model would be built after a preferred alternative has been determined from the Draft EIS process. The goal of this SUSTAIN model would optimize the BMPs that could be used in conjunction with the final land use alternative. The results of the model would provide data to support development of the stormwater plan.

Impacts related to stormwater are predicted based on these models in combination with comparing future land use designations and description for each alternative. Because specific project-related changes in impervious surface area are not available, an approximation of proportional changes in stormwater runoff relative to each land use is used to evaluate of potential effects. Specific new development standards such as the limiting the amount of impervious surface are not capture in this analysis. Impacts are generalized and based on approximations of impervious surface and related stormwater impacts relative to land use classifications as documented in Hill et al. 2003 technical report, *A Rapid Land Cover Classification Method for Use in Urban Watershed Analysis*.

The impact analysis for water (drinking) and wastewater systems addresses both physical impacts on infrastructure (i.e., impacts that could disrupt service or require facility relocations because of proposed development) and capacity impacts (i.e., the ability of existing infrastructure to accommodate the projected growth in park visitor, employee, and/or residential populations).

IMPACTS COMMON TO ALL ALTERNATIVES

Watershed

Under all project alternatives and as described in Section 2.0 *Alternatives*, areas planned land uses outside of the Gorst UGA but within the watershed would remain the same as at present. These areas include the City of Bremerton's CULs and SKIA, the City of Port Orchard's McCormick Woods, and remaining rural unincorporated Kitsap County lands. In addition, over the next 20 to 30 year jobs would substantially increase from 264 to 2,305 primarily due to economic development in the SKIA. The added jobs in the SKIA area would be subject the SKIA Subarea Plan. Population growth is projected to increase from 1,810 to 2,659. These changes in the watershed would increase demand in utilities services. The CFPs for the specific growth areas in the watershed would ensure adequate utility services matched the new demand and reduce the potential for disruption of utility services.

The Kitsap County Final EIS for the UGA Sizing and Composition Remand (Kitsap County 2012b) found that with implementation of the Kitsap County Preferred Alternative Comprehensive Plan, including growth in the cities,

SKIA and Gorst, impervious area would make up between 29.9 percent to 30.9 percent in the larger Sinclair Inlet watershed area; no estimates were available at the Gorst Creek Watershed boundaries only. Since the Gorst Creek Watershed outside of the Gorst UGA is not planned for land use changes, this result will apply to all alternatives for territory outside of the Gorst UGA. See Table 3.13-3 *High and Low Estimates of Total and Percent Impervious Surface – Sinclair Inlet Watershed*.

Table 3.13-3
High and Low Estimates of Total and Percent Impervious Surface – Sinclair Inlet Watershed

Watershed Group	Total Acres	TIA Low	Percent	Total Impervious Surface	Percent
Sinclair Inlet	27,012	8,071	29.9	8,334	30.9

Source: Kitsap County 2012b

Gorst UGA

Under all alternatives, construction activities within the UGA would have the potential to impact utilities. Depending on the scale, construction projects would likely result in short-term disruptions of service. Scale and intensity of construction projects would vary by alternative. However, differences in scale and intensity of effects are described in the following sections.

Under all alternatives, the Gorst UGA would be annexed to the City of Bremerton, resulting in a transition from County to City governance.

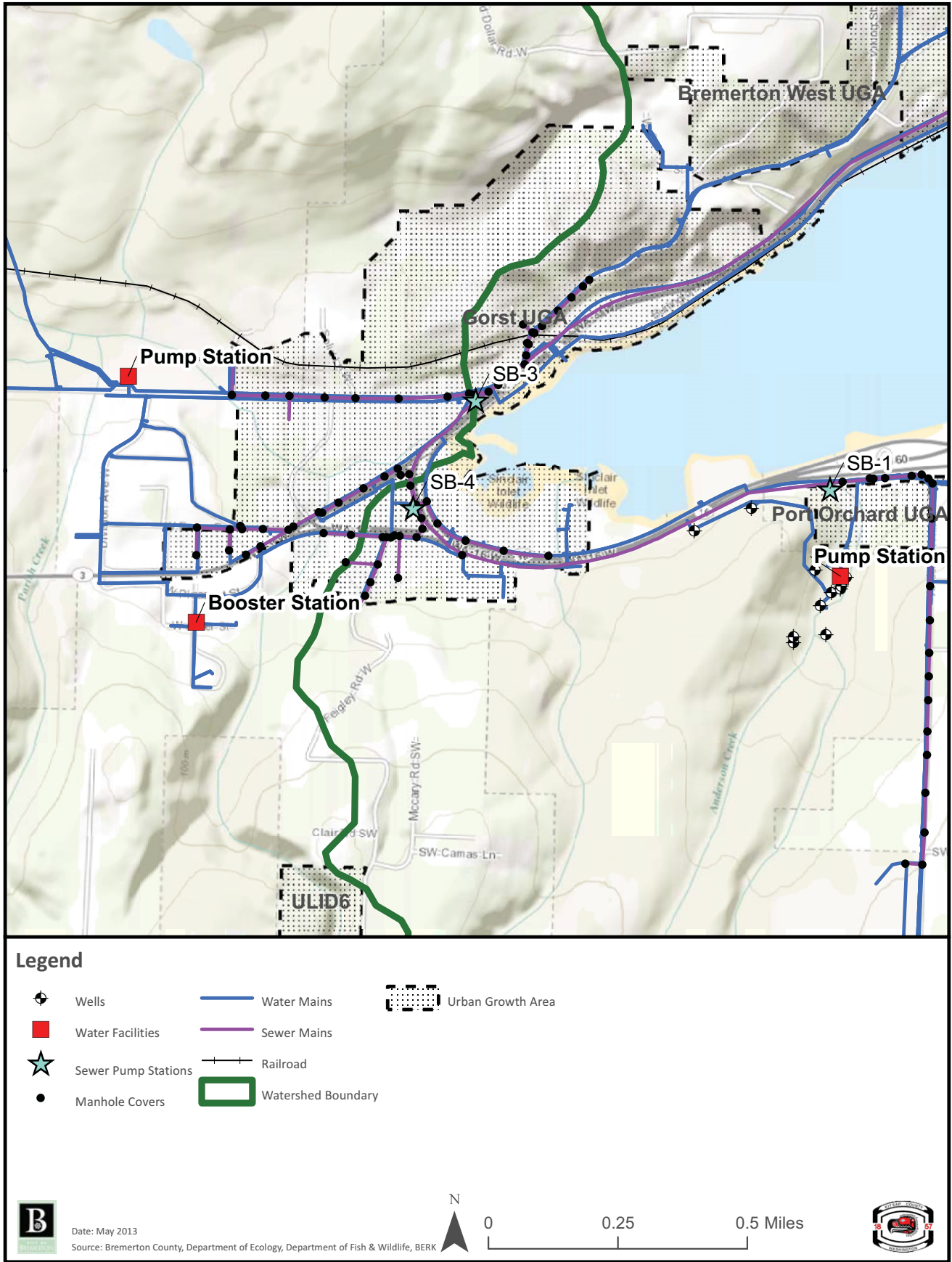
The City of Bremerton has coordinated with the County during a UGA sizing and composition remand in 2012 that identified water and wastewater improvements listed above. Disruption in service would not likely occur because the City of Bremerton currently supplies drinking water and collects wastewater (Figure 3.13-1 *Gorst Drinking Water and Wastewater Systems*).

Under all alternatives, the water (drinking) and wastewater systems have the capacity to accommodate anticipated growth. However, only the projected growth for no action (Alternative 1) is accounted for in Kitsap County CFP. Both action alternatives (Alternatives 2 and 3) propose development at the mine site and would require an evaluation of drinking water and wastewater capital improvements which are described under the respective alternative.

Considering the land use plans described in Section 2 *Alternatives* and the proposed developable coverage limits proposed in the Draft Subarea Plan, all alternatives would have the potential to increase impervious areas as shown in Table 13.3-4 *Comparison of Added Impervious Area in Gorst UGA*. Alternatives 2 and 3 assume a greater amount of developable land than Alternative 1, largely due to the anticipated conversion of the mine site for residential or mixed uses.

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FIGURE 3.13-1 GORST: DRINKING WATER AND WASTEWATER SYSTEMS



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Table 3.13-4
Comparison of Added Impervious Area in Gorst UGA

Land	Alternative 1 ²	Alternative 2	Alternative 3
Vacant and Underutilized Acres, excluding critical areas ¹	74.0	117.1	117.1
Estimated Impervious Acres	51.3	68.0	68.8
Share of Developable Acres in Impervious Surfaces (percentage)	69	58	59

Note: ¹ This includes land that could be used for rights of way and public facilities and is not discounted for market factors.

² Includes Kitsap County owned property on Sinclair Inlet, assuming a lower impervious area consistent with park/open space assumed in Alternatives 2 and 3.

Source: BERK 2013

Restoration may be limited to stormwater retrofit actions. However, restoration of in-stream alterations (removal of channel armoring, berms) and re-establishment of natural stream structure (i.e., reducing channelization in the lower reaches of the stream) may be appropriate given that upstream processes for the northern half of the watershed are relatively intact.

Alternative 1

Growth in the Gorst UGA would be served by current water service providers, which have adequate capacity for growth.

Wastewater deficiencies were addressed following the installation of the collection system in 2010. The installation of new wastewater mains in 2010 has allowed residents to abandon on-site septic systems in areas susceptible to failure due to saturated soils and flooding. However, given the gradual increase in demand, extension of service would be needed for new development.

New stormwater standards would not be adopted, and deficiencies would continue to be unresolved under existing stormwater plans. However, Kitsap County's CFP would eventually incorporate measures for addressing deficiencies. Runoff during storm events would continue to cause sheet flow over roads and discharge directly to streams and water bodies including Gorst Creek and Sinclair Inlet. The increase in development, particularly from commercial development would also likely increase impervious surfaces. Table 3.13-4 *Comparison of Added Impervious Area in Gorst UGA* above indicates an increase in about 51.3 acres of impervious area.

Future utility needs from the increase in 742 jobs and a population growth of 82 persons over the next 20 to 30 years would be addressed through incremental capital facility planning.

Overall, the effects on utilities under the Alternative 1 would be moderate from the long-term higher frequency of maintenance on aging utility infrastructure and untreated stormwater discharging directly to fish-bearing streams and estuarine wetlands in Sinclair Inlet.

Alternative 2

Under the Alternative 2, a regional commercial center corridor along the waterfront would be developed, the Watershed Characterization & Framework Plan would be adopted, and clustered Medium Density Residential development would occur. Construction activities associated with Alternative 2 could result in minor short-term disruption of service.

Similar to Alternative 1, the City of Bremerton would continue to provide clean drinking water to the residents of the UGA. The Gorst UGA would be served by current water service providers, which have adequate water source capacity for growth. New development at the mine site would require developer installed improvements for adequate distribution of drinking water.

Unlike Alternative 1, adoption of the Watershed Characterization & Framework Plan would provide a directive for enhancing and protecting water for human use to residents of the UGA. Generally, the Watershed Characterization & Framework Plan would protect the north central portion of the watershed, the tributaries, and the estuary, while allowing for additional growth and development in the south, and southeastern portions of the watershed, subject to existing protection measures and BMPs. The Guiding Principles would direct more specific action that may include water quality treatment for new impervious surfaces.

Alternative 2 would allow a moderate increase in employment of 606 jobs and a more substantial increase in residents of 985 persons over the next 20 to 30 years that would substantially increase demand for wastewater treatment. This projected growth is not accounted for in Kitsap County CFP. In general an extension of sewer mains and improvement to existing pump stations may be required for the proposed Medium Density Residential area in the mine area. The mine area is currently undeveloped and wastewater system installation is not anticipated to disrupt service in the area. A preliminary analysis of sewer capacity at the mine where approximately 96 acres currently used for mineral resources would be converted to Medium Density Residential results in a projected sanitary flow consistent with the recommended 8-inch diameter system documented in the Kitsap County CFP and could accommodate the additional residential population at the mine site. In addition, the proposed new residential area would require developer installed improvements to the wastewater system to accommodate new growth.

In addition, current deficiencies in stormwater conveyance would be resolved, and standards would be established to promote natural stormwater management. Stormwater management on proposed new development and redevelopment would follow the Watershed Characterization & Framework Plan and result in reduced stormwater runoff. Proposed LID techniques would reduce flooding problems. Compilation of watershed data and use of the hydrology and hydraulic modeling would also assist in identify priority areas and optimize investment of stormwater facilities. However, for a conservative analysis in this Draft EIS, a comparison of impervious area shows an increase in impervious area over the Alternative 1 No Action option due to the added development of the mine site. As described, the stormwater standards would be stricter and zero discharge of direct untreated stormwater would be allowed, and greater water quality standards would be instituted.

The watershed characterization model identifies the Gorst UGA as a restoration and development zone. The model results for storage suggest that the mid to lower reaches of Parish Creek and two west of the upper reaches of Gorst Creek are appropriate for urban development involving permanent change in land cover (buildings, roads, sewers). The reclassification of industrial areas to open space/recreation and redevelopment as strictly commercial areas provides an opportunity to improve buffer along the shoreline and set aside areas for stormwater infiltration. Potential redevelopment in the low density residential areas also provides opportunities for protection of critical areas such as the Gorst-Parish floodplain complex and encourages greater floodplain storage which, in turn would reduce stormwater runoff.

Overall, Alternative 2 would have a minor effect on utilities from short-term construction related disruptions of service and long-term development continued development of high density commercial areas along the shoreline. The long-term effects of the commercial development may be offset by implementation of the adopted Watershed Characterization & Framework Plan that would ensure stormwater in the watershed would be treated prior to discharge into sensitive waterways or critical areas. The Watershed Characterization & Framework Plan would have a beneficial effect on stormwater management.

Alternative 3

Under Alternative 3, the Watershed Characterization & Framework Plan would be adopted, along with LID and stormwater standards. Similar to Alternative 2, construction activities associated with Alternative 3 could result in minor short-term disruption of service. Similar to Alternatives 1 and 2, the Gorst UGA would be served by current water service providers, which have adequate water source capacity for growth. New development at the mine site would require developer installed improvements for adequate distribution of drinking water. Similar to

Alternative 2, adoption of the Watershed Characterization & Framework Plan would ensure a directive for enhancing and protect water for human use to residents of the UGA. Alternative 3 supports less job growth at 333 jobs, but the highest population growth at 1,082 persons over the next 20 to 30 years. Again, this projected growth is not accounted for in Kitsap County CFP. This would substantially increase demand for wastewater treatment, but similar to Alternative 2, the current wastewater system has the capacity to accommodate the anticipated growth. Extension of sewer mains and improvement to existing pump stations may be required for the proposed Neighborhood Mixed Use zone in the mine area. A preliminary analysis of sewer capacity at the mine where approximately 96 acres currently used for mineral resources would be converted to Neighborhood Mixed Use results in a projected sanitary flow consistent with the recommended 8-inch diameter system documented in the Kitsap County CFP and could accommodate the addition residential population at the mine site. In addition, the proposed new residential area would require developer installed improvements to the wastewater system to accommodate new growth.

Similar to Alternative 2, the watershed characterization model identifies the Gorst UGA as a restoration and development zone. The reclassification of industrial areas to open space/recreation provides a greater area than Alternative 2 for stormwater infiltration. The reclassification of commercial areas to mixed used development has moderate opportunity to reduce impervious surface and stormwater runoff but greater than Alternative 2. Potential redevelopment across the UGA also provide opportunities for protection critical areas such as the Gorst-Parish floodplain complex and encourage greater floodplain storage and reduce stormwater runoff.

Overall, Alternative 3 would have a minor effect on utilities from short-term construction related disruptions of service and long-term redevelopment of high density commercial areas with mixed use developments. The substantial increase in residential development and population would affect demand of existing utility services. A comparison of impervious area shows an increase in impervious area over the Alternative 1 No Action option and slightly more than Alternative 2 due to the added development of the mine site and mixed use areas. As described, the stormwater standards would be stricter, zero discharge of direct untreated stormwater would be allowed, and greater water quality standards would be instituted. The long-term effects of replacing the existing high density commercial developments with a low intensity waterfront along the shoreline and implementation of the adopted Watershed Characterization & Framework Plan would have a beneficial effect on stormwater management.

Mitigation Measures

Specific mitigation measures for potential impacts on utilities would be determined during subsequent project-specific environmental review and permitting or through the Planned Action Ordinance. Mitigation includes incorporated plan features, applicable regulations and commitments, and other potential measures.

Incorporated Plan Features

All alternatives including the No Action would be subject to NPDES programs and rules. Continued application of County and City NPDES programs and stormwater manuals (which incorporate LID measures) will help reduce impacts of new development on stormwater.

Features of the Gorst Creek Watershed Characterization & Framework Plan and Gorst Subarea Plan that serve as mitigation include the following:

- Implement tailored stormwater standards for the Gorst Creek Watershed, including LID standards in areas of development, restoration and protection.
- Wherever practicable, new development and redevelopment should incorporate LID measures such as infiltration. Where impractical, stormwater detention may be allowed.
- Minimize clearing and promote stormwater management in the upper and middle portions of the watershed to reduce impacts to the lower watershed.

- Promote green infrastructure for both new and existing facilities, such as by identifying areas to target for stormwater retrofits.
- Allow zero direct and untreated discharge to streams and marine water bodies in association with development and redevelopment.

Additionally, capital facility improvements have been recommended measures for addressing stormwater deficiencies. Implementation of these improvements could result in beneficial effects on stormwater and indirectly protect drinking water and wastewater facilities by reducing flood-prone damage and erosion.

Applicable Regulations and Commitments

Applicable regulations and commitments include the following:

- *Safe Drinking Water Act*. Sets national primary drinking water standards. The act includes the designation of sole source aquifers. The 1996 amendment identifies source water protection.
- *CWA*. Regulates discharge of stormwater from certain industries and municipalities. NPDES) permit or water quality discharge permit. The EPA delegated the Department of Ecology the authority to implement these permits in Washington State.
- *Drinking Water Regulations Chapter 70.116 RCW*. Directs the Washington State Department of Health to assure safe and reliable drinking water and protect drinking wells.
- *Washington State Water Pollution Control Act RCW 90.48*. Regulates various source control activities related to sediment management.
- *City of Bremerton Comprehensive Wastewater Plan and Updates*. Ensures adequate existing and future wastewater capacity.
- *City of Bremerton Stormwater Management Program*. Summarizes the actions to be taken by the City of Bremerton to fulfill its obligations as listed in the NPDES Phase II Municipal Stormwater Permit.
- *City of Bremerton BMC Chapter 15, Stormwater, SWMMWW and LID Guidance Manual*. Regulates for stormwater management associated with new development and redevelopment.
- *Kitsap County 20-year wastewater facility plan*. Ensures adequate existing and future wastewater capacity.
- *Kitsap County Surface and Stormwater Management Program*. Protects people, property and natural resources by reducing flooding and stormwater runoff, conserving groundwater, restoring fish habitat, and preventing stormwater pollution.
- *KCC Chapter 12, Stormwater Drainage, and Kitsap County Stormwater Design Manual*. Regulates for stormwater management associated with construction.
- Any future development would need to comply with applicable utility franchises and permits.

Other Potential Mitigation Measures

Other potential mitigation measures could include the following:

- Evaluate the effect on proposed utility relocations on other nearby utility infrastructure.
- Determine the exact location and depth of utilities and work with individual utility providers to verify the location.
- Complete utility relocation or modification, where feasible, prior to project-specific construction to reduce operational risks and reduce any potential disruption of service.

Significant Unavoidable Adverse Impacts

Under all alternatives, the Gorst Creek Watershed and the Gorst UGA would experience additional population and employment growth. Development in the Gorst Creek UGA is anticipated under the alternatives and comprehensive planning, as well as review of project specific development utility permits, would result in no significant unavoidable adverse impacts on water, wastewater, and stormwater.

Future project construction associated with any of the project alternatives could cause temporary service interruptions to existing utilities. Under the Alternative 1, the long-term higher frequency of maintenance on aging utility infrastructure and untreated stormwater discharging directly to fish-bearing streams, estuarine wetlands, and tidally influence waters is considered a moderate impact. Both Alternative 2 and 3 would have beneficial effects on stormwater management from adoption of the Watershed Characterization & Framework Plan.

3.13.4. Telecommunications

Affected Environment

The telecommunications services discussed in the section include telephones, cable television, and cellular phones.

The WUTC regulates telephone and radio communications; cable television and cellular telephone service are not under WUTC jurisdiction and are regulated by the Federal Communications Commission (FCC). Telecommunication providers must also comply with local regulations such as land use and public rights-of-way. The companies discussed here often provide more than one type of telecommunications service. In this discussion, they are introduced under the category with which they are most commonly associated.

Watershed

Telecommunication Services

Telephone service providers are required by state law to provide adequate telecommunications service on demand per Chapter 80.36.090 RCW. Telephone service providers are therefore required to provide services in a manner that accommodates growth within their service area, wherever it may occur. As such, telephone service providers generally do not conduct detailed long-range planning activities. General improvements and maintenance necessary to keep the current system operational and to accommodate future growth are implemented as required.

CenturyLink provides local and long-distance telephone service throughout Kitsap County and also provides digital television and DSL Internet. Kitsap PUD also operates a fiber-optic network, providing wholesale broadband internet access. State law prevents the PUD from offering this service directly to residents, but they sell access to the network to various telecommunications retailers, who offer that access to consumers. Other telecommunications providers in the vicinity of the study area include AT&T, McLeodUSA, NW CommNet LLC, Sprint, and Verizon.

Cable Television

Cable television providers are regulated under the Cable Television Consumer Protection and Competition Act of 1992, which is enforced by the FCC. Cable television providers enter franchise agreements with local governments; these franchise agreements regulate service rates to ensure compliance with FCC guidelines. Cable television service in the Gorst watershed is provided by Comcast, DirectTV, and Wave Broadband. Comcast and Wave Broadband also provide digital phone service and broadband internet access.

Cellular Telephone

Cellular telephone service in the watershed is provided by a variety of national and regional carriers, including Verizon Wireless, AT&T, T-Mobile, Sprint, and Cricket Wireless. Cellular telephone providers are regulated directly by the FCC. Cellular service depends upon a series of transmitting antennae located on towers throughout a provider's service area. Additional antennae are constructed when a particular area begins to experience capacity overload, and providers will expand capacity in response to consumer demand.

Gorst UGA

Telecommunications services in the vicinity of the Gorst UGA are provided on a regional basis. As such, existing service conditions within the UGA are the same as for the watershed as a whole.

Impacts**IMPACTS COMMON TO ALL ALTERNATIVES*****Watershed***

No land use changes are proposed for the Gorst Creek watershed outside the Gorst UGA. Updated stormwater and habitat regulations in this area are not anticipated to have significant effects on the rate of population growth in this area or the demand for telecommunication services. Therefore, no significant impacts are anticipated under any of the alternatives.

Gorst UGA

As population and employment increases in the Gorst UGA, telecommunication service providers will experience increased demand for service. Funding for necessary system improvements or expansions would be generated by user fees.

Alternative 1

Under the No Action Alternative, residential, commercial, and industrial growth in the Gorst UGA would continue according to adopted land use designations and zoning, bringing an additional 82 residents and 742 jobs to the area. Growth in the UGA would increase demand for telecommunications services. While the No Action Alternative would result in the least increase in residential demand, it would increase commercial demand to a greater degree than either of the Action Alternatives. Compared with the size of the regional customer bases for each of the service providers, the anticipated growth in the Gorst UGA is relatively small and is unlikely to have any significant impacts on the regional provision of telecommunication services in Kitsap County.

Alternative 2

Under Alternative 2, residential and commercial growth in the Gorst UGA would increase in accordance with the proposed land use designations and zoning, bringing an additional 985 residents and 606 jobs to the area. Growth in the UGA would increase demand for telecommunications service. The increased demand could potentially require additional infrastructure or upgrades to existing infrastructure, particularly in previously undeveloped portions of the UGA, such as the existing mine site. This infrastructure would be upgraded or installed at the time new development occurs, and connections would be made at the time of customer request.

While Alternative 2 would create a higher demand for residential service than the No Action Alternative, it would create less demand than Alternative 3. Alternative 2 would create greater commercial demand than Alternative 3, but less than then No Action Alternative. Compared with the size of the regional customer bases for each of the service providers, the anticipated growth in the Gorst UGA is relatively small and is unlikely to have any significant impacts on the regional provision of telecommunication services in Kitsap County.

Alternative 3

Under Alternative 3, residential and commercial growth in the Gorst UGA would increase in accordance with the proposed land use designations and zoning, bringing an additional 1,082 residents and 333 jobs to the area. Growth in the UGA would increase demand for telecommunications service. The increased demand could potentially require additional infrastructure or upgrades to existing infrastructure, particularly in previously undeveloped portions of the UGA, such as the existing mine site. This infrastructure would be upgraded or installed at the time new development occurs, and connections would be made at the time of customer request.

While Alternative 3 would create a higher residential demand for telecommunications service than the No Action Alternative or Alternative 2, it would create the least commercial demand of the three alternatives. Compared with the size of the regional customer bases for each of the service providers, the anticipated growth in the Gorst UGA is relatively small and is unlikely to have any significant impacts on the regional provision of telecommunication services in Kitsap County.

Mitigation Measures

Incorporated Plan Features

- Mixed-use and clustered development is encouraged in select areas under Alternative 3, and both Alternatives 2 and 3 would result in increased residential density over existing conditions. Providing wired communication services to higher-density and cluster development is often more efficient than provision to low-density development.

Applicable Regulations and Commitments

- Future construction of telecommunications infrastructure would be required to comply with federal and state laws, including the regulations of the FCC; the provisions of the Cable Television Consumer Protection and Competition Act, as appropriate; the regulations of the BMC; and the KCC.

Other Potential Mitigation Measures

- Encourage co-location of telecommunications facilities wherever appropriate and undergrounding of infrastructure to minimize aesthetic impacts.
- Encourage the use of appropriate site landscaping to screen telecommunications equipment from surrounding properties and the public realm.

Significant Unavoidable Adverse Impacts

Population and employment growth under all studied alternatives will increase demands for telecommunications that in turn will increase the need for additional facilities. Planning efforts to manage growth should reduce the demand and/or accommodate growth in a coordinated fashion than would otherwise occur.

3.14 Relationship to Plans and Policies

This section evaluates the alternatives for consistency with state, regional, countywide, and city plans and policies including GMA Goals, PSRC's Vision 2040, Kitsap County CPP, and the City of Bremerton and Kitsap County Comprehensive Plans.

Affected Environment

Washington GMA

The Washington State GMA was adopted in 1990 by the Washington State Legislature. The GMA contains a comprehensive framework for managing growth and coordinating land use with infrastructure. Kitsap County and all of its cities are subject to GMA and must create comprehensive plans and development regulations that guide growth to meet state goals for compact land use patterns that provide a range of housing and economic opportunities, environmental protection, and efficient public services and infrastructure. A summary of GMA provisions relevant to the Gorst Creek Watershed and Gorst UGA is presented in this section.

GMA Planning Goals

GMA contains 13 broad planning goals (RCW 36.70A.020) to guide local jurisdictions in determining their vision for the future and in developing plans, regulations, programs and budgets to implement that vision. The goals are summarized below. They are not ranked in any order but can be balanced by the jurisdiction.

- Guide growth in urban areas
- Reduce sprawl
- Encourage an efficient multimodal transportation system
- Encourage a variety of housing types including affordable housing
- Promote economic development
- Recognize property rights
- Ensure timely and fair permit procedures
- Protect agricultural, forest, and mineral lands
- Retain and enhance open space, protect habitat, and develop parks and recreation facilities
- Protect the environment
- Ensure adequate public facilities and services
- Encourage historic preservation
- Foster citizen participation

A fourteenth goal of GMA consists of the goals and policies of the Shoreline Management Act as set forth in RCW 90.58.020.

Comprehensive Plans

GMA requires the preparation of a comprehensive plan with the following required elements: land use, rural (counties only), housing, transportation, utilities, capital facilities, parks and recreation, and economic development. The plan is to contain a land use plan, inventories of conditions, and goals and policies consistent with GMA goals. Development regulations are to be consistent with the community's Comprehensive Plan.

The City of Bremerton and County have been developing a subarea plan to more directly and fully address future land use, urban design, stormwater, transportation, habitat protection, and other activities in the study area. A subarea plan is an optional element of a comprehensive plan allowed under the GMA. Subarea plans apply to smaller focused areas than the comprehensive plan, which addresses the whole City of Bremerton or County and its assigned unincorporated UGAs. Subarea plans are typically more detailed than a comprehensive plan and often establish specific visions, goals, policies, land use plans, design guidelines, zoning, infrastructure and public service needs, and other development regulations.

GMA requires early and continuous public participation during the preparation and adoption of comprehensive plans and development regulations, including subarea plans. Public participation procedures that are described in the procedural rules (WAC 365-196-600) include broad dissemination of proposals and alternatives, opportunity for written comment, public meetings after effective notice, provision for open discussion, communication programs, information services, and consideration of and response to public comments. See Chapter 2 of this Draft EIS for a description of public participation opportunities associated with the Gorst Creek Watershed Framework & Characterization Plan and Gorst Subarea Plan.

Urban Growth Areas

Counties and cities must create comprehensive plans, and counties must designate UGAs—areas characterized by urban development or adjacent to areas characterized by urban development. Designated UGAs should accommodate future urban growth; services and facilities and their areas should be available or planned to support future urban growth. All cities must be within UGAs; unincorporated land within UGAs must be urban in character or adjacent to such lands. Under GMA, the preferred urban service providers in UGAs are cities.

Lands outside of UGAs are to be designated as rural or resource lands of long-term commercial significance such as lands used for forestry activities. In general, urban development is not to be permitted on these lands and all development must be rural in character.

Within the watershed there are urban lands including McCormick Woods that was annexed to the City of Port Orchard from the McCormick Woods UGA. Also, the City of Bremerton limits contain the SKIA with the Bremerton National Airport and lands designated for industrial and commercial use surrounding the airport. The Gorst UGA contains lands that are characterized by urban development, having lands with intensive commercial development as well as single family lots of a suburban character.

Gorst is an unincorporated community under the management of Kitsap County, and its UGA was established in 1998. Kitsap County has associated the Gorst UGA with the City of Bremerton, meaning the City of Bremerton is the designated future service provider for the UGA and may annex it.

Areas in between the Bremerton and Port Orchard city limits and the Gorst UGA are designated as Rural Residential and Urban Reserve with 5 and 10 acre minimum lot sizes, respectively. Urban Reserve areas are to be considered in future UGA expansions if needed to support population growth. However, prior to expanding a UGA, Kitsap County would need to demonstrate that there was insufficient capacity and that reasonable measures to increase the capacity for urban growth within existing UGA boundaries have been taken.

Population and Employment Estimates

GMA requires the Washington State Office of Financial Management to prepare population forecasts, high, medium, and low, for counties. Counties have a responsibility to allocate population in consultation with cities. In Kitsap County, future growth is based on population distributions recommended by the KRCC, which is composed of elected officials and planning directors from all city and Tribal jurisdictions in addition to the BOCC and Kitsap County's planning director. The population distributions were adopted by the BOCC and ratified by the cities.

As established in 2004, the Kitsap County CPPs establish a population target of 331,571 people by 2025 with an assumption of 99,602 added persons between 2000 and 2025. The growth allocated to Gorst UGA was only 73 new persons for same 25 year period. As a result of the County's 2006 Comprehensive Plan Update, the Gorst UGA was expanded west of Sam Christopherson Road to add capacity for the additional growth. As a result of expanding the UGA single family homes and lots created pre-GMA were included, adding residents once in the rural area into the UGA.

In 2012, Kitsap County conducted a UGA Resizing and Recomposition Remand and amended its Comprehensive Plan with an updated base year of 2010 and a horizon year of 2025. The new 2010 base compared to the 2025 allocation meant that the net population growth would be 76 persons, meaning that there slightly fewer persons

in 2010 compared to the 2000 population.⁵ Accordingly, the capacity for growth within the Gorst UGA boundaries as adjusted in 2006 would still be needed to meet the growth allocation to the year 2025. The land capacity analysis in 2006 and 2012 assumed the mine site would continue as a mine since it has a mineral lands designation and is currently being mined.

While the Gorst growth target and land capacity are low, Bremerton has population that is unaccommodated in other assigned UGAs (e.g. Bremerton East and Bremerton West, in particular, total 1,776 of unaccommodated population). Kitsap County Comprehensive Plan policies support population reallocation discussions through the KRCC. In addition, the KRCC is planning to prepare new growth targets for the 2010-2035 time periods, and there may be opportunities to reallocate or newly allocate population growth. See Table 3.14-1 *Comparison of Growth Targets and Population Capacities*.

Table 3.14-1
Comparison of Growth Targets and Population Capacities

UGA	Growth Target 2010-2025	2012 Kitsap County Comprehensive Plan	
		Capacity	Difference from Target
Kingston UGA	2,805	2,821	16
Poulsbo UGA	3,739	2,152	-1,587
Silverdale UGA	7,779	7,768	-11
Central Kitsap UGA	6,191	6,500	309
Bremerton East UGA	3,529	2,017	-1,512
Bremerton West UGA	2,346	2,082	-264
Gorst UGA	76	82	6
Port Orchard UGA	8,506	8,006	-500
McCormick Woods UGA ULID6	6,780	8,093	1,313
Bremerton Port UGA (SKIA)	-129	0	-129
Unincorporated UGA Total	41,622	39,521	-2,359
<i>Percent Difference from Target (including Poulsbo and SKIA)</i>			<i>-6</i>

Source: Kitsap County 2012

Employment projections were used in 2006 to help allocate future land use in UGAs. While the County projects future employment, there is no specific employment target for Kitsap County or its jurisdictions.

The County last studied employment growth for a planning period of 2005-2025. The County's 2006 analysis showed that the Gorst UGA had an approximate demand for about 700 commercial and industrial jobs (based on trends between 1995 and 2004), a surplus of commercial land and a low demand for industrial land. See Table 3.14-2 *Estimated Net Land Demand by Unincorporated UGA, 2025*. The County's land capacity analysis in 2006 showed a capacity for about 742 jobs, close to the trended analysis of 1995-2004. Based on trends from 2000-2010, there has been some investment in commercial activities (e.g. Subaru dealership), though with the recession

⁵ This is consistent with permit trends in the Socio-economics section of the EIS where only one building permit for a home was issued in the last 10 years in the Gorst UGA.

and recovery, job growth has been slower. The County will revisit employment growth in its 2016 Comprehensive Plan Update.

Table 3.14-2
Estimated Net Land Demand by Unincorporated UGA, 2025

UGA	Estimated Net New Jobs 2005 - 2025			Existing Vacant Land Supply (Acres)			Estimated Net Land Need by 2025	
	Commercial	Industrial	Total	Commercial	Industrial	Total	Commercial	Industrial
Bremerton East	75	331	406	6	-	6	insignificant	very low
Bremerton West	1,501	308	1,809	10	13	23	low	low
Central Kitsap	3,876	2,029	5,905	101	10	110	mid	very high
Gorst	86	606	692	31	6	37	surplus	low
Kingston	1,406	457	1,863	34	10	44	low	low
McCormick Woods	25	70	95	-	53	53	insignificant	none*
Port Orchard	2,237	1,115	3,352	231	19	250	none*	mid
Poulsbo	729	681	1,411	-	10	10	low	low
Silverdale	6,322	3,646	9,969	133	293	426	very high	very high
SKIA	529	3,196	3,726	-	1,575	1,575	very low	none*
ALL	16,787	12,440	29,228	547	1,988	2,535		
Notes:	<p>Job forecasts for unincorporated UGAs begin with a straight line projection of observed growth between 1995 and 2004, and are then increased so that total unincorporated UGA job growth matches the county's residual growth (after city growth is subtracted) of 29,228. This residual target is a product of a county-generated countywide forecast that included a policy commitment to significantly increase the county's manufacturing jobs base. City forecasts, prepared according to varying methodologies, were subtracted from this total. The total unincorporated UGA target forecast reflects ambitious manufacturing growth targets, compensates for lower growth trends that cities may have assumed, and assumes that most growth generated from rural area employment (approximately 13,000 jobs in 2004) is allocated to UGA boundaries. Ten percent of residual county employment growth has been reserved for rural areas outside of the Urban Growth Areas.</p> <p>*The past employment trends that ground this land demand analysis may or may not be carried into the future (particularly if circumstances such as available infrastructure change). This data should be viewed as contextual information rather than a limiting factor in policy decisions.</p>							
Source:	PSRC; Kitsap County, Kitsap County Updated Land Capacity Analysis (2005), E.D. Hovee & Company.							

Source: Kitsap County 2006

Plan Consistency

Under GMA comprehensive plans must be internally and externally consistent. Internal consistency means that the “differing parts of the comprehensive plan must fit together so that no one feature precludes the achievement of any other.” (GMA — procedural criteria WAC 365-196-500(1)). Externally, local comprehensive plans are required to be consistent with the comprehensive plans of other jurisdictions with common borders or related regional issues. (WAC 365-196-510(1)) State Department of Commerce rules (WAC 365-196-510(2)) indicate that inter jurisdictional (external) consistency is accomplished by consistency with CPPs discussed below.

Each county or city that is preparing a GMA comprehensive plan or implementing development regulations, or amendments to them, is required to submit the proposed plan or regulations to the Washington State Department of Commerce and other departments for review and comment before final adoption.

The Draft Gorst Creek Watershed Framework & Characterization Plan and Draft Gorst Subarea Plan were developed in conjunction with federal, tribal, state and local partners (see Chapter 2), and are under review by state agencies as part of the draft comment period (see Fact Sheet).

SEPA

SEPA (RCW 43.21C), requires government officials to consider the environmental consequences of actions they are about to take and consider better or less damaging ways to accomplish those proposed actions. They must consider whether the proposed action would have a probable significant adverse environmental impact on the natural and built environment. This Draft EIS provides a programmatic analysis of the non-project Gorst Creek Watershed Framework & Characterization Plan and Gorst Subarea Plan. The SEPA process is more fully described in Chapter 2 of this document.

VISION 2040 and Transportation 2040

VISION 2040 is a regional growth strategy prepared by the PSRC and its member governments, including King, Kitsap, Pierce, and Snohomish Counties. Transportation 2040 is a transportation plan for the central Puget Sound region. Both plans provide a coordinated framework for guiding growth and transportation actions over the next twenty years.

VISION 2040 is based on a centers concept, encouraging growth to take place within regional centers of growth, and focusing economic development and transportation infrastructure investments there. Under VISION 2040, the PSRC designates the following urban areas/municipalities of Kitsap County.

- Downtown Bremerton as a “Regional Growth Center.”
- Silverdale as a “Regional Growth Center.”
- SKIA as a “Regional Manufacturing/Industrial Center.”

In addition to the Centers concept, VISION 2040 classifies different communities according to the roles they play in the region and allocates population accordingly. The majority of the region’s employment and housing growth is allocated to Metropolitan Cities and Core Cities, which include the centers, and thus include Bremerton and Silverdale. Larger Cities also play an important role over time as places that accommodate growth; only Bainbridge Island is considered a Large City. Small Cities provide jobs and housing that support vital and active communities at a less intensive scale; both Port Orchard and Poulsbo are considered Small Cities.

VISION 2040 contains a variety of elements addressing regional growth and development. Each of these topic areas are described below, providing overarching goals where applicable.

- **General Policies:** The general policies address coordination of jurisdictions, monitoring of Vision 2040, and fiscal challenges and opportunities including exploring funding sources for services and infrastructure.
- **Environment:** The region will care for the natural environment by protecting and restoring natural systems, conserving habitat, improving water quality, reducing GHG emissions and air pollutants, and addressing potential climate change impacts. The region acknowledges that the health of all residents is connected to the health of the environment. Planning at all levels should consider the impacts of land use, development patterns, and transportation on the ecosystem.
- **Development Patterns:** The region will focus growth within already urbanized areas to create walkable, compact, and transit-oriented communities that maintain unique local character. Centers will continue to be a focus of development. Rural and natural resource lands will continue to be permanent and vital parts of the region.
- **Housing:** The region will preserve, improve, and expand its housing stock to provide a range of affordable, healthy, and safe housing choices to every resident. The region will continue to promote fair and equal access to housing for all people.
- **Economy:** The region will have a prospering and sustainable regional economy by supporting businesses and job creation, investing in all people, sustaining environmental quality, and creating great central places, diverse communities, and high quality of life.
- **Transportation:** The region will have a safe, cleaner, integrated, sustainable, and highly efficient multimodal transportation system that supports the regional growth strategy and promotes economic and environmental vitality, and better public health.
- **Public Services:** The region will support development with adequate public facilities and services in a coordinated, efficient, and cost-effective manner that supports local and regional growth planning objectives.

VISION 2040 is implemented through PSRC's policy and plan review of each county and city comprehensive plan and their amendment. PSRC also certifies transportation elements, as well as the regional TIP, and evaluating performance measures.

Transportation 2040 supports VISION 2040 planning for a transportation system supporting the growth strategy. Transportation 2040 is built around three key strategies, as stated in the plan's executive summary:

- **Congestion and Mobility.** The plan improves mobility through a combination of effective land use planning, demand management, efficiency enhancements, and strategic capacity investments. To improve system efficiency, the plan creates "smart corridors" with advanced technology, better information for travelers, and advanced tolling approaches which adjust for actual traffic conditions. Capacity improvements strategically expand roadway, transit, and non-motorized facilities, with new roadways limited to key missing links and enhancing existing facilities. This plan includes additional attention to monitoring system performance.
- **Environment.** A key focus of the plan is to protect and improve the region's environmental health. This includes ensuring that the region has healthy air that meets all standards, ensuring that transportation projects improve the handling of stormwater runoff to protect Puget Sound and other surface waters, and addressing emerging issues such as transportation's role in reducing GHG emissions and adapting to climate change. The plan includes a specific strategy to address state GHG goals and VMT reduction benchmarks. The four-part strategy includes Land Use, Transportation Pricing, Transportation Choices, and Technology. In addition, the plan builds on current efforts to protect natural areas and support vibrant, livable communities.
- **Funding.** The Transportation 2040 financial strategy relies on traditional funding sources in the early years of the plan. Over time the region will transition to a new funding structure based on user fees, which could include high-occupancy toll lanes, facility and bridge tolls, highway system tolls, VMT charges, and other pricing approaches that replace the gas tax and further fund and manage the transportation system. Funding strategies need to include a nexus between the tax, fee, or toll and the use of the revenues.

Kitsap CPP

The GMA requires that counties adopt CPPs express a regional vision, provide a common framework to develop comprehensive plans, and to help measure consistency of local plans (RCW 36.70A.210). GMA also specifies subjects that must be addressed, including policies for urban and rural uses.

On August 10, 1992, the Kitsap County BOCC adopted the Kitsap County CPPs. Seven agencies participated in development of the CPPs through the KRCC including representatives of Kitsap County, the cities of Bainbridge Island, Port Orchard, Bremerton, and Poulsbo, the Port Gamble/S'Klallam Tribe, and the Suquamish Tribe. The CPPs have been amended several times since notably in November 2004 (established population distributions), and most recently in November 2011. The CPPs include policies that address the following topics.

- **Countywide Growth Pattern.** Establishes the countywide vision which includes livable urban communities and neighborhoods, centers for employment, civic activities and housing; a vital diversified economy; efficient multi-modal transportation system; natural systems protection; maintaining the character of rural areas; and responsive government.
 - The role of cities in achieving the countywide growth pattern is to:
 - The primary role of Kitsap's urban communities is to encourage growth, through new development, re-development and in-fill. Population growth should be directed to Cities, UGAs and centers with a transportation system that connects people with jobs and housing.
 - Each of Kitsap's urban communities should foster its unique vision as a high quality place to live and work, through urban design, historic preservation, and arts that improve the natural and human-made environments; promote healthy lifestyles; contribute to a prosperous economy; and, increase the region's resiliency in adapting to changes or adverse events.

- In Kitsap, urban communities are closely linked to water and natural amenities and provide open space links to the natural environment.
 - The role of Kitsap County in the countywide growth pattern is to:
 - Keep regional vision in mind when making local decisions.
 - Promote stewardship of unincorporated urban areas and promote annexation into cities or incorporation.
 - Maintain/enhance natural systems and rural character.
 - Include a variety of low density rural communities, densities, and uses.
- **UGAs.** Includes the outline of the land capacity analysis program, which serves as the basis for UGA expansion, establishes policies on population increments, and establishes process and criteria for expanding and adjusting UGAs. These criteria include:
 - UGAs are areas “within which urban growth shall be encouraged”
 - Unincorporated UGAs shall be associated with an existing or future city.
 - All UGAs shall be reflected in County and respective city comprehensive plans.
 - Sufficient area must be included in the UGAs to accommodate the adopted 20-year population distribution as adopted by the KRCC and consistent with OFM projections.
 - A jurisdiction may focus public and/or private investment where growth is desired and can phase utilities.
 - Any jurisdiction seeking to expand its UGA shall achieve densities consistent with the GMA and the City of Bremerton’s adopted Comprehensive Plan and any interlocal agreement between the City of Bremerton and the County.
 - If an adopted or proposed 20-year projected population distribution requires expansion of its UGA, the respective jurisdiction shall conduct planning and analysis, including a land capacity analysis, assessment of present zoning; consideration of reasonable measures; and ability to provide services.
 - A jurisdiction, as part of its Comprehensive Plan amendment or sub-area plan process that proposes an expansion of the UGA, shall prepare or update a comparison of potential areas for expansion.
 - Early and continuous public involvement must be carried out when establishing, expanding, or adjusting UGAs.
- **Centers for Growth.** Identifies a hierarchy of areas of the county within which population and employment should be concentrated consistent with VISION 2040.
- **Rural Land Uses and Development Patterns.** Seeks to preserve and enhance the rural character of areas outside of the UGAs, by protecting the natural environment, open space and recreation, scenic and historic areas, and supporting small scale farming, low density residential living and cluster development at an appropriate scale, and with appropriate rural levels of service.
- **Countywide Strategies for Open Space Preservation, Resource Protection and Critical Areas, Air Quality, and Water Quality/Quantity.** Defines these areas and establishes the importance of maintaining, protecting and enhancing these areas.

- **Contiguous, Compatible, and Orderly Development.** Provides policies for cooperative inter-jurisdictional planning, and coordination of land use, transportation, environmental and infrastructure planning. Promotes fiscal equity such as revenue sharing due to changes in municipal boundaries. Provides policies on community design and development that promote the unique character of a community, encourage healthy lifestyles, and support sustainable economic and environmental development techniques.
- **Siting Public Capital Facilities.** Establishes a process for the siting of regional facilities, which would mitigate the potential adverse impacts from the location and development of these facilities.
- **Transportation.** Seeks to promote a transportation system, which would serve the designated centers, preserve the natural environment and provide for a balanced system for the efficient and safe movement of people, goods and services among the centers of Kitsap County and the larger Puget Sound Region. Promotes measures to reduce single occupancy vehicles, and complete streets for all modes.
- **Housing.** Establishes a framework for the provision of housing within Kitsap County to all income levels at a variety of housing densities. Promotes a jobs/housing balance.
- **Countywide Economic Development.** Encourages coordinated economic growth among all jurisdictions in Kitsap County, a healthy economy with a spectrum of jobs, and diversification. Seeks to add predictability and certainty to private development decisions.
- **Analysis of the Fiscal Impact.** Identifies opportunities for jurisdictions to plan for infrastructure and services such as through comprehensive plans, CFP, at the time of UGA expansions, and UGA Management Agreements. Special districts should be involved in the planning for UGAs.
- **Coordination with Tribal Governments and the Federal Government.** Seeks to involve and inform these governments in regional and local planning efforts in the county.
- **Coordination with Federal Government including Navy.** Promotes coordination with the federal government on land use and other activities.
- **Roles and Responsibilities.** Establishes the roles and Responsibilities for the various governments and agencies within the county including the KRCC, Kitsap County, the Cities, and Special Districts.

The CPPs contain appendices with population allocations, described earlier in this section, and UGA management agreements (UGAMAs). UGAMAs are intended to facilitate and encourage annexation and/or incorporation of urban areas over the 20 year planning period and to ensure compatibility of development within the unincorporated UGA.

UGAMAs are intended to:

- Describe the goals and procedures of the joint planning process including roles and responsibilities for the unincorporated UGA, with the goal of having compatible City of Bremerton and County plans.
- Identify responsibility and mechanisms for comprehensive plan amendments, zoning changes and development applications within unincorporated UGAs. Significant weight should be given to City of Bremerton preferences.
- Identify services to be provided in the UGA, the responsible service purveyors, and the terms under which the services shall be provided. All service providers, including special districts, and adjacent jurisdictions should be included in UGA planning.
- Develop pre-annexation plans, which shall include:
 - Conditioning City of Bremerton service extensions upon actual annexation for properties contiguous to the City of Bremerton boundary or to agreements of no protest to future annexation for properties not contiguous.

- Offering pre-annexation agreements to property owners interested in annexation and needing assurances from the City of Bremerton about services, planning, or other issues.
- Plans for tiering and/or phasing of infrastructure development, appropriate to the individual UGA.
- City of Bremerton priorities for City of Bremerton-led annexation efforts as appropriate.
- Describe the development and implementation of a public involvement program that identifies roles and responsibilities for respective jurisdictions, including actions and timeline.
- Be reflected in County and City of Bremerton Comprehensive plans.

UGAMAs elsewhere in the county are to reflect revenue sharing agreements, but this does not apply to the Cities of Bremerton and Port Orchard, which does not participate in that agreement.

Kitsap County Comprehensive Plan

The Kitsap County Comprehensive Plan provides policies and goals primarily for the unincorporated portions of the county. The Comprehensive Plan is intended to comply with the GMA and other state laws that require local governments to plan comprehensively, as well as comply with the CPPs. It was adopted in 2006 and amended in 2012 to comply with a remand of the Growth Management Hearings Board.

The Plan itself contains several chapters or elements, including those required by the GMA as well as a number of subarea plans addressing particular UGAs or rural communities. Highlights of the County's vision are listed below.

- **County Government.** County government that is accountable and accessible; encourages citizen participation; seeks to operate as efficiently as possible; and works with citizens, governmental entities and tribal governments to meet collective needs fairly while respecting individual and property rights.
- **Natural Environment.** Natural ecosystems—including inter-connected wetlands, streams, wildlife habitat, and water quality—that are rehabilitated, protected and enhanced and that allow for flexible and innovative development to meet environmental and growth goals. In developed areas, the growth pattern supports conservation of non-renewable energy and minimizes impacts on air quality and climate.
- **Housing.** Residential communities that are attractive, affordable, diverse, and livable supported by appropriate urban or rural services. A variety of housing choices are available, meeting a full range of resident income levels and preferences. Residents are able to walk between neighborhoods and to community destinations.
- **Open Space.** An open space network—including greenbelts, wildlife habitat, forested areas, and active and passive parks—that is accessible, inter-connected, provides opportunities for recreation and defines and distinguishes urban and rural areas.
- **Urban Areas.** Healthy urban areas that are the region's centers for diverse employment and housing opportunities, all levels of education, and civic and cultural activities.
- **Rural Areas.** Rural areas and communities where unique historical characters, appearances, functions, and pioneering spirits are retained and enhanced. Natural resource activities, such as forestry, agriculture, and mining continue to contribute to the rural character and economy. Rural recreation opportunities are enhanced, including equestrian facilities, trails, and others.
- **Cultural Resources.** Historical and archaeological resources that are recognized and preserved for future generations.
- **Economic Development.** A stable, prosperous and diversified economy that provides living wage jobs for residents, supported by adequate land for a range of employment uses and that encourages accomplishment of local economic development goals.

- **Public Services and Facilities.** Public services and facilities—including, but not limited to, parks and recreation, law enforcement, fire protection, emergency preparedness, water/sewer, roads, transit, non-motorized facilities, ferries, stormwater management, education, library services, health and human services, energy, telecommunications, etc.—are provided in an efficient, high-quality and timely manner by the County and its partner agencies. Public services and facilities are monitored, maintained and enhanced to meet quality service standards.
- **Transportation.** An efficient, flexible, and coordinated multi-modal transportation system—including roads, bridges and highways, ferries, transit, and non-motorized travel—that provides interconnectivity and mobility for county residents and supports our urban and rural land use pattern.

Relevant to the Gorst Creek Watershed Framework & Characterization Planning efforts, Kitsap County a policy supporting coordinated cross-jurisdictional watershed and habitat protection efforts:

Policy NS-52 Work with other government jurisdictions to coordinate watershed management and habitat protection efforts for watersheds and corridors that cross jurisdictional boundaries.

The County's land use element describes Gorst as follows:

The Gorst UGA is located at the western end of Sinclair Inlet at the junction of State Route (SR) 16 with SR 3. The UGA includes approximately 281 gross acres. The Gorst UGA is a relatively small highway-oriented commercial and industrial center. It was associated with the City of Bremerton in 2008. Due to significant public health concerns regarding failing septic systems in the area, the City of Bremerton has invested resources to address this issue.

Concurrently, the City and County should pursue a UGAMA [Urban Growth Area Management Agreement] for this area, which should include the aspects included in policies LU-26 through LU-30.⁶

The referenced land use policies regarding County-City of Bremerton coordination of UGAMA are listed below:

Policy LU-32 address the issues related to the association of unincorporated UGAs with their corresponding incorporated cities, consistent with CPP. The following unincorporated UGAs are currently associated: Poulsbo (City of Poulsbo), East Bremerton (City of Bremerton), West Bremerton (City of Bremerton), Gorst UGA (City of Bremerton), SKIA UGA (City of Bremerton), ULID #6/McCormick UGA (City of Port Orchard) and South Kitsap/Port Orchard (City of Port Orchard).

Policy LU-33 establish a planning process, concurrent with the determination of UGA association, within each unincorporated UGA that abuts an incorporated area, with the goal of improving consistency between city and county plans, zoning and development regulations, as well as providing efficient delivery of urban services. The goals and procedures of the process should be described in an UGAMA between the county and the city associated with the UGA.

Policy LU- 34 includes the following components in each UGAMA:

- *Specification that the city's zoning code; densities; development, subdivision, environmental and construction standards; and levels of service shall apply to the entire UGA unless mutually agreed otherwise by the city and the County.*

⁶ It appears that in the Remand effort some policies were amended but cross references were not updated. The listed policies appear to be the ones intended though numbered differently.

- *Confirmation that the city's comprehensive plan should reflect land use and capital facility planning for the entire UGA. This should include agreement regarding the operation and maintenance of County-owned public facilities such as parks and other community buildings.*
- *Identification of the responsibility and mechanisms for comprehensive plan amendments, zoning changes and development applications within the UGA.*
- *Identification of the services to be provided, the service provider and the terms of services. All service providers should be included in UGA planning.*
- *Provisions on revenue sharing.*
- *Description of the city's pre-annexation planning to ensure logical and coordinated boundaries which shall include: conditioning city service extensions upon annexation for properties contiguous to the city boundary; agreements of no protest to future annexation for properties that are not contiguous; offering pre-annexation agreements to property owners interested in annexation and needing assurances for the city about services, planning or other issues; and other mechanisms.*
- *Other issues as appropriate for specific UGAMAs.*

County policies also support potential population reallocation that may be appropriate for Gorst:

Policy LU-14, Reallocate and resolve any significant population growth target not accommodated by a UGA boundary or zoning within the UGA, when a UGA is in close proximity to an incorporated jurisdiction and logical upzoning or UGA expansions are not available...

City of Bremerton Comprehensive Plan

The City of Bremerton adopted its first Comprehensive Plan under GMA in April 1995. The City of Bremerton adopted a major update to the Plan in December 2004, and its most recent plan is dated 2010. The City of Bremerton's Comprehensive Plan contains Land Use, Transportation, Housing, Utilities, Economic Development, Capital Facilities, Environment, and Community Character elements.

The City of Bremerton's plan is based on a concept of neighborhood, district, and regional "centers" – areas of concentrated and planned mixed-use development areas, serving various roles to meet needs of communities and well-connected to each other by various transportation modes. The City of Bremerton recognizes the unique character of each center by creating subarea plans with goals, policies, and regulations unique to each neighborhood. For example, the City of Bremerton adopted a subarea plan for SKIA recognizing it as a regional manufacturing industrial center.

The City of Bremerton has identified its future associated UGAs as including Central Kitsap, East Bremerton, West Bremerton, and Gorst. The City of Bremerton's plan introduction notes the following about Gorst:

"At Gorst, where two State highways meet, Port Orchard is behind the traveler and the focus is ahead to Bremerton. Gorst is the real entry to Bremerton."

The City of Bremerton's future land use map for Gorst reflects the Kitsap County designations described in Section 3.7 *Land Use Patterns* of this Draft EIS. However, the City of Bremerton has pre-designated the Gorst UGA with zones that are the closest match to the Kitsap County zones.

Some relevant policies for the present planning efforts include:

LU20B "Associated" UGAs. Promote the association with Bremerton of those UGAs that can be most efficiently served by Bremerton as the primary provider of urban services.

LU20C. UGA-Wide Growth Strategy. Apply the adopted City-wide growth strategy consistently to all of the City UGAs as a basis for more localized planning.

LU3B Pre-qualify key areas and sites for environmental permitting through such devices as sub-area plans and related programmatic EIS's.

Though the plan focuses on the urban centers in the community, the plan also addresses CUL that make up a large amount of the watershed as an area of protection, recreation, and limited development:

Cleanup Levels:

General development parameters

The City's management objectives for these lands shall be resource-related and structured to protect the watersheds and timberlands. These lands are vital to protect water quality and quantity in Bremerton, ensure a healthy forest cover, dispose of biosolids created from wastewater treatment, protect fish (including salmon), and provide essential habitat for wildlife. While resource management is the primary objective, there are some commercial activities that are allowed on utility lands such as the location of antenna sites.

Policy direction:

Maintain the primary character of this land as resource-related. All development should be limited, and demonstrate no significant environmental impact.

Discussion: While the primary use of this land shall continue to be used for the protection of natural resources, there will continue to be a limited amount of commercial and recreation development within the lands designated as "utility." Wherever possible, colocation should be utilized for commercial structures such as antennas. Minimal footprints shall be required. Any future development that associates with current adjacent recreational uses (such as the Gold Mountain Golf Course or Jarstad Park) should be limited to that portion of the designation south of Old Belfair Highway and adjacent to existing similar development. Moreover, any development within this fairly pristine environment shall conform to shoreline and critical lands ordinances and be designed in an environmentally sensitive way. All developments should go through rigorous environmental review. Where development can be allowed should conform to the recommendations made by other regional watershed planning efforts such as the Chico Watershed Alternative Futures Project.

Shoreline Master Programs and Critical Areas

Shorelines subject to the Shoreline Management Act of 1971 include the marine waters of Puget Sound as well as rivers and streams with a mean annual flow over 20 cubic feet per second (cfs). Shorelines include uplands within 200 feet of the ordinary high water mark and associated wetlands, and floodways. In the study area, the Sinclair Inlet marine shoreline and Gorst Creek are subject to the Shoreline Management Act (RCW 90.58).

Consistent with the Shoreline Management Act, both the County and City of Bremerton have adopted Shoreline Master Programs for lower Gorst Creek and the Sinclair Inlet, and are awaiting Ecology approval.

City of Bremerton proposed shoreline designations include

- Urban Conservancy in the inner marine shoreline along the water
- Commercial or Isolated in the outer marine shoreline area in largely developed areas
- Aquatic Conservancy applied to the Marine waters (not mapped below)
- Single Family, Recreation, and Urban Conservancy along Gorst Creek

Kitsap County proposes a similar shoreline environment approach as the City of Bremerton, except that the full marine shoreline north of the SR 3 and SR 16 interchange is shown as High Intensity. South of the interchange, the marine shoreline would be classified as Urban Conservancy in the inner jurisdiction along the water and High Intensity in the outer jurisdictional area. Gorst Creek would be classified as High Intensity and Urban Conservancy. Figure 3.14-1 *Gorst: Comparison of Shoreline Designations* compares the two sets of shoreline environments. Kitsap County's shoreline regulations would apply until such time as the Gorst UGA is annexed. The City of Bremerton's shoreline buffer standards for the Sinclair inlet are greater than the County's, and the County's buffer standards for Gorst Creek are greater than the City of Bremerton's. See Table 3.14-3 *Bremerton and Kitsap County Shoreline, Stream, and Wetland Buffer Comparison*.

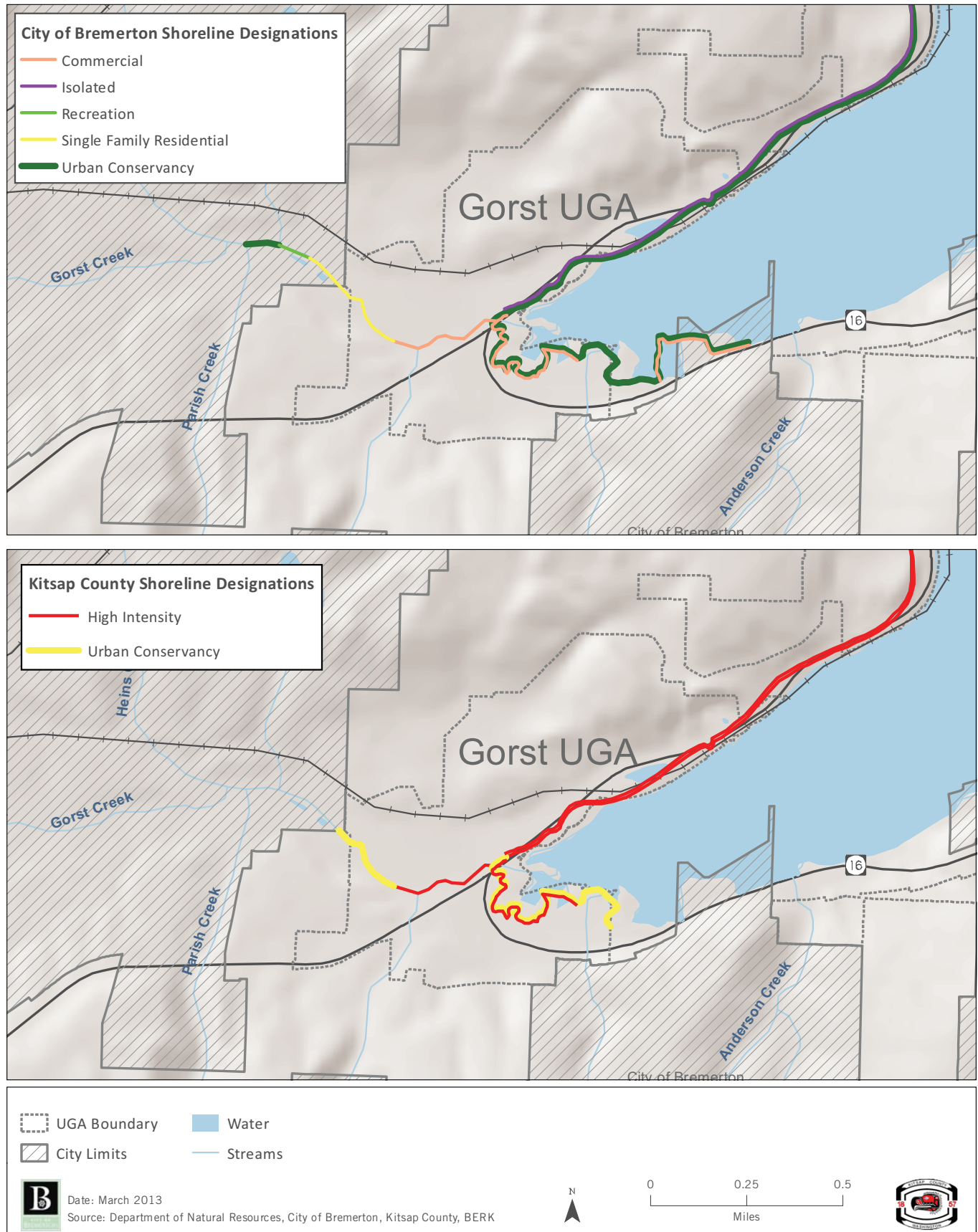
**Table 3.14-3
Bremerton and Kitsap County Shoreline, Stream, and Wetland Buffer Comparison**

City of Bremerton	Standard Buffer (ft)	Reduced Buffer (ft)	Setback (ft)	Kitsap County	Standard Buffer (ft)	Reduced Buffer (ft)	Setback (ft)				
Bremerton Shorelines: Proposed				Kitsap County Shorelines: Proposed							
Freshwater				Freshwater							
Commercial	50	Can reduce if lot depth is less than 150 ft.	15	Streams	200	Administrative Reductions with Criteria or Variance.	15				
SF Residential	20-30% of lot depth		5-15								
Recreation	100		15								
Urban Conservancy	175		15								
Marine				Marine							
Isolated	0	Same as Freshwater	15	High Intensity	50	Variance	15				
Commercial	50		15					Urban Conservancy	100	85	15
Urban Conservancy	175		15								
Bremerton Critical Areas Regulations: Existing				Kitsap County Critical Areas Regulations: Existing							
Streams											
F	150	Allowed if enhanced.	15	F	150	25-50% with a habitat mgmt plan.	15				
Np	50		15	Np	50		15				
Ns	35		15	Ns	50		15				
Wetlands											
Category I	200	Averaging	0	Category I	200	Averaging or admin reduction with criteria.	15				
Category II	100		0	Category II	100		15				
Category III	75		0	Category III	50		15				
Category IV	50		0	Category IV	30		15				

Note: With the City proposed Shoreline Master Program, when there are parallel shoreline designations, the buffer is measured from the ordinary high water mark to the width of the buffer requirement or the edge of the environment designation, whichever is less.

Source: BMC and City of Bremerton Council Review Draft Shoreline Master Program; KCC and Kitsap County Planning Commission Review Draft Shoreline Master Program; BERK 2012.

FIGURE 3.14-1 GORST: COMPARISON OF SHORELINE MASTER PROGRAM DESIGNATIONS



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According to the GMA, "critical areas" include the following areas and ecosystems:

- A. Wetlands
- B. Areas with a critical recharging effect on aquifers used for potable water
- C. Fish and wildlife habitat conservation areas
- D. Frequently flooded areas
- E. Geologically hazardous areas.

(RCW 306.70A.030) Counties and cities must regulate and protect these critical areas. Both the County and City of Bremerton have adopted critical area regulations (see Section 3.4 *Plants and Animals*). The study area includes all of these critical areas. The City of Bremerton and County buffers are similar for smaller streams (less than 20 cfs) and wetlands. See Table 3.14-3 *Bremerton and Kitsap County Shoreline, Stream, and Wetland Buffer Comparison*.

City of Port Orchard

The City of Port Orchard boundaries in the watershed reflect the McCormick Woods master planned community developed based on a development agreement with Kitsap County. The Gorst Creek Watershed Framework & Characterization Planning efforts are not going to influence this already approved and annexed development. Therefore, the City of Port Orchard plans are not further considered in this policy analysis.

The Suquamish Tribe

The Suquamish Tribe has control over developments that occurs on their reservation lands and are responsible for developing plans to guide that growth. The Suquamish Tribe has usual and accustom fishing and hunting areas throughout the county including Gorst. Together with Washington State, the Suquamish Tribe co-manages a hatchery on Gorst Creek and takes an active role in managing the natural resources within the watershed.

Impacts

IMPACTS COMMON TO ALL ALTERNATIVES

All alternatives would maintain adopted land use plans in the watershed, which maintains consistency with current Kitsap County and City of Bremerton plans. All alternatives also maintain present UGA boundaries, allowing for consistency with GMA provisions regarding UGA sizing. Last each alternative has been developed and reviewed during public outreach opportunities as identified in Section 2 *Alternatives*. Comparisons of alternatives' consistency with state, regional, and local plans follows.

GMA Planning Goals

All alternatives meet GMA goals for economic and housing growth in urban areas, supported by transportation and public facility improvements. All would apply shoreline and critical area regulations. Alternatives 2 and 3 would further meet the intent of GMA goals for open space and environmental protection. See Table 3.14-4 *GMA Goal Consistency* 4.

Table 3.14-4
GMA Goal Consistency

GMA Goal	Discussion
1) Urban growth. Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.	All alternatives encourage development in urban areas, particularly the Gorst UGA, where added commercial and residential growth is anticipated. Public facilities and services will be provided consistent with analysis in Section 3.12 <i>Public Services</i> of this Draft EIS. The recent installation of sewers will make urban growth more possible. No changes are proposed to the SKIA UGA which was the subject of its own plan in 2012.
2) Reduce sprawl. Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.	Under all alternatives, densities in the rural area will remain at one units per five 10a acres, a rural density that avoids sprawl. The Watershed Characterization & Framework Plan proposed under Alternatives 2 and 3 will help the County and cities make informed choices about the best locations for development and avoid inappropriate conversion of land.
3) Transportation. Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and City of Bremerton comprehensive plans.	Through proposed subarea plan policies, Alternatives 2 and 3 promote added transit and non-motorized systems in Gorst (e.g. transit service at a park and ride). The mixed use pattern and lower commercial growth in Alternative 3 provides less congestion and may in the future provide more support to transit use. Alternative 2 does not worsen congestion beyond that already anticipated in Alternative 1 No Action.
4) Housing. 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.	While all alternatives allow for housing, Alternatives 2 and 3 provide significant new opportunities for housing on the mine site. Further, Alternative 3 would promote a horizontal or vertical mixed use pattern, and would provide a new live-work housing choice.
5) Economic development. 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, promote the retention and expansion of existing businesses and recruitment of new businesses, recognize regional differences impacting economic development opportunities, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.	All alternatives support economic development in Gorst. Alternative 1 would promote highway-oriented commercial and some industrial uses. Alternative 2 focuses on a well-designed commercial corridor. Alternatives 1 and 2 would convert some present residential areas to more commercial uses, and assume the highest employment growth levels. Alternative 3 provides for mixed use economic opportunities with regional commercial uses as well as local serving commercial uses combined with mixed uses, such as in a horizontal format. With allowances for mixed residential uses, the job growth under Alternative 3 would not be as high as Alternatives 1 and 2.
6) Property rights. 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.	Under all alternatives, all properties are given a reasonable use of land, with at least a single family residence allowed. Incentives are offered to achieve greater density and heights and environmental enhancement under Alternatives 2 and 3.
7) Permits. Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability.	All alternatives would ensure development applications are processed under rules that are transparent. Alternatives 2 and 3 would implement a planned action for the Gorst UGA, which would streamline environmental review. Alternative 2 would have a planned action boundary west of the highways on Sinclair Inlet while Alternative 3 would have a planned action boundary including the whole Gorst UGA.

GMA Goal	Discussion
8) Natural resource industries. 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.	Alternative 1 applies a mineral resources designation to the current mine site. Alternatives 2 and 3 assume mineral extraction will continue in the near term until the property owner completes mining and reclamation.
9) Open space and recreation. 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.	All Alternatives presume CUL will be maintained for forest and habitat management. Alternatives 2 and 3 would establish a Watershed Characterization & Framework Plan that identifies not only CUL protection but also other areas important for protection or restoration for fish and wildlife habitat. Alternatives 2 and 3 highlight County-owned property that is to be set aside for open space and recreation.
10) Environment. Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.	All alternatives would implement shoreline and critical area regulations. Alternatives 2 and 3 use a science-based and landscape level approach to identifying areas of protection, restoration, and development with BMPs to protect water processes and habitat.
11) Citizen participation and coordination. Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.	All alternatives are undergoing public review as part of the watershed and subarea planning effort. Chapter 2 of this Draft EIS describes the public participation efforts to date
12) Public facilities and services. Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.	All alternatives increase the demand for public facilities and services, particularly Alternatives 2 and 3 that add greater population. Alternative 1 would continue implementation of the Kitsap County CFP. Alternatives 2 and 3 due to greater growth, would require mitigation measures to ensure adequate facilities and services. Alternatives 2 and 3 also assume transition to City governance with City levels of service. See Section 3.13 <i>Utilities, Water, Wastewater, and Stormwater</i> .
13) Historic preservation. Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.	All alternatives would be subject to Comprehensive Plan policies and federal and state laws that promote the protection and preservation of historic and cultural features. Alternatives 2 and 3 would adopt the Watershed Characterization & Framework Plan that includes additional policies to protect cultural resources in Gorst (also analyzed in Section 3.10 <i>Cultural Resources</i>).

GMA Comprehensive Plans and City of Bremerton and County Plan Consistency

Under Alternative 1, the watershed would be protected through standard natural environment policies of the County and City of Bremerton Comprehensive Plans. CUL use and zoning designations would continue the intent for minimal land disturbance on CUL. Alternatives 2 and 3 would coordinate activities in the watershed among the City of Bremerton and County and would further advance County and City of Bremerton goals and policies that promote coordinated habitat and watershed planning.

For the Gorst UGA, Alternatives 2 and 3 propose adoption of a subarea plan, which is an optional element under GMA. Alternative 1 would continue the current approach of planning for Gorst as part of its standard elements.

Alternative 1 (No Action) would continue current plans and regulations which are consistent with each other. For example, the City of Bremerton shows Kitsap County land use designations in its assigned UGAs and has pre-designated zones that most closely match County zones. Action Alternatives would be consistent with County and City of Bremerton plans in that both the County and the City of Bremerton are anticipated to integrate the Watershed Characterization & Framework Plan and Gorst Subarea Plan into their Comprehensive Plans.

Additionally, Action Alternatives 2 and 3 would meet County land use policies that assign the Gorst UGA to Bremerton and that promote joint planning with UGAMAs. Action Alternatives 2 and 3 would meet City of Bremerton policies that support subarea planning for different types of centers in the community; the subarea planning concept allows the City of Bremerton to apply community specific land use and zoning designations. Alternatives 2 and 3 also promote as Gorst as the southern gateway to the City of Bremerton, a concept in the City of Bremerton's Comprehensive Plan. Alternatives 2 and 3 also plan for capital improvements and services to meet current and projected needs of the population, as well as governance transition to Bremerton.

Urban Growth Areas

As noted above, all alternatives would meet GMA goals for compact growth in the current UGA boundaries. By increasing housing choices and densities on the mine site, Alternatives 2 and 3 would exhibit reasonable measures to increase growth in current boundaries.

Population and Employment Estimates

Alternatives 2 and 3 assume greater population allocations than found in the CPPs. Consistent with County policies that would allow for exchanges of population, a portion of the excess population in East and West Bremerton could be reallocated to Gorst. However, growth allocation modifications may be possible in the upcoming 2014-2016 Comprehensive Plan Update cycle through a regional process with the KRCC.

Job growth estimates can be locally determined since there is no formal jobs target, and studying 310 to 1,100 jobs, including the "No Action" level of 742 jobs, appears appropriate.

SEPA

All alternatives are undergoing review in this Draft EIS as part of the watershed and subarea planning effort. As allowed in SEPA, Alternatives 2 and 3 would implement a planned action for the Gorst UGA, which would streamline environmental review. Alternative 2 would have a planned action boundary west of the highways on Sinclair Inlet while Alternative 3 would have a planned action boundary including the whole Gorst UGA. A draft of the planned action ordinance is found in Appendix B *Draft Planned Action Ordinance*. For more information on the planned action process, please also see Section 2.5 *Study Alternatives: Planned Action*.

VISION 2040 and Transportation 2040

VISION 2040 Framework Policies

Under all alternatives, Bremerton would remain a Metropolitan city, and SKIA as a Manufacturing Industrial Center as designated in VISION 2040. The consistency of the alternatives with VISION 2040's overarching goals is described below.

- **Environment:** All alternatives would implement shoreline and critical area regulations. Alternatives 2 and 3 use a science-based and landscape level approach to identifying areas of protection, restoration, and development with BMPs to protect water processes and habitat.
- **Development Patterns:** All alternatives encourage development in urban areas, particularly the Gorst UGA, where added commercial and residential growth is anticipated. Public facilities and services will be provided consistent with analysis in Section 3.12 *Public Services* of this Draft EIS. The recent installation of sewers will make urban growth more possible. No changes are proposed to the SKIA UGA which was the subject of its own plan in 2012. Under all alternatives, densities in the rural area will remain at one unit per five or 10 acres, a rural density that avoids sprawl. The Watershed Characterization & Framework Plan proposed under Alternatives 2 and 3 will help the County and cities make informed choices about the best locations for development and avoid inappropriate conversion of land.

- **Housing:** While all alternatives allow for housing, Alternatives 2 and 3 provide significant new opportunities for housing on the mine site. Further, Alternative 3 would promote a horizontal or vertical mixed use pattern, and would provide a new live-work housing choice.
- **Economy:** All alternatives support economic development in Gorst. Alternative 1 would promote highway-oriented commercial and some industrial uses. Alternative 2 focuses on a well-designed commercial corridor. Alternatives 1 and 2 would convert some present residential areas to more commercial uses, and assume the highest employment growth levels. Alternative 3 provides for mixed use economic opportunities with regional commercial uses as well as local serving commercial uses combined with mixed uses, such as in a horizontal format. With allowances for mixed residential uses, the job growth under Alternative 3 would not be as high as Alternatives 1 and 2.
- **Transportation:** Through proposed subarea plan policies, Alternatives 2 and 3 promote added transit and non-motorized systems in Gorst (e.g. transit service at a park and ride). The mixed use pattern and lower commercial growth in Alternative 3 provides less congestion and may in the future provide more support to transit use. Alternative 2 does not worsen congestion beyond that already anticipated in Alternative 1 No Action.
- **Public Services:** All alternatives increase the demand for public facilities and services, particularly Alternatives 2 and 3 that add greater population. Alternative 1 would continue implementation of the Kitsap County CFP. Alternatives 2 and 3, due to greater growth, would require mitigation measures to ensure adequate facilities and services. Alternatives 2 and 3 also assume transition to City governance with City levels of service. See Section 3.12 *Public Services*.

Transportation 2040

A review of the alternatives programmatically in relation to the key principles of Transportation 2040 is provided below:

- **Congestion and Mobility.** The mixed use pattern and lower commercial growth in Alternative 3 provides less congestion and may in the future provide more support to transit use. Alternative 2 does not worsen congestion beyond that already anticipated in Alternative 1 No Action. Alternatives 2 and 3 also promote added transit and non-motorized systems in Gorst (e.g. transit service at a park and ride).
- **Environment.** All alternatives add VMT to the network; however, more compact growth and a greater share of mixed use growth along with other GHG reduction measures addressed in Section 3.11 *Transportation* can help reduce VMT.
- **Funding.** The No Action Alternative would retain the recent Kitsap County 2012 CFP that includes funding projections for transportation facilities under County responsibility. More specific capital improvements and funding are identified for stormwater improvements, fish passage barrier removals, and transportation improvements are proposed for Action Alternatives. The County and City of Bremerton will continue to partner with the PSRC on transportation planning and funding opportunities.

Kitsap County CPP

All alternatives would be consistent with CPPs by focusing growth in UGAs and offering employment and housing opportunities. Alternatives 2 and 3 would promote joint City-County planning for an assigned UGA consistent with CPPs. All facilities and services are addressed in this Draft EIS consistent with CPP guidance for joint planning and service transition. See Table 3.14-5 *Kitsap County CPP Evaluation*.

One area of inconsistency for Alternatives 2 and 3 includes population allocations; Alternatives 2 and 3 would substantially increase the capacity for population on the mine site compared to Alternative 1. Kitsap County and the City of Bremerton could work with KRCC to reallocate population from undersized UGAs to Gorst to match Alternatives 2 or 3 population levels. This could be accomplished prior to the County and City of Bremerton's GMA required 2016 Comprehensive Plan Update. Until that time, the mineral resources designation could remain while the mine is still in active operation, thus not allowing residential growth until population targets are reallocated.

Table 3.14-5
Kitsap County CPP Evaluation

CPP Concept Summary	Discussion
<p>Countywide Growth Pattern: Establishes the countywide vision which includes livable urban communities and neighborhoods, centers for employment, civic activities and housing; a vital diversified economy; efficient multi-modal transportation system; natural systems protection; maintaining the character of rural areas; and responsive government.</p> <p>The primary role of Kitsap’s urban communities is to encourage growth, through new development, re-development and in-fill. Population growth should be directed to Cities, UGAs and centers with a transportation system that connects people with jobs and housing.</p> <p>Each of Kitsap’s urban communities should foster its unique vision as a high quality place to live and work, through urban design, historic preservation, and arts that improve the natural and human-made environments; promote healthy lifestyles; contribute to a prosperous economy; and, increase the region’s resiliency in adapting to changes or adverse events.</p> <p>In Kitsap, urban communities are closely linked to water and natural amenities and provide open space links to the natural environment.</p> <p>The role of Kitsap County in the countywide growth pattern is to:</p> <ul style="list-style-type: none"> ▪ Keep regional vision in mind when making local decisions ▪ Promote stewardship of unincorporated urban areas and promote annexation into cities or incorporation ▪ Maintain/enhance natural systems and rural character ▪ Include a variety of low density rural communities, densities, and uses <p>UGAs. Includes the outline of the land capacity analysis program, which serves as the basis for UGA expansion, establishes policies on population increments, and establishes process and criteria for expanding and adjusting UGAs. These criteria include:</p> <ul style="list-style-type: none"> ▪ UGAs are areas within which urban growth shall be encouraged and outside of which growth can occur only if it is not urban in nature per GMA. ▪ Unincorporated UGAs shall be associated with an existing or future city. ▪ All UGAs shall be reflected in County and respective city comprehensive plans. ▪ Sufficient area must be included in the UGAs to accommodate the adopted 20-year population distribution in the CPPs developed by the KRCC. ▪ A jurisdiction may define growth tiers within its UGA or phase utility development. ▪ The County, city, or interested citizens may initiate an amendment to an existing UGA. ▪ Any jurisdiction seeking to expand its UGA shall achieve densities consistent with the GMA and the City’s adopted Comprehensive Plan and any interlocal agreement between the 	<p>All alternative promote growth in compact urban patterns, with Alternatives 2 and 3 improving the aesthetic qualities of growth through urban design concepts, and promoting greater linkages to the Sinclair Inlet and Gorst Creek shorelines.</p> <p>The County continues to promote stewardship of the UGA until annexation or incorporation and is jointly planning with the City of Bremerton.</p> <p>See a discussion of environmental and rural policies elsewhere on this chart.</p> <p>All alternatives encourage development in urban areas, particularly the Gorst UGA, where added commercial and residential growth is anticipated. The recent installation of sewers will make urban growth more possible. No changes are proposed to the SKIA UGA which was the subject of its own plan in 2012.</p> <p>The Gorst UGA is currently associated with Bremerton for future annexation, and Action Alternatives will help plan for the transition of governance. Action Alternatives include capital facility and service plans and policies to support the land use patterns and growth.</p> <p>The land capacity analysis program has been applied to the alternatives for a comparison of growth projections.</p> <p>The County and City will reflect the Gorst planning efforts in their plans through the adoption of the Watershed Characterization & Framework Plan and Gorst Subarea Plan.</p> <p>All alternatives are undergoing public review as part of the watershed and subarea</p>

CPP Concept Summary	Discussion
<p>City and the County.</p> <ul style="list-style-type: none"> ▪ If an adopted or proposed 20-year projected population distribution may require expansion of its UGA, the respective jurisdiction shall conduct planning and analysis, including a land capacity analysis, assessment of present zoning; consideration of reasonable measures; and ability to provide services. ▪ A jurisdiction, as part of its Comprehensive Plan amendment or sub-area plan process that proposes an expansion of the UGA, shall prepare or update a comparison of potential areas for expansion. ▪ Conduct early and continuous public involvement when establishing, expanding, or adjusting UGAs. <p>Centers for Growth. Identifies a hierarchy of areas of the county within which population and employment should be concentrated consistent with VISION 2040.</p> <p>Rural Land Uses and Development Patterns. Seeks to preserve and enhance the rural character of areas outside of the UGAs, by protecting the natural environment, open space and recreation, scenic and historic areas, and supporting small scale farming, low density residential living and cluster development at an appropriate scale, and with appropriate rural levels of service.</p> <p>Countywide Strategies for Open Space Preservation, Resource Protection and Critical Areas, Air Quality, and Water Quality/Quantity. Defines these areas and establishes the importance of maintaining, protecting and enhancing these areas.</p> <p>Contiguous, Compatible, and Orderly Development. Provides policies for cooperative inter-jurisdictional planning, and coordination of land use, transportation, environmental and infrastructure planning. Promotes fiscal equity such as revenue sharing due to changes in municipal boundaries. Provides policies on community design and development that promote the unique character of a community, encourage healthy lifestyles, and support sustainable economic and environmental development techniques.</p> <p>Siting Public Capital Facilities. Establishes a process for the siting of regional facilities, which would mitigate the potential adverse impacts from the location and development of these facilities.</p> <p>Transportation. Seeks to promote a transportation system, which would serve the designated centers, preserve the natural environment and provide for a balanced system for the efficient and safe movement of people, goods and services among the centers of Kitsap County and the larger Puget Sound Region. Promotes measures to reduce SOVs, and complete streets for all modes.</p>	<p>planning effort. Chapter 2 of this Draft EIS describes the public participation efforts to date</p> <p>The City of Bremerton has annexed SKIA and no change to center status is anticipated there, as is also the case with Downtown Bremerton.</p> <p>Under all alternatives, densities in the rural area will remain at one unit per five or 10a acres, a rural density that avoids sprawl. The Watershed Characterization & Framework Plan proposed under Alternatives 2 and 3 will help the County and cities make informed choices about the best locations for development and avoid inappropriate conversion of land.</p> <p>All Alternatives presume CUL will be maintained for forest and habitat management. Alternatives 2 and 3 would establish a Watershed Characterization & Framework Plan that identifies not only CUL protection but also other areas important for protection or restoration for fish and wildlife habitat. Alternatives 2 and 3 highlight County-owned property that is to be set aside for open space and recreation.</p> <p>The County and City are jointly planning in the watershed and in the Gorst UGA, and intend to both adopt the associated plans.</p> <p>Essential public facilities are not proposed in Gorst. However, there are proposals to mitigate the effect of past facilities (e.g. landfill on Gorst Creek in watershed).</p> <p>The mixed use pattern and lower commercial growth in Alternative 3 provides less congestion and may in the future provide more support to transit use. Alternative 2 does not worsen congestion beyond that already anticipated in Alternative 1 No Action. Alternatives 2 and 3 also promote added transit and non-motorized systems in Gorst (e.g. transit service at a park and ride).</p>

CPP Concept Summary	Discussion
<p>Housing. Establishes a framework for the provision of housing with in Kitsap County to all income levels at a variety of housing densities. Promotes a jobs/housing balance.</p>	<p>While all alternatives allow for housing, Alternatives 2 and 3 provide significant new opportunities for housing on the mine site. Further, Alternative 3 would promote a horizontal or vertical mixed use pattern, and would provide a new live-work housing choice.</p>
<p>Countywide Economic Development. Encourages coordinated economic growth among all jurisdictions in Kitsap County, a healthy economy with a spectrum of jobs, and diversification. Seeks to add predictability and certainty to private development decisions.</p>	<p>All alternatives support economic development in Gorst. Alternative 1 would promote highway-oriented commercial and some industrial uses. Alternative 2 focuses on a well-designed commercial corridor. Alternatives 1 and 2 would convert some present residential areas to more commercial uses, and assume the highest employment growth levels. Alternative 3 provides for mixed use economic opportunities with regional commercial uses as well as local serving commercial uses combined with mixed uses, such as in a horizontal format. With allowances for mixed residential uses, the job growth under Alternative 3 would not be as high as Alternatives 1 and 2.</p>
<p>Analysis of the Fiscal Impact. Identifies opportunities for jurisdictions to plan for infrastructure and services such as through comprehensive plans, CFP, at the time of UGA expansions, and UGA Management Agreements. Special districts should be involved in the planning for UGAs.</p>	<p>The City is conducting an annexation fiscal analysis. The Subarea Plan associated with Alternatives 2 and 3 incudes policies towards transition of governance as indicated in CPP policies regarding UGAMAs.</p>
<p>Coordination with Tribal Governments and the Federal Government. Seeks to involve and inform these governments in regional and local planning efforts in the county.</p>	<p>The Suquamish Tribe has been a project partner and a member of the Advisory Committee for the Gorst Creek Watershed Characterization & Framework Plan and Gorst Subarea Plan.</p>
<p>Coordination with Federal Government including Navy. Promotes coordination with the federal government on land use and other activities.</p>	<p>The EPA is directing the grant under which the Gorst planning efforts are occurring. The Navy has attended project partner meetings. The City has notified federal agencies about this planning process as part of public outreach methods including notices and similar means.</p>
<p>Roles and Responsibilities. Establishes the roles and Responsibilities for the various governments and agencies within the county including the KRCC, Kitsap County, the Cities, and Special Districts.</p>	<p>The County serves unincorporated Kitsap County and has assigned the Gorst UGA to the City of Bremerton. The County and Cities are jointly planning consistent with their roles.</p>

Shoreline Master Programs and Critical Areas

Both the County and City have locally adopted new Shoreline Master Programs that require Ecology approval prior to their being effective. These pending Shoreline Master Programs differ with respect to shoreline buffers on Gorst Creek. Kitsap County's proposed Shoreline Master Program and Critical Areas Regulations will apply in the Gorst UGA until such time as the area is annexed by the City when Bremerton's proposed regulations will apply. The City of Bremerton's shoreline buffer standards for the Sinclair inlet are greater than the County's, and the County's buffer standards for Gorst Creek are greater than the City of Bremerton's. Apart from these more prominent shorelines, the City of Bremerton and County regulate smaller streams and wetlands similarly.

The adoption of the Gorst Subarea Plan is an opportunity to develop joint standards for stream and shoreline protection. This is particularly important with the new analysis included in the watershed characterization and the recent list of steelhead (see Section 3.4 *Plants and Animals*). This Draft EIS Appendix D *Shoreline Buffer Comparison & Options* provides options for common shorelines standards along Gorst Creek to achieve some of the Watershed Characterization Study BMPs. These options could be considered as the final Subarea Plan is developed around a preferred alternative.

The Suquamish Tribe

The study area includes the Suquamish Tribes usual and accustomed fishing and hunting areas, as well as the Gorst Creek Hatchery. There are also cultural resources important to the tribe in the Gorst UGA and elsewhere.

Alternative 1, No Action, would continue current plans in the watershed. There would be less coordination regarding areas of protection and restoration, such as removal of fish passage barriers.

Action alternatives would implement a Watershed Characterization & Framework Plan that could better promote habitat restoration and protection and remove fish passage barriers. The Gorst Subarea Plan would include policies and plans also intended to operationalize BMPs of the watershed characterization.

Mitigation Measures

Incorporated Plan Features

The Watershed Characterization & Framework Plan and Gorst Subarea Plan provide a common set of plans and policies to ensure consistent and coordinated planning between the City of Bremerton, Kitsap County, and the Suquamish Tribe.

Applicable Regulations and Commitments

- In order to ensure consistency with GMA requirements, the City of Bremerton and Kitsap County will submit the Gorst plans to the Washington Department of Commerce for review and comment prior to adoption.
- As a preferred plan is prepared, the City of Bremerton and County will prepare a land capacity analysis prior to legislative adoption.

Other Potential Mitigation Measures

- The County and City of Bremerton could work with KRCC to reallocate population from undersized UGAs to Gorst to match Alternatives 2 or 3 population levels. This could be accomplished prior to the County and City of Bremerton's GMA required 2016 Comprehensive Plan Update. Until that time, the mineral resources designation could remain while the mine is still in active operation, thus not allowing residential growth until population targets are reallocated.
- The final Subarea Plan prepared for the preferred alternative could include coordinated shoreline and critical area standards. See Draft EIS Appendix D *Shoreline Buffer Comparison & Options* for a description of options.

Significant Unavoidable Adverse Impacts

With implementation of mitigation measures, no significant unavoidable adverse impacts are anticipated with regards to future plan consistency under any of the alternatives.

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None.

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5.0 DISTRIBUTION LIST

The following agencies and individuals were sent a notice of availability, or a compact disk, or a copy of the Draft EIS.

5.1 Federal Agencies

Federal Aviation Administration
Naval Base Kitsap
US Environmental Protection Agency

5.2 Tribes

Port Gamble/S'Klallam Tribe
Skokomish Tribe
Squaxin Island Tribe
Suquamish Tribe

5.3 State and Regional Agencies

Puget Sound Partnership
Puget Sound Regional Council
Kitsap Regional Coordinating Council
Washington State Department of Archaeology and Historic Preservation
Washington State Department of Commerce
Washington Department of Corrections
Washington State Department of Ecology
Washington State Department of Fish and Wildlife
Washington State Department of Health
Washington State Department of Natural Resources
Washington State Department of Social and Health Services
Washington State Department of Transportation

5.4 Local Governments

City of Bremerton City Council
City of Bremerton Planning Commission
City of Port Orchard
Kitsap County Assessor
Kitsap County Board of County Commissioners
Kitsap County Community Development
Kitsap County Parks and Recreation

Kitsap County Planning Commission

Kitsap County Public Works

Kitsap County Sheriff

Kitsap Public Health District

5.5 Services, Utilities, Special Districts, and Transit

Port of Bremerton

Puget Sound Energy

South Kitsap Fire and Rescue

South Kitsap School District

Sunnyslope Water District No. 15

5.6 Community Organizations

Kitsap Economic Development Alliance

Sustainable Bremerton

West Sound Watersheds Council

5.7 Newspapers

Bremerton Patriot

Kitsap Sun

5.8 Interested Persons and Stakeholders

Gorst UGA Property Owners

Gorst Community Workshop Participants (October 2012 Scoping and February 2013 Preliminary Alternatives)

Persons interested in planning – City and County email listservs

Appendix A
Gorst Watershed Public Scoping Summary

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GORST CREEK WATERSHED PLAN, GORST SUBAREA PLAN & PLANNED ACTION EIS

Public Scoping Summary: October and November 2012

PURPOSE AND INTRODUCTION

As part of the Gorst planning process, the City of Bremerton solicited public and agency input on the future vision for Gorst as well as the key environmental issues that should be evaluated in an environmental impact statement (EIS) under the State Environmental Policy Act (SEPA). This public scoping summary describes the comments received through a written comment period and a public scoping meeting. This summary also describes other related outreach such discussions with the Suquamish Tribe and business owner interviews.

Proposals

The City of Bremerton, in partnership with Kitsap County and other state, federal, and tribal agencies, is in the process of preparing a proposed Gorst Creek Watershed Plan, including a framework plan for the watershed as a whole and a subarea plan for the Gorst Urban Growth Area (UGA). Also under preparation are implementing land use and environmental regulations. It is also anticipated that a capital facilities plan (CFP) will be prepared to support the plan and to implement infrastructure. The plan and regulations will undergo public review and refinement through late 2013. The planning efforts in the Gorst Creek Watershed and Gorst Urban Growth Area (UGA) are intended to:

- To plan the future of the Gorst area over the next 20-30 years by defining the land use options,
- To protect water quality, habitat and fish while fostering economic development,
- To establish areas for development, restoration and protection based on science,
- To develop a long-range capital improvement plan to provide for future utility services, public services and transportation needs, and
- To make Gorst a place where people want to live, shop and recreate.

Part of the process entails the preparation of a SEPA EIS to evaluate natural and built environment topics and alternative land use patterns, particularly in the Gorst UGA. To facilitate development and restoration in the Gorst UGA, the City anticipates adopting a planned action ordinance as part of the EIS. Future development proposals consistent with the planned action ordinance would not have to undergo a new environmental threshold determination, and would not be subject to SEPA appeals when consistent with the planned action ordinance including specified mitigation measures.

Scoping Activities and Advertisements

Public and agency comment was solicited in a 21-day written scoping period from October 15 to November 5, 2012. The City also held a public meeting on October 29, 2012 to ask about the vision for Gorst and about the EIS scope.

Scoping notices and a meeting announcement were sent by mail to each property owner in the Gorst UGA, and to a list of federal, state, and local agencies and tribes. The City and County also sent these documents by email to lists of persons interested in planning issues in the City and County. The City's website, located at: <http://www.ci.bremerton.wa.us/gorstwatershed/>, included a comment form. The scoping notice was published in

the Kitsap Sun on October 15, 2012 to notify any other persons having an interest in the project. A copy of the scoping notice and meeting flyer are attached.

WRITTEN SCOPING COMMENTS

During the 21-day comment period, written comments were received from citizens and agencies as follows in Exhibit 1. Copies of written comments by agencies are provided in the attachment and should be reviewed for the full statements; copies of citizen comments are available at City Hall. Also, it should be noted that a questionnaire distributed at the public meeting was returned by four persons, and those are described further below in this document and also available for review at City Hall.

Exhibit 1. List of Commenters and Key Topics

Date	Name/Agency	Summary
Website Comment Form		
October 15, 2012	Pat Waters	Stormwater runoff that is undermining many of the roads in the vicinity of Feigley and the frontage road along with Hwy 16 submersion during storms.
October 29, 2012	Tina London, Navy City Metals	Would like scoping meeting notes as she could not attend. Also, main objective is how project could affect the business and property. Also willing to help out and assist.
October 30, 2012	Julie Larson	Enjoyed public meeting. Provided examples (links) of low-impact development, and also development examples to avoid. Perhaps a Dollar store would do well.
November 2, 2012	Julie Larson	Residence was robbed. Now concerned by signing in at meeting she may have provided personal information available for others to view who were also signing in. [Consultant Response: The meeting Sign-In Sheet asked for a name, email address, and affiliation. No street addresses were requested.]
Written Comments		
October 29, 2012	Yvonne Sadtler, Mattress Ranch	Would like to see the right lane of 16 west become a "Business Route" that is a 25mph zone that runs from just before Elandon Gardens and ends right before Viking Fence. Would like water pipe under road fixed. Understand potential rezoning to mixed use and annexation to City. Appreciated contact.
November 4, 2012	Harry Gilger, member West Sound Cycle Club	Encourage the City to actively pursue the proposed Bike Trail from the West side of Bremerton through Gorst to Port Orchard
November 4, 2012	Ann Richey	Support Gorst trail.
November 5, 2012	William Abbey	Support proposed Sinclair Trail.
November 5, 2012	Dan Kronyak	Support the development of a hard surface pedestrian/bicycle

Date	Name/Agency	Summary
		shared path that provides a safe transportation link between Port Orchard and Bremerton.
November 5, 2012	David Miller	Support for the proposed Sinclair Trail.
November 5, 2012	Jay Spady	Provide an interconnected hard surface shared use path/trail (recommended routes suggested); expedite a Park and Ride; provide park areas to maximize access to Sinclair Inlet; provide rules for adequate stream buffers; provide zoning to result in Gorst being more family friendly; address transportation – free arterials from serving as local frontage roads; providing zoning for shopping areas and nice multifamily dwellings.
November 5, 2012	Ron Landon, WSDOT	Request that planning team seek input from WSDOT. Gorst as a destination could exacerbate congestion. Would like to review traffic analysis and potential impacts to state routes forthcoming in plan and EIS. WSDOT identifies pending study at SR 3/ SR304 and would like to review Gorst study methods and assumptions. Address transit and mode share. Very interested in mitigation measures. In planned action ordinance include a process where WSDOT can be notified of development applications and can review proposals. How will mitigation be required on a case-by-case evaluation? Also WSDOT is interested in the stormwater and watershed planning components and how they can provide mitigation and treatment options that may benefit WSDOT.
Post – Scoping Comments		
November 7, 2012	Fred Grimm	Support for proposed Sinclair Trail.
November 7, 2012	Tim Baker, President, West Sound Cycling Club	Urge City support the proposed Sinclair Trail Project along the Navy's railroad tracks between PSNS and Gorst
November 7, 2012	Brian E. Watson, member West Sound Cycle Club	Support the construction of the Sinclair Trail to connect the shipyard area to Gorst.

SCOPING OPEN HOUSE AND WORKSHOP

Workshop Activities

The City of Bremerton held a public scoping meeting to solicit comments on the Gorst Creek Watershed Plan, Gorst Subarea Plan, and Planned Action EIS. The meeting was held on October 29, 2012 from 5 to 7 p.m. and featured periods of open house and an active workshop. Approximately 37 persons participated. The agenda was as follows:

5:00-5:30	Open House
5:30-5:50	Presentation
5:50-6:20	Visioning Exercise – SWOT Analysis
6:20-6:30	Group Reporting
6:30-7:00	Open House

Heather Kauer, City of Bremerton, provided a welcome at the beginning of the presentation. Members of the consulting team, Bill Webb, AECOM, and Lisa Grueter, BERK, gave a presentation regarding the purpose of the Gorst planning efforts, EIS topics, and draft guiding principles. Heather Kauer provided an overview of the annexation process. A general question and answer period was held. Questions from audience related to code enforcement, creeks and stormwater, and traffic.

Following the presentation, meeting participants were asked to participate in a small group exercise to identify strengths, weaknesses, opportunities, and threats/challenges in Gorst. The groups were facilitated by City and County staff and Consultants. Small groups were asked to have a citizen report results to the larger group. Results are shown in Exhibit 2 below.

Citizens could also ask questions of City and County staff and consultants following the presentation in an informal one-on-one manner.

Kitsap County staff available included Eric Baker, Special Projects Division Manager, Katrina Knutson, Senior Planner, and Jim Rogers, Transportation Planner. City staff in attendance included Heather Kauer, Deputy Director of Community Development, Doug McIntyre, City Planner, and Dave Tanner, Stormwater Engineer. Consultant staff included Bill Webb, Bill Kreager, and Dennis Struecker with AECOM, and Lisa Grueter and Erik Rundell with BERK.

Exhibit 2. SWOT Analysis

Strengths – Group 1	Strengths – Group 2	Strengths – Group 3	Opportunities – Group 1	Opportunities – Group 2	Opportunities – Group 3
<p>Quality of life</p> <p>Strong sense of community</p> <p>Central access</p> <p>Poggie Club (children's fishing)</p>	<p>Views of the mountains and Sound</p> <p>Accessibility to highway (but dangerous)</p> <p>New sewer (add uplands?)</p> <p>Shoreline access</p> <p>Location image as Sound and salmon</p>	<p>Wooded and forested, "green"</p> <p>Blue -> water, creek, inlet</p> <p>Rural and low density</p> <p>Safe and quiet</p> <p>Connected to rest of the County, Bremerton, Port Orchard</p> <p>Central location</p> <p>Shoreline -> Extensive Wildlife, Eagles, deer, seals, etc.</p>	<p>Waterfront access/trail/park</p> <p>Gorst Salmon Days</p>	<p>Sound barriers</p> <p>With new sewers, Park is now possible?</p> <p>Brownfield</p> <p>Name change "Sinclair"</p>	<p>Sidewalks, trails, local trails and intra-county</p> <p>Litter cleanup</p> <p>More inviting businesses, local-serving, places people stop</p> <p>Bus to Bremerton ferry dock</p> <p>Frontage road (increase flow, spread of through traffic)</p> <p>Tree preservation</p> <p>Beach/water access and signage</p> <p>Kayak launching point</p> <p>More public land/park space</p>
Weaknesses – Group 1	Weaknesses – Group 2	Weaknesses – Group 3	Threats – Group 1	Threats – Group 2	Threats – Group 3
<p>Confusing access</p> <p>Stopping not possible, safely</p> <p>Lack of snow plowing</p> <p>Not attractive</p>	<p>Vehicle noise</p> <p>Traffic dangers – 72,000 cars/day</p> <p>Access to businesses creates bottleneck</p> <p>Landscaped</p> <p>North highway is overplanted, not maintained</p> <p>Overgrown</p> <p>Across highway from Kitsap Muffler</p> <p>Sawmill site</p> <p>Storm runoff on back roads</p> <p>Need for quality shopping?</p>	<p>Seedy businesses -> topless coffee shops</p> <p>Rundown businesses and properties</p> <p>Difficult access to get off highway</p> <p>Traffic collisions</p> <p>Litter, litter on beach</p> <p>No access to water or beach</p> <p>Highway local access vs. controlled access</p> <p>Traffic-highway and local roads are backed-up</p> <p>No way to walk – illegal to walk along the highway</p>	<p>Traffic</p>	<p>Flooding – creek, highway runoff</p> <p>Tax changes in City</p> <p>Property values are up or down</p> <p>Environmental remediation</p> <p>Continued usability</p>	<p>Competing uses – commercial vs. parks</p> <p>"seedy" businesses are successful, profitable</p> <p>Change in transportation seen as negative to businesses</p> <p>Higher taxes with annexation</p> <p>Topography</p>

Group 1 (Dennis and Jim, Facilitators), Group 2 (Bill, Facilitator), Group 3 (Erik and Katrina, Facilitators)

Written Input

Questionnaires

A questionnaire was distributed at the meeting asking about draft guiding principles, key environmental topics and other questions. Four were returned and are part of the attachments. A summary of input follows.

What do you think would make Gorst a place to stop?

- Eliminate shady places like Toys Topless and topless coffee shops.
- Regular litter clean up.
- Beautiful public places – trails.
- Clean up the beach.
- Gentrification – cute stores, Starbucks places that are pleasant to be at and stay awhile.
- Clean it up.
- Community – rename it to Sinclair Inlet (the Community of Sinclair on Gorst Creek). Legacy – farmer Gorst has his “Gorst Creek”.
- Take advantage of water view
- 1) A park; 2) Shopping, grocery; 3) Environmentally friendly. Townhomes?
- Bus stop for transit
- Get rid of the junkyard. A decent grocery store. A bus stop/public transportation.

What are the top 3 issues you think the Gorst Creek Watershed Plan and Gorst Subarea Plan should address?

- Aesthetics, economic development, natural environment.
- Aesthetics, cultural resources, land use, natural environment, ecofriendly park.

What do you like about the Guiding Principles?

- Environmental concern.
- Don't worry about land value, per se.

What would you change about the Guiding Principles?

- Sort of with the Bremerton Boardwalk to Port Orchard was still planned.

Is anything Missing from the Guiding Principles?

- We really hope there will be trails for hiking.
- Clean up junky properties.

Is there anything else you'd like to share?

- We like the name Gorst, for the record. When building – please PRESERVE THE TREES! Development is great, but don't let it become just like California – pavement + strip malls and anonymous Sim City-like streets. Trees make all the difference. Please preserve the mural at the Packiat's Toybox. We are very concerned about the eagles, herons, salmon + Trees + wildlife. They are #1 important most. Deer, wild birds, etc. PRESERVE THE GORST MISSILE! We wish Sherman Heights Road had a sidewalk!? Park and Ride to the Ferry! A grocery store?

- I have rental properties that are zoned HTC. Adjacent, I have lots that currently are not allowed to have a residence put in because of the commercial zoning. I would like to see mixed-use zoning, so I could exploit the property to its highest and best use, whether it be residential (rental in my case) or commercial.
- I have enclosed a map to clarify my area of concern. The impact of commercial zoning on both sides of Gorst Creek is too profound. Why encourage it in an area that is mainly an estuary and should be protected as such. By the way, please note the planned expansion of the Lockhart Quarry that was facilitated by the 2003 zoning decision—this doesn't look like a plan for housing development to me.

Cover Story Poster

Another means of attracting input was an opportunity to write a headline for a future cover story on Gorst – 20 years from now. Two persons provided some feedback as follows.

How would people now describe Gorst (in 20 years)?

- Driving from the north in Bremerton – gateway has shoreline vegetation that allows views to the water and a boardwalk
- Put all the through traffic overhead on a viaduct (cheaper than bridge) – better for businesses

PRE-SCOPING COORDINATION AND OUTREACH

Tribal Coordination

The primary agency partners in the Gorst project are the City of Bremerton (lead), Kitsap County, and the Suquamish Tribe. Each has assigned elected and appointed officials to serve in an advisory capacity. The City and County will ultimately adopt the Gorst Watershed Plan and Gorst Subarea Plan and associated EIS and regulations in consultation with the Tribe.

To assist with project coordination and obtain early input, the Mayor of Bremerton and Suquamish Tribe met to share information and discuss key topics of mutual concern regarding planning and the EIS. Key issues included ensuring restoration is considered as an economic development activity, addressing fish passage, addressing trails, and ensuring cultural resources are evaluated.

Business Interviews

The City and consultant staff mailed correspondence and walked around to businesses to promote the scoping process, discuss the land use plan and annexation, and hear about business owner plans for the future. Meetings were held informally in late September and early October. Some businesses provided written comments as shown in Exhibit 1 above.

NEXT STEPS

The City and project partners will consider the scoping comments as draft land use alternatives and plans are developed. The EIS will address a large variety of natural and built environment topics and the topics identified will be covered, e.g. transportation, stormwater, natural environment, land use, and others. A draft plan and Draft EIS will be issued in spring 2013, and will allow for additional public comment.

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ATTACHMENTS

A. Scoping Advertisements

B. Scoping Meeting Materials

C. Agency Comments

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Determination of Significance & Request for Comments on Scope of Planned Action EIS

Description of Proposal

The City of Bremerton, in partnership with Kitsap County and other state, federal, and tribal agencies, is in the process of preparing a proposed Gorst Creek Watershed Plan, including a framework plan for the watershed as a whole and a subarea plan for the Gorst Urban Growth Area (UGA). Also under preparation are implementing land use and environmental regulations. It is also anticipated that a capital facilities plan (CFP) will be prepared to support the plan and to implement infrastructure. The plan and regulations will undergo public review and refinement through late 2013.

This plan will create a land use framework and implementing development, design, and street standards to establish a cohesive vision for a livable district and to encourage investment in the Gorst UGA. Concepts include a range of permitted land uses with emphasis on residential, retail and commercial uses. The subarea plan and implementing zoning are anticipated to serve as pre-annexation planning and zoning pursuant to RCW 35.13.177.

Land use plans and regulations could include increased residential density in targeted areas and new development standards that provide for protection of environmental processes and provide development incentives for enhanced economic development.

The City is also proposing to adopt a Planned Action Ordinance for the Gorst UGA. A Planned Action Ordinance, if adopted pursuant to WAC 197-11-164 to 172, would indicate that the completed EIS adequately addresses significant impacts of the proposed action, and that future projects consistent with the analyzed projects and parameters of the Planned Action Ordinance would not require future SEPA threshold determinations or EISs. Therefore, comment during this Scoping period is encouraged.

The EIS will analyze the *No Action Alternative*, e.g. continuation of the City and County's current Comprehensive Plan and development regulations applicable to the UGA and watershed without amendment. It is also anticipated that the EIS will address two *Action Alternatives* that may review various land use patterns such as an increase residential development options and enhancement of commercial options while promoting environmental restoration and protection.

Proponents

City of Bremerton and Kitsap County

Location of Proposal

The Gorst Creek Watershed and Gorst UGA together comprise the planning boundaries, and encompass over 6,000 acres in the southwestern portion of Kitsap County. Several jurisdictional boundaries cross into the watershed: about 3,600 acres encompass Bremerton City Limits, most of which is zoned as utility lands, about 335 acres are in the Gorst UGA, nearly 180 acres are in the McCormick Woods area of the City of Port Orchard, and the balance of about 1,940 acres are rural, unincorporated lands.

Lead Agency

City of Bremerton

EIS Required

The lead agency has determined this proposal is likely to have a significant adverse impact on the environment. An environmental impact statement (EIS) is required under RCW 43.21C.030 (2)(c) and will be prepared. An environmental checklist or other materials indicating likely environmental impacts can be reviewed at City Hall, 345 6th Street, Suite 600, Bremerton or at the project website: <http://www.ci.bremerton.wa.us/gorstwatershed/>.

The lead agency has identified the following areas for discussion in the EIS: Natural Environment (geology/soils, water resources including surface water, groundwater, and stormwater, air quality, plants and animals), Noise, Hazardous Materials, Land Use Patterns/Plans and Policies, Socioeconomics, Aesthetics, Cultural Resources, Transportation, and Public Services and Utilities.

Scoping

Agencies, affected tribes, and members of the public are invited to comment on the scope of the EIS. You may comment on alternatives, mitigation measures, probable significant adverse impacts, and licenses or other approvals that may be required. The methods and deadline for giving us your comments are:

Mail written comments to the Responsible Official at the address below or email comments to heather.kauer@ci.bremerton.wa.us. **The City must receive the comments by 5:00 pm November 5, 2012.**

Interested citizens, tribes, and agencies are also invited to a **scoping meeting on Monday, October 29, 2012**, at the Kitsap Square Dance Association, Dance Hall located at 6800 W Belfair Valley Road, from **5:00pm-7:00 pm**. The meeting is an opportunity to review available information, participate in a visioning exercise, and ask questions. Comments can be submitted at the meeting.

SEPA Responsible Official:

Responsible Official: Andrea Spencer, AICP

Position/Title: Director, Department of Community Development

Phone: 360-473-5283 **Fax:** 360-473-5278

Contact Person: Heather Kauer

Position/Title: Assistant Director, Department of Community Development **Phone:** 360.473.5297

Address: 345 6th Street, Suite 600, Bremerton, WA 98337

Email: heather.kauer@ci.bremerton.wa.us

Phone: (360) 473-5275 - Fax: (360) 473-5278

Date:

10/10/12

Signature:





You're Invited!

What **Scoping Meeting** for the Gorst Creek Watershed Plan & Environmental Impact Statement (EIS)

When Monday, October 29, 2012
5:00 PM - 7:00 PM

Where Kitsap Square Dance Association, Dance Hall
6800 W Belfair Valley Road

Why **Join us** for an open house and workshop to talk about the Gorst Creek Watershed Plan, Gorst Urban Growth Area (UGA) Subarea Plan, and Planned Action EIS under development by the City of Bremerton, together with Kitsap County and other state, federal, and tribal agencies. At the meeting, you can review available information, participate in a visioning exercise, ask questions and provide comments on the future of the watershed and UGA.

Visit the project web site at: <http://www.ci.bremerton.wa.us/gorstwatershed/>

For More Information

Heather Kauer, Assistant Director
Bremerton Planning and Community
Development Department
(360) 473-5275

Heather.Kauer@ci.bremerton.wa.us

or

David Tanner, PE
Bremerton Public Works Department
(360) 473-5344

david.tanner@ci.bremerton.wa.us



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GORST CREEK WATERSHED PLAN, GORST SUBAREA PLAN & ENVIRONMENTAL IMPACT STATEMENT

October 29, 2012

Scoping Meeting



STUDY AREA

Entire Watershed
vs. Urban Growth
Area

Part Bremerton,
Part County,
Part Port Orchard

Boundaries are
based on
Hydrology—NOT
Jurisdiction

MEETING PURPOSE

1. Describe the planning efforts in Gorst area over 2012/2013
2. Welcome feedback on:
 - a. Vision: What is the future of Gorst over the next 20 years?
 - b. EIS Scoping: What built and natural environment topics should we address in an environmental impact statement to be prepared over the next year?



PURPOSE OF PLANNING EFFORT

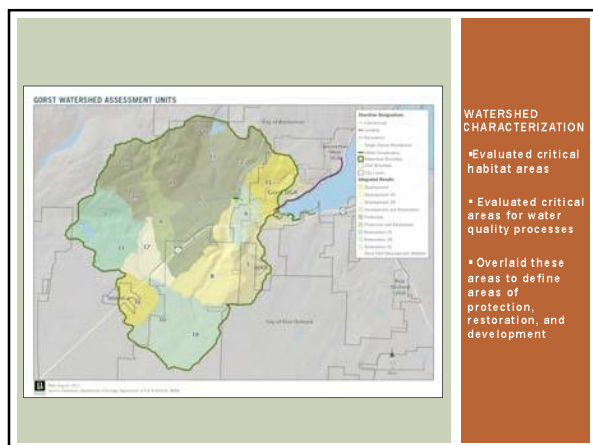
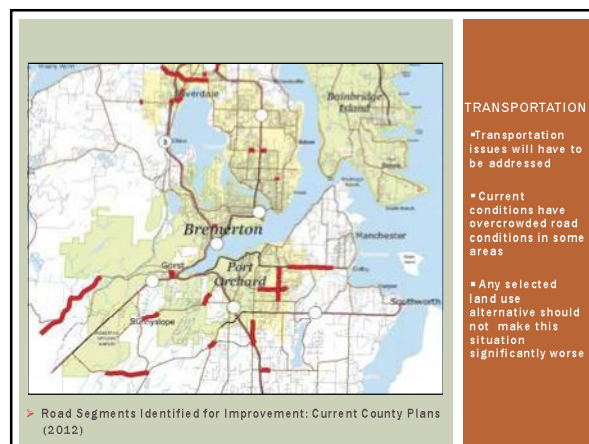
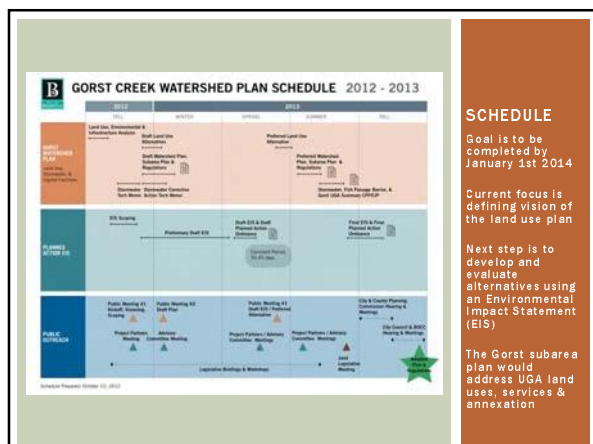
- To plan the future of the area over the next 20-30 years by defining the land use options
- To protect water quality, habitat and fish while fostering economic development
- To establish areas for development, restoration and protection based on science
- To develop a long-range capital improvement plan to provide for future utility services, public services and transportation needs
- To make Gorst a place where people want to live, shop and recreate

AGENDA

- | | |
|--------------------------------------|-----------|
| ■ Open House | 5:00-5:30 |
| ■ Presentation | 5:30-5:50 |
| ■ Visioning Exercise – SWOT Analysis | 5:50-6:20 |
| ■ Group Reporting | 6:20-6:30 |
| ■ Open House | 6:30-7:00 |

PROJECT PARTNERS

- City of Bremerton
- Kitsap County
- The Suquamish Tribe
- Kitsap County Heath District
- Port of Bremerton
- Puget Sound Partnership
- USEPA
- Washington Department of Fish and Wildlife
- Washington Department of Ecology
- Sustainable Bremerton
- West Sound Watershed Council
- City of Port Orchard
- ALL OF YOU!



WHAT WILL THE EIS COVER?

- Geology/soils
- Air quality
- Water resources
- Stormwater
- Plants and animals
- Noise
- Hazardous Materials
- Land Use Patterns
- Plans and Policies
- Socioeconomics
- Aesthetics
- Cultural Resources
- Transportation
- Public Services & Utilities

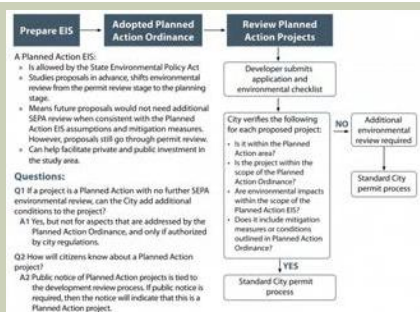
REVITALIZING GORST

Community Vision & Economic Development



- Make Gorst a place to stop/visit
- Facilitate development of economically valued land
- Recognize environmental restoration as a tool that can support the local economy

WHAT IS A PLANNED ACTION?



FACILITATING SUSTAINABLE ECONOMIC GROWTH

Development Pattern



- Identify and prioritize land that can be more intensely developed with less environmental consequences
- Promote green infrastructure for both new and existing facilities, such as by identifying areas to target for stormwater retrofits
- Support development incentives and evaluate options such as off-site mitigation, mitigation banking, transfer development rights (TDRS), and other tools where appropriate

GUIDING PRINCIPLES

- Drafted based on:
 - Gorst Creek Watershed Characterization Report and Map Inventories
 - Coordination with project partners such as Kitsap County, Suquamish Tribe, and federal and state agencies.
- The Guiding Principles are meant to:
 - Provide a vision, parameters, or essential ingredients
 - Steer the preparation of the watershed plan and particularly the Gorst Subarea Plan
- See questionnaire



ENHANCING AND RESTORING THE ENVIRONMENT

Environmental Protection



- Identify and protect critical areas
- Prioritize areas to be protected and restored
- Protect and enhance water quality/quantity for fish and wildlife habitat as well as for human use
- Promote shoreline reclamation

THE DESIRED END PRODUCT

Urban Design, Land Use, Services & Transportation



- Create a cohesive and attractive urban character in the Gorst UGA
- Allow an environmentally sustainable pattern of land use in the rural areas of watershed
- Improve transportation mode choices including transit, bicycle, pedestrian, and autos, recognizing local as well as regional travel needs
- Develop a plan to ensure that future service needs are met
- Promote interpretive art, signage, and public spaces that recognize cultural history and environmental features

QUESTION & ANSWERS

ANNEXATION

- Under GMA, preference is that Urban Growth Areas (UGAs) be served by cities
 - Kitsap County has associated the Gorst UGA with the City of Bremerton
- Subarea Plan would establish pre-annexation plan/zoning
- Subarea Plan would address transition from County to City services
- See fact sheet on annexation
 - Answers frequently asked questions about annexation
- Annexation timeline – preparing for it over 2013 and likely effective following plan adoption
- The City is committed to working with the Gorst Community now and in the future

Gorst citizens will have a voice in the subarea plan over 2012/2013

See Schedule for planned comment opportunities

WORKSHOP INPUT

- SWOT Analysis
- Newspaper Headline Poster
- Questionnaire
- Comment Sheet





GORST CREEK WATERSHED PLAN, GORST SUBAREA PLAN, AND PLANNED ACTION EIS

Project Fact Sheet

What is the purpose of the Gorst planning effort?

The planning efforts in the Gorst Creek Watershed and Gorst Urban Growth Area (UGA) are intended to:

- To plan the future of the Gorst area over the next 20-30 years by defining the land use options,
- To protect water quality, habitat and fish while fostering economic development,
- To establish areas for development, restoration and protection based on science,
- To develop a long-range capital improvement plan to provide for future utility services, public services and transportation needs, and
- To make Gorst a place where people want to live, shop and recreate.

What is the study area?

The Gorst Creek Watershed and Gorst UGA together comprise the study area, and encompass over 6,000 acres in the southwestern portion of Kitsap County.

- About 3,597 acres comprise Bremerton city limits.
- The unincorporated Gorst UGA is approximately 335 gross acres in area (about half of which are in the watershed).
- Approximately 178 acres are in the McCormick Woods area of the City of Port Orchard.
- The balance of the watershed, about 1,941 acres, consists of Rural unincorporated land.

Who is planning for the area? What plans will be prepared?

The City of Bremerton, in partnership with Kitsap County and other state, federal, and tribal agencies, is in the process of preparing a proposed Gorst Creek Watershed Plan, including a framework plan for the watershed as a whole and a subarea plan for the Gorst UGA. Also under preparation are implementing land use and environmental regulations. It is also anticipated that a capital facilities plan (CFP) will be prepared to support the plan and to implement infrastructure. The plan and regulations will undergo public review and refinement through late 2013.

How is the plan funded?

The planning effort is funded through the US Environmental Protection Agency's Watershed Management Assistance Program Grant and from the participation of Gorst government agencies, regional stakeholders, and property owners.

Is annexation under consideration?

Under the Growth Management Act (GMA), the preferred urban service providers in UGAs are cities. Kitsap County has associated the *Gorst UGA* with the City of Bremerton, meaning the City is the designated future service provider for the UGA and may annex it. The subarea plan and implementing zoning are anticipated to serve as pre-annexation planning and zoning pursuant to RCW 35.13.177. The subarea plan will also address the transition from County to City services. The City proposes to annex the Gorst UGA following the completion of the subarea plan. The City intends to work closely with the Gorst community now during the planning process and following annexation.

What is an Environmental Impact Statement (EIS)?

Generally an EIS is an informational document that provides the City, public, and other agencies with environmental information to be considered in the decision-making process for new development. It also allows residents, businesses, and other government agencies to comment on proposals and alternatives. An EIS describes: proposed actions and alternatives; existing conditions of the study area; impacts that may occur if an alternative were implemented; mitigation measures to reduce or eliminate impacts; and potential significant, unavoidable, and adverse impacts.

What is scoping?

Scoping is a process intended to narrow the scope of every EIS to the probable significant adverse impacts and reasonable alternatives, including mitigation measures. Interested parties, agencies, and tribes may comment on EIS alternatives, issues the EIS should evaluate, probable significant adverse impacts, and licenses or other approvals that may be required.

The City has identified the following areas for discussion in the EIS: Natural Environment (geology/soils, water resources including surface water, groundwater, and stormwater, air quality, plants and animals), Noise, Hazardous Materials, Land Use Patterns/Plans and Policies, Socioeconomics, Aesthetics, Cultural Resources, Transportation, and Public Services and Utilities.

The EIS will analyze the *No Action Alternative*, e.g. continuation of the City and County's current Comprehensive Plan and development regulations applicable to the UGA and watershed without amendment. It is also anticipated that the EIS will address two *Action Alternatives* that may review various land use patterns such as an increase residential development options and enhancement of commercial options while promoting environmental restoration and protection.

What is a Planned Action?

A planned action provides more detailed environmental analysis during formulation of planning proposals rather than at the project permit review stage. The basic steps in designating a planned action are to prepare an EIS, designate the planned action area and projects by ordinance, and review permit applications for consistency with the ordinance (see WAC 197-11-164 to 172). Future development proposals consistent with the planned action ordinance do not have to undergo an environmental threshold determination, and are not subject to SEPA appeals when consistent with the planned action ordinance including specified mitigation measures. This tool has been used elsewhere by local governments in Washington State, including Bremerton. The City is considering designating a planned action for the Gorst UGA.

How do I comment?

Public comment is being solicited in a scoping process from October 15 to November 5, 2012. Mail written comments at the address below or email comments to Heather.Kauer@ci.bremerton.wa.us. **The City must receive the comments by 5:00 pm November 5, 2012.** Additional comment opportunities will be available following the preparation of the draft plans and draft EIS.

For More Information:

Visit the project web site at: <http://www.ci.bremerton.wa.us/gorstwatershed/>

Heather Kauer, Assistant Director
Community Development Department
City of Bremerton | 345 6th Street | Bremerton, WA 98337

Phone: 360-473-5297 - Fax: 360- 473-5278
Heather.Kauer@ci.bremerton.wa.us



Gorst Watershed Plan & Gorst Subarea Plan: Draft Guiding Principles Questionnaire

Guiding Principles have been drafted from the Gorst Creek Watershed Characterization Report and Inventory Map Folio as well as coordination with project partners such as Kitsap County, Suquamish Tribe, and federal and state agencies. **The Guiding Principles are meant to provide a vision, parameters, or essential ingredients that steer the preparation of the Land Use Plan. The questionnaire below asks your thoughts about the draft Guiding Principles.**

Draft Guiding Principles

Community Vision & Economic Development

Make Gorst a place to stop

Facilitate development of economically valued land

Recognize environmental restoration as a tool that can support the local economy

Development Pattern

Identify and prioritize land that can be more intensely developed with less environmental consequences

Promote green infrastructure for both new and existing facilities, such as by identifying areas to target for stormwater retrofits

Support development incentives and evaluate options such as off-site mitigation, mitigation banking, transfer development rights (TDRS), and other tools where appropriate

Environmental Protection

Identify and protect critical areas

Prioritize areas to be protected and restored

Protect and enhance water quality/quantity for fish and wildlife habitat as well as for human use

Promote shoreline reclamation

Urban Design, Land Use & Transportation

Create a cohesive and attractive urban character in the Gorst urban growth area (UGA) such as by improving building design, and creating and enhancing public spaces such as parks, trails, pedestrian corridors and streetscapes

Allow an environmentally sustainable pattern of forestry, low density residential, small scale employment, and recreation uses in the rural areas of watershed

Improve transportation mode choices including transit, bicycle, pedestrian, and autos, recognizing local as well as regional travel needs

Promote interpretive art, signage, and public spaces that recognize cultural history and environmental features

Questions

A. What do you think would make Gorst a place to stop?

B. What are the top 3 issues you think the Gorst Creek Watershed Plan and Gorst Subarea Plan should address? (Check three)

- Aesthetics
- Annexation
- Cultural Resources
- Economic Development
- Hazardous Materials
- Land Use
- Natural Environment (geology/soils, water resources, air quality, plants and animals)
- Noise
- Public Services
- Transportation
- Utilities
- Other: _____

C. What do you like about the Guiding Principles?

D. What would you change about the Guiding Principles?

E. Is anything Missing from the Guiding Principles?

[illegible]

Name:	Address:
Email Address:	Phone Number

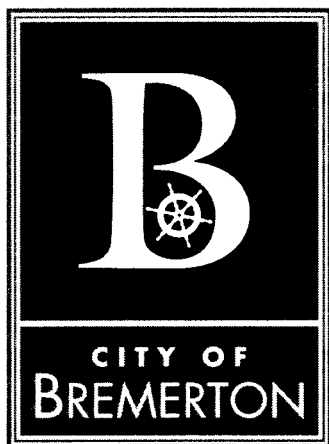
Heather Kauer, Assistant Director
Bremerton Community Development Department
City of Bremerton | 345 6th Street | Bremerton, WA 98337
Phone: 360-473-5297 - Fax: 360- 473-5278
Heather.Kauer@ci.bremerton.wa.us

SWOT ANALYSIS

A “SWOT” analysis is an exercise considering strengths, weaknesses, opportunities, and challenges/threats in the Gorst Watershed & UGA.

Strengths What are the positive attributes currently present in Gorst?	Opportunities What can be done in Gorst to address its weaknesses? (e.g. targeted investment)
Weaknesses What local issues or characteristics limit opportunities in Gorst?	Challenges/Threats What challenges and trends must be overcome in Gorst’s future?

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CITY OF BREMERTON

Tax & License Division
345 6th Street, Suite 600
Bremerton, WA 98337-1873
(360) 473-5298 (360) 473-5311
Fax (360) 473-5200

TAX & LICENSE INFORMATION FOR ANNEXED BUSINESSES

LICENSING REQUIREMENTS

Bremerton Municipal Code (BMC) Chapter 5.02.060 requires any person who engages in business activities in the City to obtain a general business license for the current calendar year or unexpired portion thereof, and pay the fees. All businesses located in the annexed region will be required to apply for a business license with the City. The annual business license fee is currently \$75.00 and is renewable January 1st. The license fee for businesses located in the annexed area would be pro-rated to the month the annexation is effective. The license application is available on the City's website at www.ci.bremerton.wa.us under Forms and Applications. You may also call our office at the above numbers and we will be happy to e-mail or fax you the application.

BUSINESS & OCCUPATION TAXES

The City of Bremerton levies a Business & Occupation tax as provided in BMC Chapter 3.48. The tax is levied for the privilege of engaging in business activities within the City and is also known as a Gross Receipts tax. The tax is determined by application of various rates against gross proceeds of sale, less any allowable deductions and exemptions. The rates currently range from .125% to .2%, depending on type of business activity. Currently, the first \$60,000 of gross revenue is exempt from taxation. This exemption is scheduled to increase to \$80,000 in 2013 and be increased by an additional \$20,000 each year thereafter. Taxpayers have the option of filing tax returns quarterly or annually, depending on their expected revenues, but, **because of special tax rule conditions for the annexed regions, all existing businesses in the annexed regions should indicate an annual reporting status on the Business Application form.** The tax form has detailed instructions on how to complete it and we are always happy to assist you if you have any questions. You may reach us by telephone at the above listed numbers or you can direct questions via email to taxinfo@ci.bremerton.wa.us. Emails are generally answered on the same business day they are received.

Requirements for businesses currently located in the Annexed area

BMC Chapter 3.48.090(20) grants a Three (3) year exemption for annexed businesses from Business & Occupation tax. The business must be located in the annexed region on the date of annexation to qualify. Once again, the exemption applies to any business activity that takes place in the annexed region. Business activities occurring off the annexed region but within the City are still subject to taxation.

Requirements for businesses locating within the Annexed area after the date of annexation

BMC Chapter 3.48 makes no special provisions for businesses that locate in an annexed region after the date of annexation. These businesses are subject fully to the Business & Occupation tax on all gross receipts less any allowable deduction or exemption as provided in BMC Chapter 3.48.

Sales Tax Reporting

Once the annexation takes place and the area is part of the City of Bremerton, revenue generated or delivered within City limits should be reported under the City of Bremerton jurisdiction code 1801. If the business is not registered with the Department of Revenue, you will be required to obtain a Washington State Master Business License prior to being issued your City Business License.

Gorst Annexation—Frequently Asked Questions

1. *What is annexation?*

Annexation is a procedure for bringing unincorporated areas of a county into an adjacent incorporated city. After an area is annexed, the city becomes the primary provider of local government services.

2. *Who is eligible for annexation?*

Properties must be located within the Gorst Urban Growth Area (UGA) in order to be eligible for this annexation.

3. *What Will Change/Stay the Same?*

Service/Regulations	Current Provider (Today)	Future Provider (After Annexation)
Wastewater – septic system	If you are currently on septic, you will continue to be on septic	Unchanged
Wastewater – sewer	If you are currently on sewer, you are served by the City of Bremerton	Unchanged
Water	City of Bremerton	City of Bremerton
Garbage collection	Kitsap County	City of Bremerton
School Districts	South Kitsap School District	South Kitsap School District
Taxes	Taxes are currently paid to the County	Taxes will be paid to the City of Bremerton
Development/construction permits (land use regulations, Zoning)	Kitsap County Department of Community Development	City of Bremerton Department of Community Development
Fire	South Kitsap Fire District	City of Bremerton Fire Department
Police	Kitsap County Sheriff	City of Bremerton Police Department
Elected Official Representation – City/County	County Board of Commissioners	Bremerton City Council (District To Be Determined)

4. *What services does the City provide to an area that is annexed?*

Municipal government services include:

- Fire protection and emergency services
- City police service
- City sewer and water utilities
- City street maintenance and improvement
- City parks, recreational facilities, and recreation programs
- Urban land use planning
- Urban building regulation and inspection
- City Council representation

5. *How will annexation affect growth in my neighborhood?*

The City's annexation of the Gorst UGA will not immediately affect the rate of growth in your neighborhood. However, with the anticipated adoption of the Gorst Subarea Plan and over the course of time, there is a likelihood that growth will be affected in a positive manner.

6. *How will annexation affect my property value*

Annexation should not affect your property value



**Washington State
Department of Transportation**
Paula J. Hammond, P.E.
Secretary of Transportation

Olympic Region Headquarters
5720 Capitol Boulevard, Tumwater
P. O. Box 47440
Olympia WA 98504-7440
360-357-2600

Fax 360-357-2601
TTY: 1-800-833-6388
www.wsdot.wa.gov

November 5, 2012

Heather Kauer
Assistant Director of Community Development
City of Bremerton
345 6th Street, Suite 600
Bremerton, WA 98337

RE: Gorst Creek Watershed Plan, Gorst Urban Growth Area (UGA) Subarea Plan
and Planned Action Environmental Impact Statement (EIS)

Dear Ms. Kauer:

Thank you for allowing the Washington State Department of Transportation (WSDOT) the opportunity to comment on the scoping process for the Gorst Creek Watershed Plan, Gorst Urban Growth Area (UGA) Subarea Plan and Planned Action Environmental Impact Statement (EIS). WSDOT looks forward to working with the city and county during their development of these plans and the associated EIS and asks that the subarea planning team take advantage of seeking input from WSDOT and other transportation partners and consider the following comments.

The junction of state routes SR 3 and SR 16 in the Gorst area is the most traffic congested location in Kitsap County and it is important for the WSDOT to understand the impacts of any land use decisions that may occur. At the recent open house it was noted that one goal is to make Gorst a place to stop and visit. Currently the majority of the traffic flow is regional traffic passing through the area. Making Gorst a destination could further exacerbate an already congested location. Having state facilities located immediately within the Gorst study area, WSDOT is keenly interested in the results of the traffic analysis and any potential impacts to state facilities as well as the transportation system as a whole from the proposed subarea plan and EIS.

In addition WSDOT has been funded to conduct an operational analysis, and begin environmental and preliminary design work on interchange improvements for the SR 3/SR 304 interchange immediately adjacent to the study area. As WSDOT proceeds with this project we will also be interested in the Gorst UGA Subarea Plan study's traffic forecast and analysis as it relates to this project. Therefore, WSDOT would like the opportunity to provide input and review the methodologies and assumptions related to the traffic modeling analysis as well as the opportunity to review and comment on the traffic impact analysis and results conducted during the process.

The proposed subarea plan and EIS should consider and identify transit's ability to help mitigate the effects of growth on the transportation system as well as the evaluation of how different levels of transit service can accommodate projected growth in the area. The plan should evaluate the effects of land use policies and growth targets on transportation demand. Without changes in mode share, services, and infrastructure, the transportation system may be overwhelmed. The plan should also consider providing alternative travel choices to reduce trips into, out of, and within the subarea.

WSDOT is also very interested in how mitigation measures will be implemented, particularly the identification and implementation of improvements to address potential impacts to state facilities. Since this is a planned action effort, the city's adoption of the subarea plan and subsequent ordinance would exempt future developments from additional review, substituting the case-by-case evaluation that WSDOT would normally do under SEPA. We are therefore interested that the EIS description of mitigation measures for state facilities be in sufficient detail to account for the impacts of any proposed developments.

WSDOT's interests and concerns that revolve around the addressing of mitigation measures in the subarea plan, planned action EIS, and the eventual planned action ordinance include:

1. Notification of development applications
2. Ability to review project proposals
3. How will mitigation be implemented, particularly implementing improvements to adequately address impacts to state facilities; we would encourage the city to work with WSDOT early on to take a proactive approach to address this issue of implementing mitigation improvements and identify an adequate substitute for the case-by-case evaluation of traffic impacts typically done under SEPA
4. What will be the threshold for implementing mitigation improvements and what will be the means to trigger those improvements
5. Ability to revisit mitigation measures at some level or point of time; the issue is that, when development does occur, it could take the form of something very different than what the EIS and preferred alternative assumes. This could result in significant changes in growth, trip generation and distribution than envisioned, calling the EIS findings of future traffic operations into question. If so, this would require a new look at mitigation than that described in the EIS

November 5, 2012

Heather Kauer

Page - 3

As to development of an area watershed plan, WSDOT will be interested in the stormwater and watershed planning components of this effort. These kinds of efforts can provide important mitigation and stormwater treatment opportunities that can be of benefit to WSDOT.

Thank you for the opportunity to comment on this proposal and we look forward to working with the city and county in regards to these planning efforts.

Please contact George Kovich of my office at (360) 704-3207 if you have any questions or would like to discuss any of these comments.

Sincerely,



Ron Landon

Transportation Planning and Program Manager
WSDOT, Olympic Region

RL:dlm

GK

cc: Leah Bolotin (WSDOT) TB55
Dale Severson (WSDOT) 47440
Richard A. Gersib (WSDOT Stormwater and Watersheds Program)
Karena Houser, (WSDOT)
Leonard Bauer (Commerce) 48350
Rocky Piro (PSRC)

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Appendix B
Draft Planned Action Ordinance

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ORDINANCE NO. _____

AN ORDINANCE OF [THE CITY COUNCIL OF THE CITY OF BREMERTON/THE
KITSAP COUNTY BOARD OF COUNTY COMMISSIONERS] WASHINGTON,
ESTABLISHING A PLANNED ACTION FOR THE GORST URBAN GROWTH AREA
PURSUANT TO THE STATE ENVIRONMENTAL POLICY ACT

WHEREAS, the State Environmental Policy Act (SEPA) and implementing rules provide for the integration of environmental review with land use planning and project review through designation of "Planned Actions" by jurisdictions planning under the Growth Management Act (GMA); and

WHEREAS, the City of Bremerton (City) and Kitsap County (County) have each adopted a Comprehensive Plan complying with the GMA; and,

WHEREAS, to guide Gorst's growth and redevelopment, the City and County have engaged in extensive watershed characterization and subarea planning for Gorst and have adopted amendments to their Comprehensive Plan including the Gorst Subarea Plan; and

WHEREAS, the City has received a grant from the USEPA's Watershed Management Assistance Program Grant and also received support from the participation of Gorst property owners, regional stakeholders, and government agencies including Kitsap County; and

WHEREAS, the City approved a planned action ordinance for part of the Gorst Creek Watershed for the South Kitsap Industrial Area, which was separately approved for a planned action in 2012; and

WHEREAS, the [City] [County] desires to designate a separate Planned Action for [a portion of] the Gorst Urban Growth Area (UGA); and

WHEREAS, designation of a Planned Action expedites the permitting process for subsequent, implementing projects whose impacts have been previously addressed in a Planned Action environmental impact statement (EIS), and thereby encourages desired growth and economic development; and

WHEREAS, the Gorst Planned Action EIS identifies impacts and mitigation measures associated with planned development in the Gorst UGA; and

WHEREAS, the [City] [County] has adopted development regulations and ordinances which will help protect the environment, and is adopting regulations specific to the Gorst UGA which will guide the allocation, form and quality of desired development; and

WHEREAS, the [City's SEPA Rules, Bremerton Municipal Code 20.04.205] [County's SEPA Rules, Kitsap County Code 18.04.020] provide for Planned Actions within the [City] [County]; and

WHEREAS, the City as lead agency and County as a project partner provided public comment opportunities through an EIS scoping period in October and November 2012, and for the Gorst Subarea Plan and Draft Planned Action EIS during June and July 2013, and held public meetings and hearings as part of a coordinated Gorst public participation program throughout 2013.

NOW, THEREFORE, the [City Council of the City of Bremerton] [Board of County Commissioners of Kitsap County], Washington ordains as follows:

Section 1. Recitals. The recitals set forth above are incorporated herein by reference.

Section 2. Purpose. The [City Council] [Board of County Commissioners] declares that the purpose of this ordinance is to:

- A. Combine environmental analysis, land use plans, development regulations, [City] [County] codes and ordinances together with the mitigation measures in the Gorst Planned Action EIS to mitigate environmental impacts and process planned action development applications in the Planned Action Area;
- B. Designate the Gorst UGA [define final boundaries – all or a portion of the Gorst UGA] as a Planned Action Area for purposes of environmental review and permitting of subsequent, implementing projects pursuant to SEPA, RCW 43.21C.031;
- C. Determine that the EIS prepared for the Gorst Subarea Plan meets the requirements of a Planned Action EIS pursuant to SEPA;
- D. Establish criteria and procedures, consistent with state law, that will determine whether subsequent projects within the Planned Action Area qualify as Planned Actions;
- E. Provide the public with information about Planned Actions and how the [City] [County] will process implementing projects within the Planned Action Area;
- F. Streamline and expedite the land use permit review process by relying on the EIS completed for the Planned Action;
- G. Apply the [City's] [County's] development regulations together with the mitigation measures described in the EIS and this Ordinance to address the impacts of future development contemplated by this Ordinance.

Section 3. Findings. The [City Council] [Board of County Commissioners] finds as follows:

- A. The [City] [County] is subject to the requirements of the GMA (RCW 36.70A), and is applying the Planned Action to a UGA [Urban Growth Area]; and
- B. The [City] [County] has adopted a Comprehensive Plan complying with the GMA, and is amending the Comprehensive Plan to incorporate a subarea element specific to the Gorst UGA; and
- C. The [City] [County] is adopting development regulations concurrent with the Gorst Subarea Plan to implement said Plan, including this ordinance; and
- D. An EIS has been prepared for the Planned Action Area, and the [City Council] [Board of County Commissioners] finds that the EIS adequately identifies and addresses the probable significant environmental impacts associated with the type and amount of development planned to occur in the designated Planned Action Area; and
- E. The mitigation measures identified in the Gorst Planned Action EIS and attached to this ordinance as Exhibit B, incorporated herein by reference, together with adopted [City] [County] development regulations, will adequately mitigate significant impacts from development within the Planned Action Area; and
- F. The Gorst Subarea Plan and Planned Action EIS identify the location, type and amount of development that is contemplated by the Planned Action; and
- G. Future projects that are implemented consistent with the Planned Action will protect the environment, benefit the public and enhance economic development; and
- H. The City and County provided several opportunities for meaningful public involvement in the Gorst Subarea Plan and Planned Action EIS, including a community meeting prior to the publication of notice

for the planned action ordinance; have considered all comments received; and, as appropriate, have modified the proposal or mitigation measures in response to comments;

I. Essential public facilities defined in RCW 47.06.140 are excluded from the Planned Action and not eligible for review or permitting as Planned Actions unless they are accessory to or part of a project that otherwise qualifies as a planned action; and

J. The Planned Action applies to a defined area that is smaller than the overall City boundaries and smaller than overall County designated UGAs; and

K. Public services and facilities are adequate to serve the proposed Planned Action, with implementation of mitigation measures identified in the EIS.

Section 4. Procedures and Criteria for Evaluating and Determining Planned Action Projects within Planned Action Area.

A. Planned Action Area. This Planned Action designation shall apply to the area shown in Exhibit A, incorporated herein by reference.

B. Environmental Document. A Planned Action determination for a site-specific project application within the Planned Action Area shall be based on the environmental analysis contained in the Draft EIS issued by the City on XXX 2013 and the Final EIS published on XXX 2013 [and adopted by Kitsap County on XXX 2013]. The Draft and Final EIS documents shall comprise the Planned Action EIS for the Planned Action Area. The mitigation measures contained in Exhibit B and attached to this Ordinance are based upon the findings of the Planned Action EIS and shall, along with adopted [City] [County] regulations, provide the framework that the [City] [County] will use to apply appropriate conditions on qualifying Planned Action projects within the Planned Action Area.

C. Planned Action Designated. Land uses and activities described in the Planned Action EIS, subject to the thresholds described in subsection 4.D and the mitigation measures contained in Exhibit B, are designated Planned Actions or Planned Action Projects pursuant to RCW 43.21C.031. A development application for a site-specific Planned Action project located within Planned Action Area shall be designated a Planned Action if it completes the modified SEPA Checklist in Exhibit C and meets the criteria set forth in Subsection 4.D of this Ordinance and all other applicable laws, codes, development regulations and standards of the [City] [County] are met.

D. Planned Action Qualifications. The following thresholds shall be used to determine if a site-specific development proposed within the Planned Action Area was contemplated as a Planned Action and has had its environmental impacts evaluated in the Planned Action EIS: [Note: this list is a placeholder and will be revised, as appropriate, based on the preferred subarea plan land uses.]

(1) Qualifying Land Uses.

(a) Planned Action Categories: The following general categories/types of land uses are defined the Gorst Subarea Plan and are considered Planned Actions:

i. XXX

ii. XXX

[To be based on the Preferred Alternative – see Draft EIS Chapter 2 for example land uses in the alternative land use and zoning designations, e.g. commercial, single family, multifamily, mixed use, recreation, open space, etc.]

(b) Planned Action Uses: A land use shall be considered a Planned Action Land Use when:

i. it is within the Planned Action Area as shown in Exhibit A;

- ii. it is within the one or more of the land use categories described in subsection 1(a) above; and
- iii. it is listed in development regulations applicable to the zoning classifications applied to properties within the Planned Action Area.

A Planned Action may be a single Planned Action use or a combination of Planned Action uses together in a mixed use development. Planned Action uses include accessory uses.

- (c) Public Services: The following public services, infrastructure and utilities are also Planned Actions: **XXX [Consistent with Preferred Alternative]**.

(2) Development Thresholds:

- (a) Land Use: The following amounts of various new land uses are contemplated by the Planned Action:

Feature	Planned Action Area
Residential Dwellings (units)	XXX
Commercial Square Feet	XXX
Jobs	XXX

- (b) Shifting development amounts between land uses in D(2)(a) may be permitted when the total build-out is less than the aggregate amount of development reviewed in the EIS; the traffic trips for the preferred alternative are not exceeded; and, the development impacts identified in the Planned Action EIS and are mitigated consistent with Exhibit B.
- (c) Further environmental review may be required pursuant to WAC 197-11-172, if any individual Planned Action or combination of Planned Actions exceed the development thresholds specified in this Ordinance and/or alter the assumptions and analysis in the Planned Action EIS.

(3) Transportation Thresholds:

- (a) Trip Ranges & Thresholds. The number of new PM peak hour trips anticipated in the Planned Action Area and reviewed in the EIS is as follows:

PM PEAK HOUR TRIPS	
	Total
TOTAL	XXX PM Peak Hour Trips

- (b) Concurrency. All Planned Actions shall meet the transportation concurrency requirements and the LOS thresholds established in [BMC XXX/KCC XXX].
- (c) Traffic Impact Mitigation. **[To be determined based on Preferred Alternative; for example each project could be required to mitigate based on proportional share of trips determined by a traffic generation study.]**
- (d) Discretion. The SEPA Responsible Official or his/her designee shall have discretion to determine incremental and total trip generation, consistent with the Institute of Traffic Engineers (ITE) Trip Generation Manual (latest edition) or an alternative manual accepted by the SEPA Responsible Official at his or her sole discretion, for each project permit application proposed under this Planned Action.

- (4) Elements of the Environment and Degree of Impacts. A proposed project that would result in a significant change in the type or degree of adverse impacts to any element(s) of the environment analyzed in the Planned Action EIS, would not qualify as a Planned Action.
- (5) Changed Conditions. Should environmental conditions change significantly from those analyzed in the Planned Action EIS, the [City's] [County's] SEPA Responsible Official may determine that the Planned Action designation is no longer applicable until supplemental environmental review is conducted.
- (6) Substantive Authority. Pursuant to SEPA Substantive Authority at [BMC XXX/KCC XXX], and Comprehensive Plan Policies, impacts shall be mitigated through the measures included in Exhibit B.

E. Planned Action Review Criteria.

- (1) The City's SEPA Responsible Official may designate as "planned actions", pursuant to RCW 43.21C.030, applications that meet all of the following conditions:
 - (a) the proposal is located within the Planned Action area identified in Exhibit A of this ordinance;
 - (b) the proposed uses and activities are consistent with those described in the Planned Action EIS and Section 4.D of this ordinance;
 - (c) the proposal is within the Planned Action thresholds and other criteria of Section 4.D of this ordinance;
 - (d) the proposal is consistent with the [City of Bremerton] [Kitsap County] Comprehensive Plan and the Gorst Subarea Plan;
 - (e) the proposal's significant adverse environmental impacts have been identified in the Planned Action EIS;
 - (f) the proposal's significant impacts have been mitigated by application of the measures identified in Exhibit B, and other applicable [City] [County] regulations, together with any modifications or variances or special permits that may be required;
 - (g) the proposal complies with all applicable local, state and/or federal laws and regulations, and the SEPA Responsible Official determines that these constitute adequate mitigation; and
 - (h) the proposal is not an essential public facility as defined by RCW 36.70A.200(1), unless the essential public facility is accessory to or part of a development that is designated as a planned action under this ordinance.
- (2) The [City] [County] shall base its decision on review of a Planned Action SEPA checklist (Exhibit C), or an alternative form approved by state law, and review of the application and supporting documentation.
- (3) A proposal that meets the criteria of this section shall be considered to qualify and be designated as a planned action, consistent with the requirements of RCW 43.21C.030, WAC 197-11-164 et seq, and this ordinance.

F. Effect of Planned Action.

- (1) Designation as a Planned Action Project by the SEPA Responsible Official means that a qualifying proposal has been reviewed in accordance with this Ordinance and found to be consistent with the

development parameters and thresholds established herein, and with the environmental analysis contained in the Planned Action EIS.

- (2) Upon determination by the [City's] [County's] SEPA Responsible Official that the proposal meets the criteria of Section 4.D and qualifies as a planned action, the proposal shall not require a SEPA threshold determination, preparation of an EIS, or be subject to further review pursuant to SEPA.

G. Planned Action Permit Process. Applications for planned actions shall be reviewed pursuant to the following process:

- (1) Development applications shall meet all applicable requirements of the [Bremerton Municipal Code (BMC)] [Kitsap County Code (KCC)]. Applications for planned actions shall be made on forms provided by the [City] [County] and shall include the Planned Action SEPA checklist (Exhibit C).
- (2) The [City's] [County's] SEPA Responsible Official shall determine whether the application is complete as provided in [BMC XXX/KCC XXX].
- (3) If the application is for a project within the Planned Action Area defined in Exhibit A, the application will be reviewed to determine if it is consistent with the criteria of this ordinance and thereby qualifies as a Planned Action project.
 - (a) The decision of the [City's] [County's] SEPA Responsible Official regarding qualification of a project as a Planned Action is a Type 1 decision. The SEPA Responsible Official shall notify the applicant of his/her decision. Notice of the determination shall also be mailed or otherwise verifiably delivered to federal recognized tribal governments and to agencies with jurisdiction over the planned action project, pursuant to Chapter 1, Laws of 2012 (Engrossed Substitute Senate Bill (ESSB) 6406).
 - (b) If the project is determined to qualify as a Planned Action, it shall proceed in accordance with the applicable permit review procedures specified in [BMC XXX/KCC XXX], except that no SEPA threshold determination, EIS or additional SEPA review shall be required.
 - (c) Notice of the application for a planned action project shall be consistent with [BMC XXX/KCC XXX].
- (4) If notice is otherwise required for the underlying permit, the notice shall state that the project has qualified as a Planned Action. If notice is not otherwise required for the underlying permit, no special notice is required by this ordinance.
- (5) To provide additional certainty about applicable requirements, the [City] [County] or applicant may request consideration and execution of a development agreement for a Planned Action project, consistent with RCW 36.70B.170 et seq.
- (6) If a project is determined to not qualify as a Planned Action, the SEPA Responsible Official shall so notify the applicant and prescribe a SEPA review procedure consistent with the [City's] [County's] SEPA regulations and the requirements of state law. The notice shall describe the elements of the application that result in failure to qualify as a Planned Action.
- (7) Projects that fail to qualify as Planned Actions may incorporate or otherwise use relevant elements of the Planned Action EIS, as well as other relevant SEPA documents, to meet their SEPA requirements. The SEPA Responsible Official may limit the scope of SEPA review for the non-qualifying project to those issues and environmental impacts not previously addressed in the Planned Action EIS.

Section 5. Monitoring and Review.

A. The [City] [County] should monitor the progress of development in the designated Planned Action area as deemed appropriate to ensure that it is consistent with the assumptions of this ordinance and the Planned Action EIS regarding the type and amount of development and associated impacts, and with the mitigation measures and improvements planned for the Planned Action Area.

B. This Planned Action Ordinance shall be reviewed by the SEPA Responsible Official no later than five years from its effective date. The review shall determine the continuing relevance of the Planned Action assumptions and findings with respect to environmental conditions in the Planned Action area, the impacts of development, and required mitigation measures. Based upon this review, the [City] [County] may propose amendments to this ordinance and/or may supplement or revise the Planned Action EIS.

Section 6. Conflict. In the event of a conflict between this Ordinance or any mitigation measures imposed thereto, and any Ordinance or regulation of the [City] [County], the provisions of this Ordinance shall control, except that the provision of any International Building Code shall supersede.

Section 7 Severability. If any one or more sections, subsections, or sentences of this Ordinance are held to be unconstitutional or invalid such decision shall not affect the validity of the remaining portions of this Ordinance and the same shall remain in full force and effect.

Section 8. Effective Date. This ordinance shall take effect and be in force ten (10) days after publication as provided by law.

Passed by the [City Council] [Board of County Commissioners], the ____ day of XXX, 2013.

[Signatures]

EXHIBIT A
PLANNED ACTION AREA

Draft

EXHIBIT B
PLANNED ACTION EIS MITIGATION MEASURES

Draft

EXHIBIT C
PLANNED ACTION MODIFIED SEPA CHECKLIST

Draft

Appendix C
Air Quality GHG Development Reduction Procedures & Sea Level Rise Information

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Appendix C

Derivation of Development Emission Reduction Factors

VMT and greenhouse gas emission rates generated by vehicle travel associated with the Gorst UGA area were adjusted downward to account for development that will encourage residents and workers to commute options other than single-occupancy vehicles. The development reduction factor for each alternative was derived using the scoring system described in the Sacramento Metropolitan Air Quality Management District (SMAQMD) document “Recommended Guidance for Land Use Emission Reductions”, Version 2.5, updated August 15, 2007. That document presents a wide variety of design features that are typically available for the land use design of any given development, and scores the percent reduction in VMT and vehicle emissions by assigning “mitigation points” to each selected development feature. The numerical value of each “mitigation point” is equivalent to the percent reduction in VMT and vehicle emissions compared to the base-case land use design. For example, if a developer selects a set of development-related features with a cumulative mitigation point total of 10, then it is assumed the VMT and vehicle emissions would be reduced by 10 percent.

Note, the development-related mitigation is applied only to emissions generated by vehicle travel. This method does not attempt to evaluate GHG emission reductions from construction materials, electricity usage, space heating, or waste reduction.

Development Reduction Factor Derivation for Alternatives

Table C-1 shows the list of development-related land use features that appear to be inherent in the land use design of the Gorst UGA, and shows the mitigation points assigned to each of those land use features. The key features that are believed to be inherent to the Gorst UGA are as follows:

- Bicycle paths within ½ mile, with connection to transit.
- High mixed-use density close to transit.
- Residential density

The combined mitigation points for the above features is 4, so the base-case VMT and transportation-related GHG emissions factors for the action alternatives were reduced by four percent, as applied to the per-dwelling factors and the per-square-foot factors.

Note, for this analysis mitigation points were assigned only to the above land use features that are inherent to the overall programmatic configuration of the Gorst UGA. This analysis did not attempt to predict what other project-specific design features the future developers might build into their facilities, to respond either to encouragement by the City and County or to comply with potential Gorst-specific design standards. It is possible the future developers could incorporate more of SMAQMD’s listed design features into their facilities, in which case the actual overall development-related reductions might be higher than the four percent value derived for this study.

Table C-1
Derivation of Development Reduction Factor

Mitigation Number	Description	Maximum Achievable Reduction Percent	Considerations for Assigning Mitigation Values for Proposed Action	Assigned Mitigation Percent
4	Bicycle paths within 1/2 mile, with connection dwellings, business and transit corridors.	1	Alternatives would provide multi-family and mixed use near bus routes and pedestrian corridors. Bike paths would likely be provided.	1
15	High mixed use density close to transit	2	Alternatives would provide multi-family and mixed use near bus routes and pedestrian corridors.	1
18	Residential density	12	Alternatives would provide multi-family and mixed use near bus routes and pedestrian corridors.	2
Total Assigned Mitigation				4

Source: The Sacramento Metropolitan Air Quality Management District (SMAQMD), "Recommended Guidance for Land Use Emission Reductions", Version 2.5, updated January 12, 2010

Sea Level Rise Images

As noted in Section 3.3 Air Quality analysis of the Draft EIS, by themselves, none of the Gorst alternatives studied would cause discernible changes to global climate change. However, increased worldwide GHG emissions are expected to cause global climate change, and the effects will likely impact the Gorst study area and the Pacific Northwest region. Local impacts are expected to include changes in seasonal temperatures, seasonal precipitation patterns, or local seawater rise (UW CIG 2012). Based on research conducted by the University of Washington Climate Impacts Group and the Washington Department of Ecology sea level is expected to rise within the Puget Sound between 3 and 22 inches by 2050 and between 6 and 50 inches by 2100 (UWCIG, et al 2008).

The images below show sea level rise extent at 12-inch intervals at high tide in Sinclair Inlet based upon the Sea Level Rise and Coastal Flooding Impacts Viewer, available at the following link:

<http://www.csc.noaa.gov/digitalcoast/tools/slrviewer/>. As described on the website it is considered a planning level screening tool and not an exact analysis:

"The purpose of this data viewer is to provide coastal managers and scientists with a preliminary look at sea level rise and coastal flooding impacts. The viewer is a screening-level tool that uses nationally consistent data sets and analyses. Data and maps provided can be used at several scales to help gauge trends and prioritize actions for different scenarios.

Disclaimer: The data and maps in this tool illustrate the scale of potential flooding, not the exact location, and do not account for erosion, subsidence, or future construction. Water levels are shown as they would appear during the highest high tides (excludes wind driven tides). The data, maps, and information provided should be used only as a screening-level tool for management decisions. As with all remotely sensed data, all features should be verified with a site visit. The data and maps in this tool are provided "as is," without warranty to their performance, merchantable state, or fitness for any particular purpose. The entire risk associated with the results and performance of these data is assumed by the user. This tool should be used strictly as a planning reference tool and not for navigation, permitting, or other legal purposes."

The images can be compared to the range of sea level rise in Puget Sound estimated by the University of Washington, though it should be noted the University's study was not specific to Sinclair Inlet.

- Images 1 and 2 show 1 and 2 foot rises, closer to the University's low range estimate of 3 and 22 inches by 2050.
- Images 3 and 4 show rises of 3 and 4 feet, similar to the middle and upper end of the University's higher range estimate of 6 and 50 inches by 2100.
- Image 5 shows 5 feet (or 60 inches) of rise and would be higher than the University's most extreme range of 50 inches by 2100.

If such levels of rise were experienced at the Sinclair inlet, at the low end of the range, the effects appear to be absorbed by tidal wetlands. As levels increase, sea level rise could begin to affect developed areas of Sinclair Inlet. In addition, flooding in low lying areas would increase further upstream on Gorst Creek on the northern (uphill) side of Highway 3..

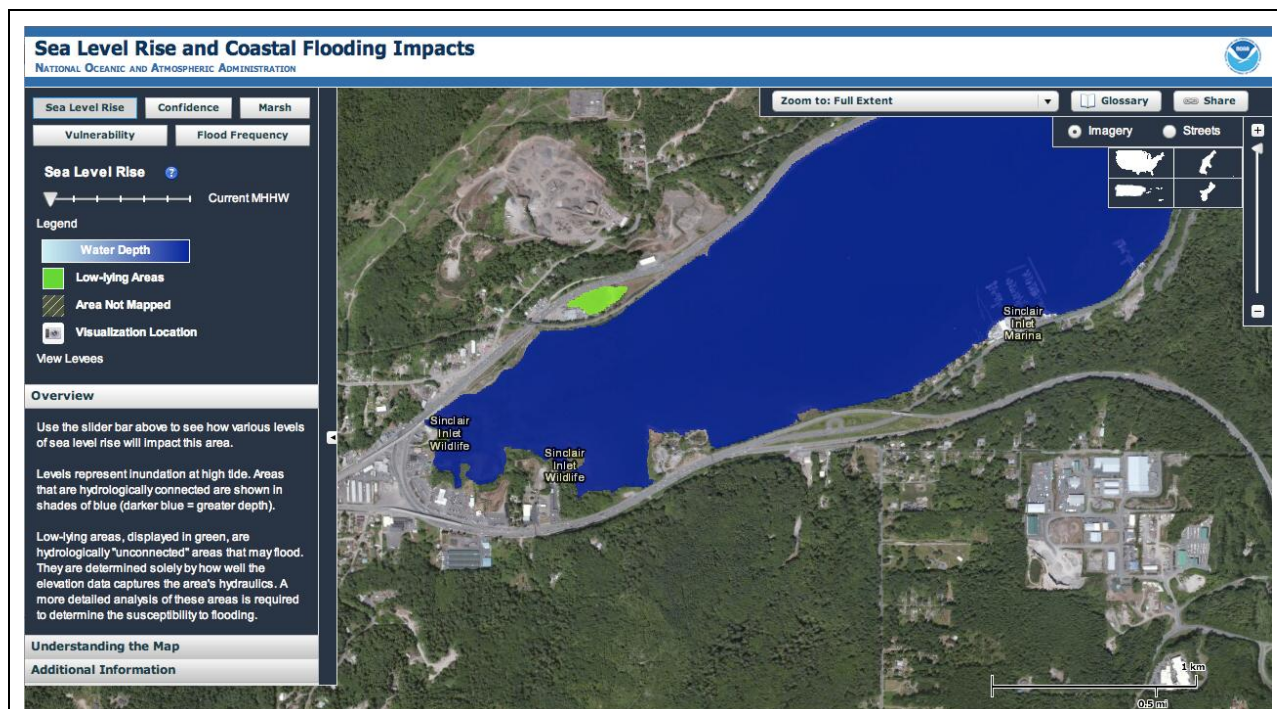


Image 0. Current Conditions – High Tide

<http://www.csc.noaa.gov/slr/viewer/index.html?l=-13658169.196796.6028798.776015&level=11&basemap=null&CurTab=0&CurSLR=0>

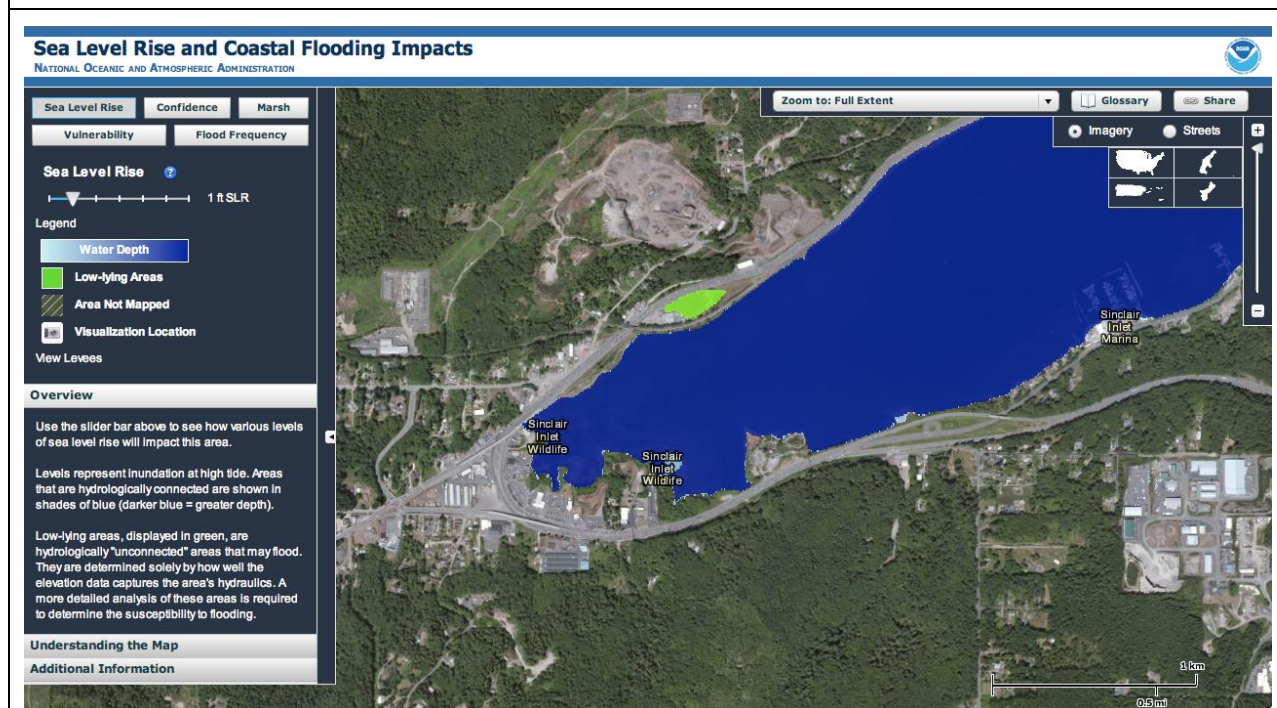


Image 1. 12-inch (1 foot) Rise at High Tide

<http://www.csc.noaa.gov/slr/viewer/index.html?l=-13658169.196796.6028798.776016&level=11&basemap=null&CurTab=0&CurSLR=1>

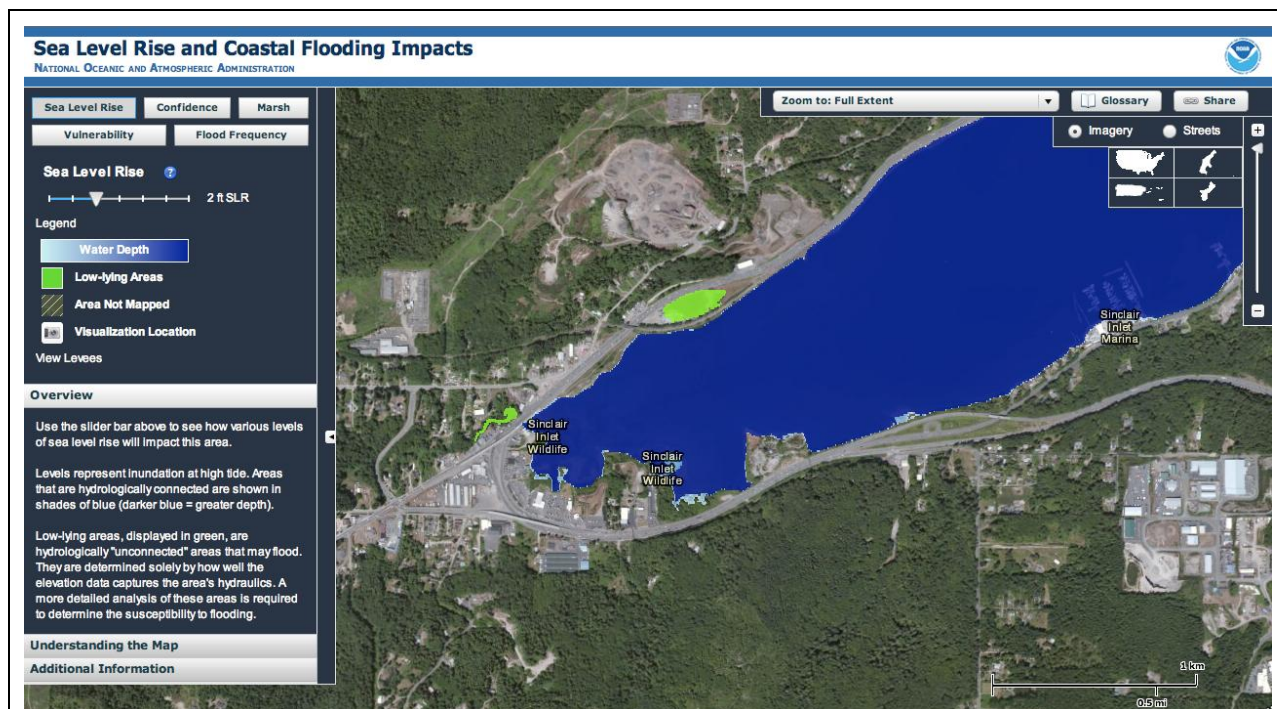


Image 2. 24-inch (2 feet) Rise at High Tide

<http://www.csc.noaa.gov/slr/viewer/index.html?l=-13658169.196796:6028798.776015&level=11&basemap=null&CurTab=0&CurSLR=2>

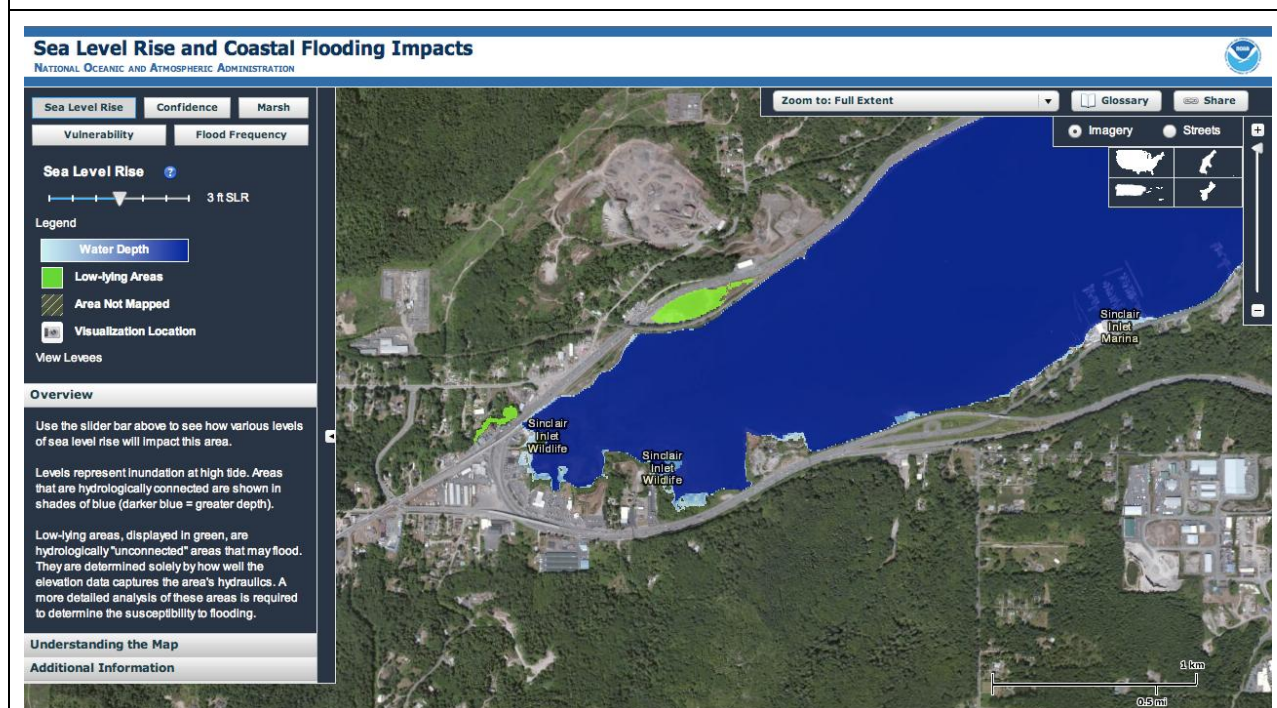


Image 3. 36-inch (3 feet) Rise at High Tide

<http://www.csc.noaa.gov/slr/viewer/index.html?l=-13658169.196796:6028798.776015&level=11&basemap=null&CurTab=0&CurSLR=3>

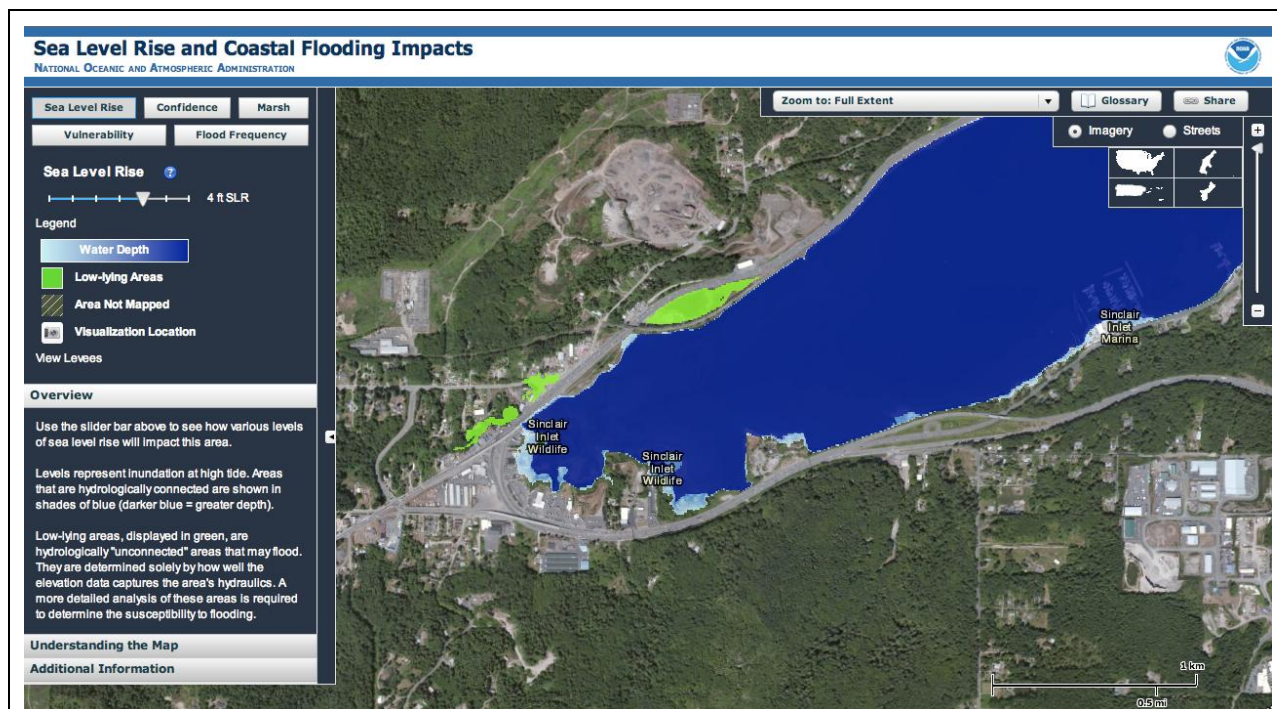


Image 4. 48-inch (4 foot) Rise at High Tide

<http://www.csc.noaa.gov/slr/viewer/index.html?l=-13658169.196796:6028798.776015&level=11&basemap=null&CurTab=0&CurSLR=4>

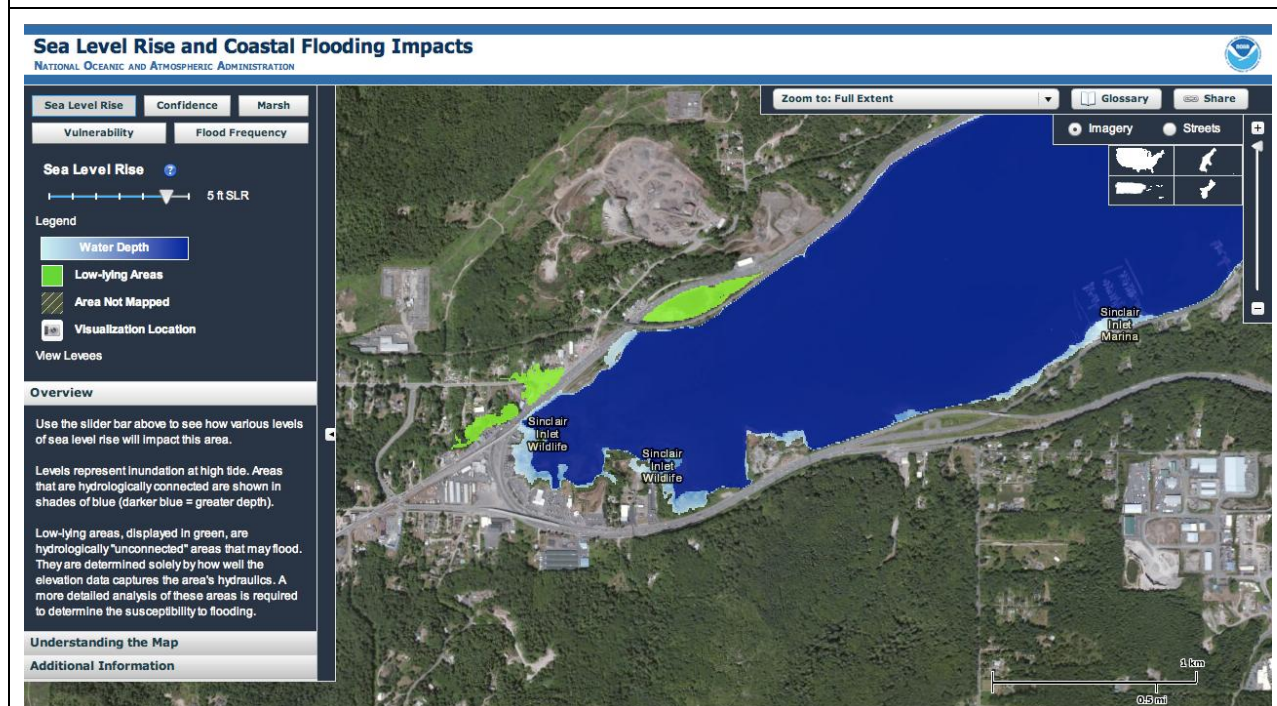


Image 5. 60-inch (5 foot) Rise at High Tide

<http://www.csc.noaa.gov/slr/viewer/index.html?l=-13658169.196796:6028798.776015&level=11&basemap=null&CurTab=0&CurSLR=5>

Appendix D
Shoreline Buffer Comparison and Options

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Appendix D. Shoreline Buffer Comparison and Options

Introduction

Kitsap County and the City of Bremerton regulate shorelines such as Sinclair Inlet and Gorst Creek. The County and City also regulate critical areas such as wetlands, fish and wildlife conservation areas, aquifer recharge areas, geologic hazard areas, and flood hazard areas. Generally, the County and City regulations are similar except along Gorst Creek and Sinclair Inlet. County buffer regulations are greater along Gorst Creek while City buffer regulations are greater along Sinclair Inlet.

The Draft Watershed Characterization & Framework Plan and Draft Gorst Subarea Plan include a proposed policy recommending compatible and equivalent environmental standards:

Policy WS-2. Coordinate County and City shoreline and critical area regulations in the Gorst Creek Watershed to provide adequate and equivalent protection.

Policy UGA-3. Coordinate County and City shoreline regulations and restoration plans along Gorst Creek and Sinclair Inlet to provide adequate and equivalent protection.

Following a comparison of standards and background information, options to standardize regulations are evaluated in this appendix.

Shoreline Environment and Buffer Comparisons

Shorelines subject to the Shoreline Management Act of 1971 include the marine waters of Puget Sound as well as rivers and streams with a mean annual flow over 20 cubic feet per second (cfs). Shorelines include uplands within 200 feet of the ordinary high water mark and associated wetlands, and floodways. In the study area, the Sinclair Inlet marine shoreline and Gorst Creek are subject to the Shoreline Management Act (RCW 90.58).

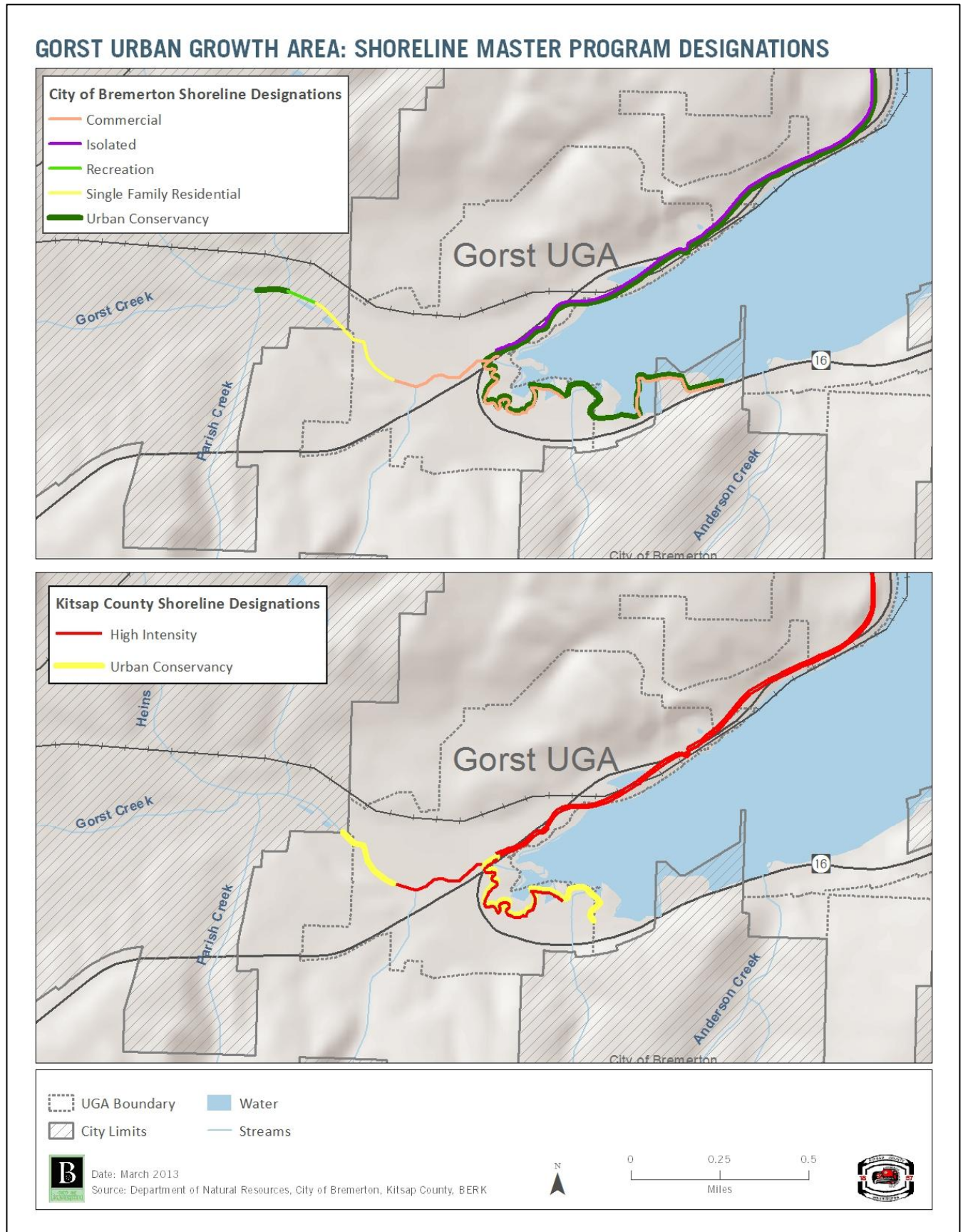
Consistent with the Shoreline Management Act, both the County and City of Bremerton have adopted Shoreline Master Programs for lower Gorst Creek and the Sinclair Inlet, and are awaiting Ecology approval.

City of Bremerton proposed shoreline designations include

- Urban Conservancy in the inner marine shoreline along the water
- Commercial or Isolated in the outer marine shoreline area in largely developed areas
- Aquatic Conservancy applied to the Marine waters (not mapped below)
- Single Family, Recreation, and Urban Conservancy along Gorst Creek

Kitsap County proposes a similar shoreline environment approach as the City of Bremerton, except that the full marine shoreline north of the SR 3 and SR 16 interchange is shown as High Intensity. South of the interchange, the marine shoreline would be classified as Urban Conservancy in the inner jurisdiction along the water and High Intensity in the outer jurisdictional area. Gorst Creek would be classified as High Intensity and Urban Conservancy. Figure D--1 *Comparison of Shoreline Designations* compares the two sets of shoreline environment designations.

Figure D-1. Comparison of Shoreline Designations



Kitsap County's shoreline regulations would apply until such time as the Gorst UGA is annexed. The City of Bremerton's shoreline buffer standards for the Sinclair inlet are greater than the County's, and the County's buffer standards for Gorst Creek are greater than the City of Bremerton's. See Table D-1 *Bremerton and Kitsap County Shoreline, Stream, and Wetland Buffer Comparison*.

Table D-1
Bremerton and Kitsap County Shoreline, Stream, and Wetland Buffer Comparison

City of Bremerton	Standard Buffer (ft)	Reduced Buffer (ft)	Setback (ft)	Kitsap County	Standard Buffer (ft)	Reduced Buffer (ft)	Setback (ft)
Bremerton Shorelines: Proposed				Kitsap County Shorelines: Proposed			
Freshwater				Freshwater			
Commercial	50	Can reduce if lot depth is less than 150 ft.	15	Streams	200	Administrative Reductions with Criteria or Variance.	15
SF Residential	20-30% of lot depth		5-15				
Recreation	100		15				
Urban Conservancy	175		15				
Marine							
Isolated	0	Same as Freshwater	15	High Intensity	50	Variance	15
Commercial	50		15	Urban Conservancy	100		85
Urban Conservancy	175		15				
Bremerton Critical Areas Regulations: Existing				Kitsap County Critical Areas Regulations: Existing			
Streams							
F	150	Allowed if enhanced.	15	F	150	25-50% with a habitat mgmt plan.	15
Np	50		15	Np	50		15
Ns	35		15	Ns	50		15
Wetlands							
Category I	200	Averaging	0	Category I	200	Averaging or admin reduction with criteria.	15
Category II	100		0	Category II	100		15
Category III	75		0	Category III	50		15
Category IV	50		0	Category IV	30		15

Note: With the City proposed Shoreline Master Program, when there are parallel shoreline designations, the buffer is measured from the ordinary high water mark to the width of the buffer requirement or the edge of the environment designation, whichever is less.

The estimated depth of lots in Bremerton's Single Family Residential Environment Designation ranges from 100 to 500 feet. The minimum buffer depth by percentage is 20% where lot depth is less than 200 feet, and 30% for lot depths greater than 200 feet. The maximum buffer is 100 feet.

Source: BMC and City of Bremerton Council Review Draft Shoreline Master Program; Kitsap County Code and Kitsap County Planning Commission Review Draft Shoreline Master Program; BERK 2012.

Shoreline Master Program Cumulative Impacts Analysis

Both the City and County proposed Shoreline Master Programs were developed with a cumulative impacts analysis. In both cases, the Gorst shorelines were found to be degraded though the estuary was found to be valuable habitat. The City and County cumulative impacts analyses both found that application of each set of Shoreline Master Program regulations would achieve no-net-loss of ecological function.

Kitsap County's conclusions regarding Gorst marine and freshwater shorelines included:

Kitsap County Cumulative Impacts Analysis, January 2013, page 93, High Intensity Environment: Development of underutilized or undeveloped commercial parcels on the shoreline in Gorst is generally encumbered by wetland buffers. Where existing commercial structures are relocated or expanded, restoration or mitigation would be required under the proposed SMP. Further development potential exists away from the shoreline and west of Highway 3. In this case,

development would have little impact on shoreline hydrologic or vegetative functions. Water quality functions would further be maintained through stormwater standards that require onsite infiltration for any development with new impervious surfaces over 2,000 square feet or clearing of areas greater than 7,000 square feet. In summary, no loss of ecosystem functions is anticipated in the Gorst UGA.

Kitsap County Cumulative Impacts Analysis, January 2013, pages 76 and 77, Urban Conservancy: In the Gorst UGA, development along the marine shoreline is limited to commercial development of vacant and underdeveloped parcels. In addition to standard shoreline vegetation conservation buffers, buffers associated with salt marsh wetland areas in the Gorst UGA limit potential commercial development along Sinclair Inlet. If commercial structures are expanded or relocated during redevelopment, the SMP will require mitigation. Furthermore, any development with new impervious surfaces over 2,000 square feet or clearing of areas greater than 7,000 square feet will need to employ best management practices to infiltrate groundwater onsite. This will help ensure that existing water quality is not further degraded in the area.

Streams and Rivers, page 104: The proposed standard buffer of 200 feet for all shoreline freshwater streams and rivers will ensure that existing stream functions are maintained, and the buffer will limit most development along streams to the area outside of shoreline jurisdiction. Where future development of residential units along streams is indicated in Section 4 (Table 4-1), these figures are indicative of potential development outside of jurisdiction on lots that partially extend within jurisdiction. Significant restoration is planned and underway in the streams and rivers of Kitsap County. Near-term restoration efforts will be focused on restoring fish passage and improving stream habitat on Chico Creek and Burley Creek. Additionally, efforts to reduce agricultural impacts on water quality in Burley Creek are ongoing. In the longer term, efforts will focus on a balance of protecting intact functions and restoring functions and processes where they are impaired. Long-term restoration will include floodplain restoration, enhancing channel complexity, improving water quality, and restoring fish passage.

The City of Bremerton's Cumulative Impacts Analysis (February 2012) included a reach by reach analysis that indicated:

Page 2-14: Gorst Estuary is the largest estuary in the planning area and provides significant shoreline functions to Sinclair Inlet and Puget Sound. The estuary receives freshwater flows from Gorst Creek, as well as several small independent drainages nearby. Tributary streams support a variety of species including coho, chum, cutthroat, and steelhead. Gorst Estuary itself is shallow, with fringing marshes and mud flats that provide excellent production of prey for salmonids. Biological resources in the estuary include waterfowl concentrations at the mouth and along the north and south shorelines of Sinclair Inlet, as well as shorebird concentrations along the north shore. The majority of the north side of the inlet is bounded by State Route (SR) 2 and the U.S. Navy railroad and is not expected to change. There are extensive areas of commercial development generally south of Gorst Creek that are subject to redevelopment in the future. Because non-water-dependent development is likely, and such development requires shoreline restoration and public access, buffer areas are likely to be augmented. On Gorst Creek, the commercially zoned area between the inlet and Sam Christopherson Road are low intensity and is likely to be redeveloped in the future. This area could provide stream buffers and incorporate shoreline restoration as a non-water-dependent use. Between Sam Christopherson Road and West Belfair Valley Road, the residential and urban restricted area can be expected to experience more intensive future development and provide standard stream buffers.

Further in Bremerton's Cumulative Impacts Analysis, for each reach, the application of the proposed standards (buffers, vegetation conservation, mitigation sequencing, and more) found either "no change or positive change in ecological functions."

Watershed Characterization Assessment

The Gorst Creek Watershed Characterization Study completed in 2012 analyzes existing conditions of the watershed with respect to water flow and habitat. Watershed characterization, an analytical framework developed by Ecology, provides the basis for understanding the relative value of assessment units for water flow processes, water quality, and habitat within the Gorst Creek Watershed (Puget Sound Characterization, Stanley et al, in preparation, Ecology Publication #11-06-016 April 16, 2012).

Based on assessment results for individual water flow components (delivery, storage, recharge, and discharge) and sediment process, as well as habit functions, assessment units (AUs) were grouped into patterns that identify zones for restoration, protection, and development.

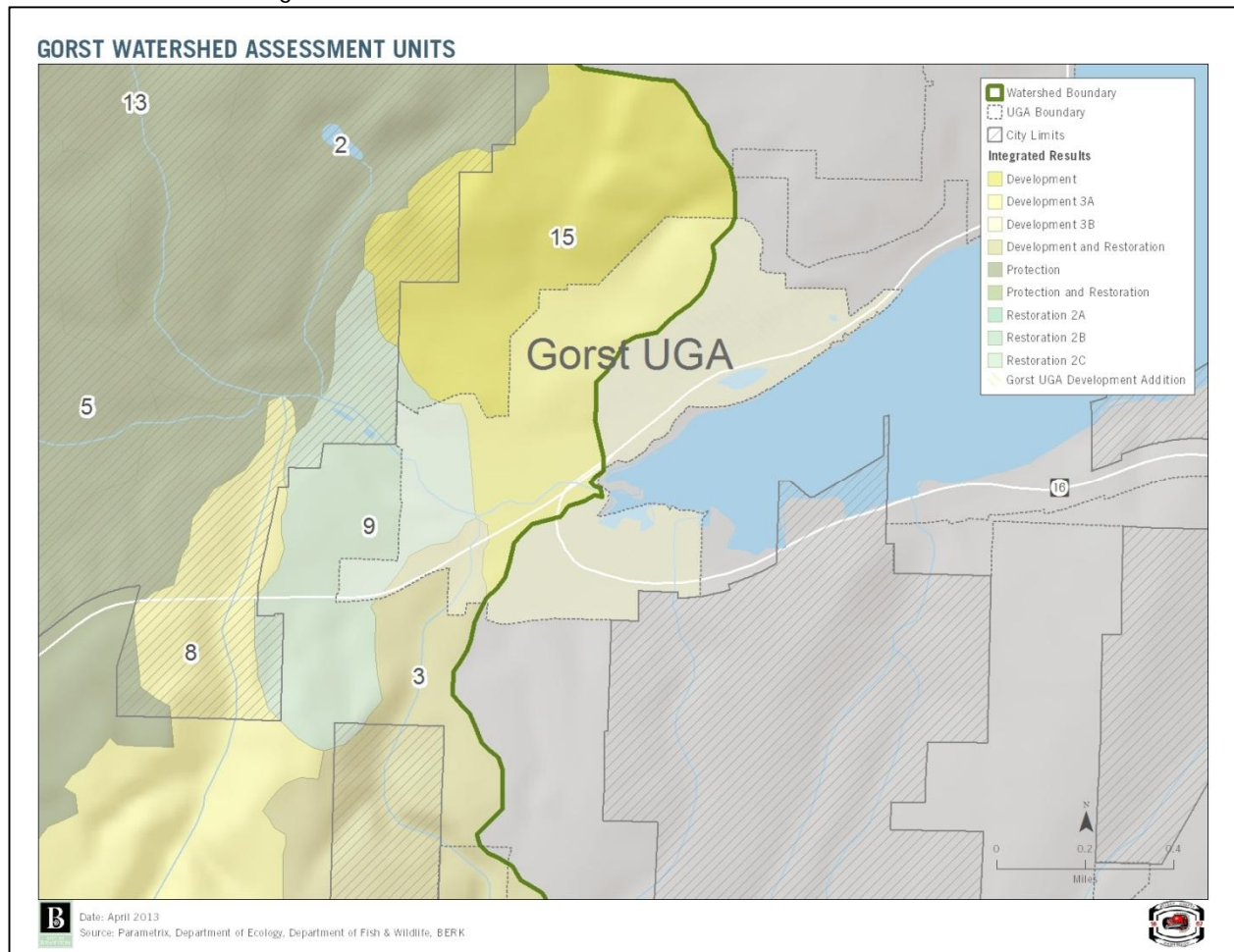
Figure D-2 provides a close up view of the watershed AUs in the Gorst UGA. The Gorst UGA is generally recommended for "Development" in Assessment Unit (AU) 15, though to the west is area of "Restoration" in AU 9. Also a small area to the southwest is recommended for "Development and Restoration" in AU 3.

The recommendations of the Watershed Characterization Study relevant to the Gorst UGA include:

- Area of Development (AU 15): Relatively high level of degradation and low habitat score; more appropriate area for higher density development provided measures are applied to reduce potential sediment export.
- Area of Restoration (AU 9): Though this area has a low score for habitat and salmon refugia, it is a higher priority for restoration due to generally intact upstream processes (northern half of watershed). Channelization, culverts, and reduced riparian cover have degraded stream corridor and discharge processes. A comprehensive program to restore creek corridor should be developed. Effective Impervious surface should be reduced through a stormwater retrofit program.
- Area of Development & Restoration (AU 3): Relatively high level of degradation. Not rated by salmon refugia study. More appropriate area for moderate density development provided measures are implemented to reduce erosion and sediment export (adequate stream buffers, setbacks, reduced overland flow through infiltration and vegetation cover).

Measures to reduce sediment export including buffers, setbacks, infiltration and vegetation cover are generally recommended in each AU, and areas in the western UGA along Gorst Creek are recommended for restoration.

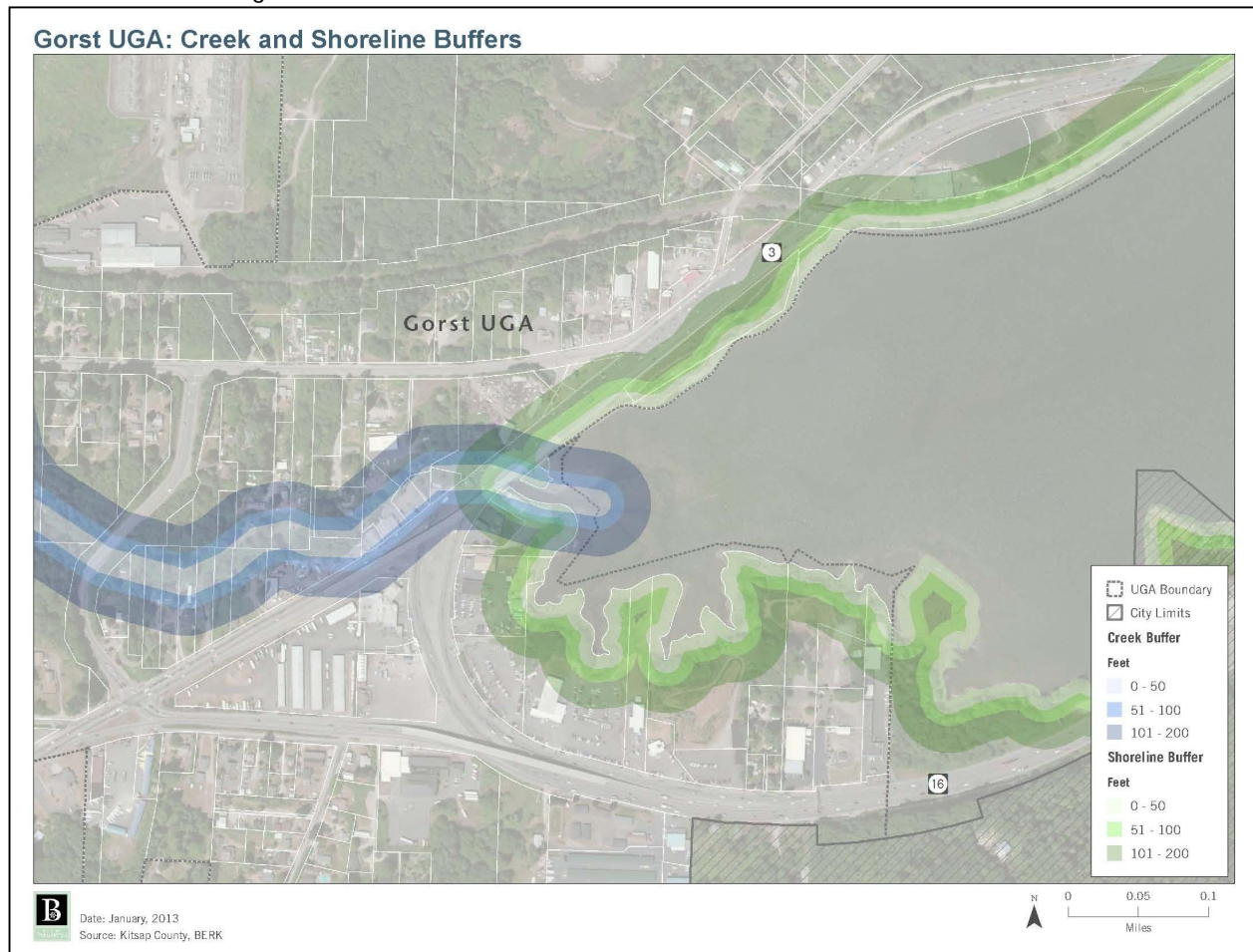
Figure D-2. Watershed Characterization Results – Gorst UGA



Gorst Creek – Development Adjacent to Shoreline

Based on the Shoreline Master Program Cumulative Impacts Analysis, and the Watershed Characterization Study, Gorst Creek possesses some important ecological functions but is also degraded. As seen in Figure D-3, there are existing structures in the buffer areas particularly in the area along SR-3.

Figure D-3. Gorst UGA: Creek and Shoreline Buffers in Increments



Buffer Standardization Options

The Draft Watershed Characterization & Framework Plan and Draft Gorst Subarea Plan include a proposed policy recommending compatible and equivalent environmental standards, particularly regarding Gorst Creek:

Policy WS-2. Coordinate County and City shoreline and critical area regulations in the Gorst Creek Watershed to provide adequate and equivalent protection.

Policy UGA-3. Coordinate County and City shoreline regulations and restoration plans along Gorst Creek and Sinclair Inlet to provide adequate and equivalent protection.

Options to standardize regulations are evaluated in this appendix and include:

- Apply City shoreline regulations in locally adopted Shoreline Master Program
- Apply County shoreline regulations in locally adopted Shoreline Master Program
- Apply modified County shoreline regulations (would require Ecology review)
- Apply a series of management zones addressing vegetation conservation, impervious surface allowances and structure allowances that are an overlay "on top of" either the City or the County shoreline regulations

A description of each option is provided in Table D-2.

Table D-2. Potential Options to Standardize Gorst Creek Buffers in Gorst UGA

Option / Description	Discussion
<p>A. City SMP buffers</p> <p>50 foot buffer would apply in areas designated as Commercial.</p> <p>Areas designated as Single Family Residential would have a buffer based on their lot depth at either 20% or 30%.</p>	<p>For the areas east of Sam Christopherson Road, this 50-foot buffer would recognize the current development patterns where much area along the creek is devoted to impervious area and structures.</p> <p>For the areas west of Sam Christopherson Road, designated for Single Family Residential, the buffers would be based on depth of the lot, to both protect the immediate riparian area and allow use of the parcel for development; vegetation conservation and water quality standards would also apply.</p> <p>This appears to be an area identified for Restoration in the Watershed Characterization Study.</p>
<p>B. County SMP buffers</p> <p>200 foot buffer standard along all stream reaches</p>	<p>This buffer standard would treat all areas of the creek the same, regardless of current conditions.</p> <p>Areas within the 200 foot buffer area (see Figure D-3) would need to apply special criteria for buffer reductions in Proposed SMP Section 5.5.3 Constrained Lot and Infill Provisions. In some cases a variance may be required and in other cases administrative approval is required. However, this overall approach could spur enhancement where some buffer reductions are granted with criteria; also, growth could occur more slowly given combination of regulations and site constraints.</p>
<p>C. Modified County SMP buffers</p> <p>Apply buffers based on shoreline environment</p> <p>50 feet High Intensity</p> <p>100 feet Urban Conservancy</p>	<p>This buffer standard would recognize Gorst Creek as a different stream than other shoreline streams in the County which tend to be in rural areas.</p> <p>The modified buffers would match Kitsap County's buffers applied to specific shoreline environments rather than a single number.</p> <p>The modified buffers are similar to the City's Commercial buffer and greater than (though more comparable to) the City's Single Family Residential Buffer.</p>
<p>D. Management Zone Overlay</p> <p>See Table D-3</p> <p>0-50 feet: focus on habitat retention and enhancement with limited trails</p> <p>50-85 feet: Allow small percentage of impervious or semi-pervious materials if greater enhancement in 0-50 foot area or if stream restoration occurs.</p> <p>85-100 feet: Allow more impervious area if greater enhancement in 0-50 foot area or if stream restoration occurs</p>	<p>The proposal would apply a series of management zones that have variable levels of vegetation conservation, impervious allowances and structure allowances.</p> <p>The standards to retain vegetation and reduce erosion, minimize impervious areas and structures, and incentivize restoration are based on the Watershed Characterization Study, and some of the buffer mitigation standards in Kitsap County's proposed Shoreline Master Program Appendix B.</p> <p>The distances of the management zones are related to the mean setback for shoreline streams and rivers (~78 feet) documented in the Kitsap County Cumulative Impacts Analysis developed January 2013. The distances are also based on the buffer science and average distances in the "Technical Memorandum for Proposed Kitsap County SMP Buffers" prepared by Kitsap County, January 2012 (which focuses on marine shorelines but provides scientific literature for both freshwater and marine shorelines).</p>

Table D-3, Gorst Creek Management Zones, provides more information on Option D. With this option, more alteration could occur in outer management zones than in inner management zones provided there is enhancement or stream restoration in inner management zones. These management zones could overlay on top of SMP buffers; the management zone approach would be most compatible in combination with Options A and C, but could work with Option B if administrative flexibility is offered to apply the standards.

Table D-3. Gorst Creek Management Zones – Preliminary Approach

Management Zone	Habitat Standards	Impervious Surface Allowances	Structure Allowances
A: 0-50 feet upland of OHWM	<p>A-1: Retain significant native trees, shrubs, and ground cover consistent with shoreline master program, critical area, and landscape regulations.</p> <p>A-2: In exchange for impervious surface allowances, enhance degraded areas of Management Zone A, as follows: Enhance at a 2:1 ratio the equivalent of the cleared area with native vegetation or remove man-made structures in stream.¹</p> <p>A-3: If existing impervious area of an equivalent or greater area is removed from Management Zone A, enhance degraded areas of Management Zone A, as follows: Enhance at a 1:1 ratio the equivalent of the cleared area with native vegetation, or remove man-made structures in stream at a minimum of 50% of property's lineal feet of shoreline frontage based on an approved habitat management plan.¹</p>	<p>Installation of pervious or semi-pervious surfaces such as non-solid surface decks or green infrastructure in place of existing lawn or other non-native vegetation. The area of such surfaces shall not be greater than 25% of Management Zone A area, and shall meet Type A-2 or A-3 habitat standards.</p> <p>Perpendicular trails constructed of permeable materials and no greater in travel way width than 6 feet subject to Type A-2 or A-3 habitat standards.</p>	No new structures with permanent foundations are allowed.
B: 50-85 feet upland of OHWM	<p>B-1: Same as A-1.</p> <p>B-2: In exchange for impervious surface allowances, enhance degraded areas in Management Zone A, as follows: Enhance at a 1:1 ratio the equivalent of the cleared area with native vegetation or remove man-made structures in stream. ¹</p> <p>B-3: In exchange for structure allowances, achieve both of the following:</p> <ul style="list-style-type: none"> i. Plant significant native trees to achieve 65% coverage of Management Zone A Area. ¹ ii. Enhance Management Zone B: Enhance at a 2:1 ratio the equivalent of the cleared area with native vegetation or remove man-made structures in stream or remove man-made structures in stream at a minimum of 50% of property's lineal feet of shoreline frontage based on an approved habitat management plan.¹ 	<p>Installation of pervious or semi-pervious surfaces such as non-solid surface decks or green infrastructure in place of existing lawn or other non-native vegetation, and when meeting B-2 habitat standards. Or placement of impervious surfaces that comply with all storm water standards and Habitat Standards B-3. The maximum impervious surface allowance by itself shall not exceed 25% of Management Zone B area. In combination, impervious and structural allowances shall not exceed 35% of Management Zone B area.</p> <p>Trails, parallel or perpendicular, constructed of permeable materials and no greater in travel way width than 6 feet subject to Habitat Standard B-2.</p>	<p>None with Type B-1 vegetation standards.</p> <p>Structures allowed in up to 25% of Management Zone B if meeting Type B-3 habitat standards. Except that the maximum impervious surface allowance and structural allowance shall not exceed 35% in combination.</p>

Management Zone	Habitat Standards	Impervious Surface Allowances	Structure Allowances
C: 85-100 feet upland of OHWM	C-1: Same as A-1. C-2: Same as B-2. ¹ C-3: Same as B-3. ¹	Installation of impervious surfaces or infrastructure. The maximum impervious surface allowance by itself shall not exceed 50% of Management Zone C area and shall meet Habitat Standard C-2. In combination, impervious and structural allowances shall not exceed 65% of Management Zone C area. Trails improved or unimproved.	None with Type C-1 vegetation standards. Structures allowed in up to 50% of Management Zone B if meeting Type C-3 vegetation standards. In combination, impervious and structural allowances shall not exceed 65% of Management Zone C area.

¹ Vegetation shall be planted in this order of preference: 1) native coniferous trees; 2) native deciduous trees; 3) other native vegetation; 4) non-native trees; and 5) other non-native vegetation. Trees and shrubs may be placed in natural groups to allow for view preservation and trails.