FINAL ENVIRONMENTAL IMPACT STATEMENT

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for the proposed

PORT GAMBLE REDEVELOPMENT PLAN

prepared by

Kitsap County

October 2020

Port Gamble Redevelopment Plan
Environmental Impact Statement

October 8, 2020

RE: **Final Environmental Impact Statement Port Gamble Master Plan**

Dear Reader:

Attached is a copy of the Port Gamble Redevelopment Plan Final Environmental Impact Statement (Final EIS), prepared for the Port Gamble Town Master Plan Performance Based Development (PBD). This statement has been prepared and is being circulated in compliance with the Washington State Policy Act 1971, RCW 43.21C. The intent of the Final EIS is to address potential impacts at a project level, conducting an analysis of the elements of the natural environment as well as infrastructure in the project area. Consistent with SEPA rules, the County will not take action on the Final EIS 14 days from date of issuance. All comments or questions will be forwarded to the Kitsap Hearing Examiner to be included in the public record and consisted with the Port Gamble Master Plan PBD Staff Report.

The proposal is to update the Master Plan for the Port Gamble Rural Historic Town through the following requirements: a) the Performance Based Development per KCC Chapter KCC 17.450 *Zoning; Performance Based Development*; b) a Preliminary Subdivision approval per KCC Title 16 *Land Division and Development*; c) a Shoreline Substantial Development Permit per KCC Title 22 *Shoreline Master Program*; and, d) a Critical Area Administrative buffer setback reduction from 15 feet to 5 feet as allowed in KCC Title 19 *Critical Areas Ordinance*. To help maintain historic character all development proposals are required to be reviewed through the Historic Town Development objectives listed in KCC 17.360C.020.

The historic town is designated through the 2016 Kitsap County Comprehensive Plan as a Limited Area of More Intensive Rural Development (LAMIRD). In 1967 the town of Port Gamble was designated a Historic Landmark and added to the National Register of Historic Places. The designation recognizes the unique character of the town, including the original development as a company town built around the Pope Resources sawmill. The sawmill began production in 1853 and closed in 1995. The redevelopment proposal includes land designated Rural Residential and Rural Wooded for required open space and other land uses outside of the designated historic town.

The range of proposed land uses and their densities could result in potential land use impacts associated with increase in traffic, noise and light. However, the applicant intends to comply with Kitsap County development regulations to minimize potential impacts. The proposal was reviewed through three alternatives in the FEIS: Alternative 1, Full Buildout; Alternative 2, Lesser Development; and Alternative 3, No Action Alternative. The applicant's proposed alternatives represent a range of rural land use densities to address town development objectives for the town, rural town regulatory framework, and economic development.

Alternative 1 – (Full Buildout)
This alternative represents the applicant's proposal for site development, forecasting approximately 156,000 square feet (SF) of commercial mixed-uses (retail and office),

approximately 15,000 SF of restaurant use, approximately 265 new residential units, approximately 30,480 SF of community/education/industrial space, and approximately 30,000 SF of other uses, including the West Sound Wildlife Shelter. All would be provided on the approximately 318.3-acre site. In addition, the proposal includes approximately 239 acres of open space uses.

Alternative 2 – Lesser Development
Alternative 2 assumes that approximately 35,000 SF of commercial mixed-use (retail and office), approximately 15,000 SF of restaurant use, 226 new residential units, and 30,000 SF of other uses (including the West Sound Wildlife Shelter) would develop on the approximately 318.3-acre site. In addition, approximately 250.8 acres of open space uses would include landscape areas, parks, agricultural area, natural/wooded area, critical areas and buffers, and stormwater retention ponds. With redevelopment under this alternative, the existing and largely paved Mill Site area would be converted to approximately 2.17 acres of buildings uses, a 4.2-acre paved area would be used for parking, 4.95 acres would become landscaped area, 7.63 acres of critical areas and buffers would exist, and 12.44 acres of open space would be dedicated. Redevelopment would include approximately 39 multifamily dwelling units, a 100-room hotel, and 15,000 SF of restaurant use.

Alternative 3 - No Action Alternative
The applicant is projecting three scenarios under the no action Alternative. The existing buildings and infrastructure would age and degrade overtime. The existing land use and site coverages remain as described under existing conditions. Within a portion of the mill site approximately 200,000 SF of industrial use would be developed. The industrial uses would be more intensive than those which occur onsite today. The additional use would be consistent with those uses that occurred historically on the site.

Project Details - Summary of Historic Town Development Alternatives

ZONE	**USE**	**ALTERNATIVE 1 (**Proposed Action**)**	**ALTERNATIVE 2**
RHTR			
	Single-Family	104 dwelling units	104 dwelling units
	Cottage	40 dwelling units	40 dwelling units
RHTC			
	Townhouse/Condo/Cottage	33 dwelling units	33 dwelling units
	General Commercial	35,000 SF	35,000 SF
RHTW			
	Townhouse/Condo/Cottage	78 dwelling units	39 dwelling units
	Lodge/Hotel	100 rooms	100 rooms
	General Commercial	121,000 SF	0 SF
	Restaurant	15,000 SF	15,000 SF
RR/RW			
	Single-Family	10 dwelling units	10 dwelling units
	Winery/Brewery	3 establishments	3 establishments
	Wildlife Shelter	14,300 SF	14,300 SF

The WA State Environmental Policy Act (SEPA), found in Chapter 43.21C RCW (Revised Code of Washington), is a state law that requires the County to conduct an environmental impact review of any action that might have a significant, adverse impact on the environment.

The review includes the completion of an Environmental Checklist by the applicant and a review of that checklist by the County. If it is determined that there will be environmental impacts, conditions are imposed upon the applicant to mitigate those impacts below the threshold of "major" environmental impacts. If the impacts cannot be mitigated, an environmental impact statement (EIS) must be prepared. The decision following environmental review, which may result in a Determination of Nonsignificance (DNS), Mitigated DNS (MDNS), or the necessity for an EIS is called a threshold determination. A separate notice of the threshold determination is given by the County. If it is not appealed, it becomes part of the hearing record as it was issued, since it cannot be changed by review authority under the County Hearing Examiner.

Any appeals to the adequacy of this document shall include a $500 appeal fee and shall be filed through the Kitsap County Department of Community Development, 619 Division Street Port Orchard, WA **by 4:30 PM, October 22, 2020**.

THE DECISION OF THE DEPARTMENT IS FINAL, UNLESS TIMELY APPEALED TO THE KITSAP COUNTY HEARING EXAMINER ON OR BEFORE 14 DAYS FROM THE DATE OF DECISION PER KITSAP COUNTY CODE 21.04.290.

The written appeal shall be made on, or attached to, an appeal form found on DCD's website: https://www.cognitoforms.com/KitsapCounty1/RequiredPermitQuestionnaireAppealObjectionOfAnAdministrativeDecision.

Please note affected property owners may request a change in valuation for property tax purposes, notwithstanding any program of revaluation. Please contact the Assessor's Office at 360-337-5777 to determine if a change in valuation is applicable due to the issued Decision.

If you have any questions or desire for clarification of the information, please contact Jeff Smith, Planner, jnsmith@co.kitsap.wa.us , (360) 337-5777.

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FINAL

ENVIRONMENTAL IMPACT STATEMENT

for the

PORT GAMBLE REDEVELOPMENT PLAN

This Final Environmental Impact Statement (FEIS) for the proposed Port Gamble Redevelopment Plan has been prepared in compliance with the State Environmental Policy Act (SEPA) of 1971 (Chapter 43.21C, Revised Code of Washington); the SEPA Rules (Chapter 197-11, Washington Administrative Code); and rules adopted by Kitsap County implementing SEPA (KCC 18.04). Preparation of this FEIS is the responsibility of Kitsap County, and based on a scoping process has directed the areas of research and analysis that were undertaken in preparation of this FEIS. This document is not an authorization for an action, nor does it constitute a decision or a recommendation for an action. In its final form – as a Final EIS – it will accompany the Proposed Action and will be considered in making final decisions concerning the construction, development and operation of the proposed Port Gamble redevelopment.

Date of Draft EIS Issuance.....**September 17, 2019**

Date of Final EIS Issuance.....**October 8, 2020**

PREFACE

The purpose of this Environmental Impact Statement (EIS) is to:

- identify and evaluate probable adverse environmental impacts that could result from development associated with the *Proposed Action* and development alternatives, and the *No Action Alternative;* and
- identify measures to mitigate those impacts.

This EIS does not authorize a specific action or alternative nor does it recommend for or against a particular course of action; it is one of several key documents that will be considered in the decision-making process for this project. A list of expected regulatory actions, including: licenses, permits and approvals is contained in the **Fact Sheet** to this EIS (pgs. ii-iii). In its final form, this Final Environmental Impact Statement (FEIS) will accompany the applications specifically associated with the permit processes and will be considered as the final environmental (SEPA) document relative to those applications.

The environmental elements that are analyzed in this EIS were determined as a result of the formal, public EIS scoping process, which occurred from February 22, 2013, through March 20, 2013. The SEPA Determination of Significance/Scoping Notice was mailed to numerous agencies and organizations, as well as owners and current occupants of parcels located within 800 feet of the site and land owners along a limited portion of State Route 104 and in the community immediately north of the tribal boundary on the east side of Port Gamble Bay. A public Scoping Meeting was held on March 18, 2013 attended by approximately 34 individuals. During the EIS Scoping period, written comments were received from 32 agencies, organizations and individuals and public testimony was received from eight individuals. Following review of the written comments and testimony, Kitsap County determined the issues and alternatives to be analyzed in this EIS. They include 13 broad areas of environmental review consisting of: earth; water resources; plants and animals; environmental health; historic and cultural resources; air quality and greenhouse gases; land use; relationship to plans and policies; aesthetics; recreation; public services; transportation; and, utilities.

The Table of Contents for this FEIS is contained on pgs. v-ix of the **Fact Sheet**. In general, the FEIS is organized into four major chapters:

- **Fact Sheet** (immediately following this Preface) provides an overview of the proposed action and development alternatives;
- **Chapter 1** (beginning on page 1-1) summarizes the description of the proposed project, the Proposed Action and alternatives, as well as provides a summary of environmental impacts, mitigation measures, and significant unavoidable adverse impacts;
- **Chapter 2** (beginning on page 2-1) provides a detailed description of the Proposed Action and alternatives;
- **Chapter 3** (beginning on page 3-1) contains the Errata with changes made subsequent to the publication of the Draft EIS (DEIS).
- **Chapter 4** (beginning on page 4-1) contains the public comments received on the DEIS and responses to those comments.

FACT SHEET

Name of Proposal — **Port Gamble Redevelopment Plan**

Proponent — Olympic Property Group, LLC

Location — This Final EIS identifies and analyzes conditions associated with redevelopment of the 318.3 acre Port Gamble site that includes waterfront property and is bordered by Port Gamble Bay to the east, Hood Canal to the north, and primarily forested land to the south and west.

Proposed Action — To implement the vision for the site, the Proposed Actions for the Port Gamble Redevelopment proposal include:

- Kitsap County Performance Based Development with Preliminary Plat approval;
- Kitsap County Shoreline Substantial Development Permit approval;
- Potential future Development Agreement between Kitsap County and Olympic Property Group; and,
- Future local, state and federal permits that would be required for construction and redevelopment of Port Gamble.

EIS Alternatives — In order to conduct a comprehensive environmental review, two development alternatives meeting the proponent's objectives are analyzed in this DEIS including Alternative 1 (Proposed Action) and Alternative 2, as well as a No Action Alternative. The development alternatives both fulfill the applicant's objectives (assuming in Alternative 2 the southern Mill Site is purchased by third parties for conservation) and provide a useful tool for the decision-making process. The development alternatives are described in detail in Chapter 2 of this Draft EIS.

Alternative 1, which represents the applicants proposal for site development, assumes that approximately 156,000 sq. ft. of commercial uses, 15,000 sq. ft. of restaurant uses, approximately 265 new residential units (plus 28 existing residential units for 293 total units), 30,480 sq. ft. of community/education/industrial space, a 100-room hotel/visitor accommodations, approximately 239 acres of open space[1], and approximately 3 miles of trails.

[1] Note that open space as mentioned here refers to the aggregate area of "green space" which will exist at project completion. It should be distinguished from the open space calculations referenced on Sheets CV5 and CV6 of the Plat/PBD plan set which refer to open space set aside to meet the 50% open space code requirement.

Alternative 2 assumes that approximately 35,000 sq. ft. of commercial uses, 15,000 sq. ft. of restaurant uses, approximately 226 new residential units (plus 28 existing residential units for 254 total units), 30,480 sq. ft. of community/education/industrial space, a 100-room hotel/visitor accommodations, approximately 250.76 acres of open space[2], and approximately 2.5 miles of trails. 16 acres of the southern portion of the Mill Site would be purchased by others for conservation.

The No Action Alternative includes three scenarios: continuation of existing conditions; redevelopment by others under existing zoning including industrial development of the Mill Site; and redevelopment by others under existing zoning and conservation of the entire Mill Site.

SEPA Responsible Official

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Phased Environmental Review[3]

This project-level EIS has been prepared for the proposed *Port Gamble Redevelopment Plan* based on information that is currently available and that has been prepared in support of this EIS. It is anticipated that no subsequent environmental review of this proposal will be necessary. If, however, substantial changes occur to the project following issuance of the Final EIS or new environmental information is identified, the SEPA Lead Agency may determine that subsequent environmental analysis is necessary in order to address the project changes and/or the new environmental information.

Required Approvals and/or Permits

Preliminary investigation indicates that the following approvals and/or permits may be required for the proposed *Port Gamble Redevelopment Plan* from agencies with jurisdiction.[4] The approvals/permits pertain to development, construction and operation of redevelopment and to other regulatory actions that may allow or facilitate development, construction and operation of the proposed redevelopment. Additional permits/approvals may be identified during the review process associated with specific elements of the project.

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2 Note that open space as mentioned here refers to the aggregate area of "green space" which will exist at project completion. It should be distinguished from the open space calculations referenced on Sheets CV5 and CV6 of the Plat/PBD plan set which refer to open space set aside to meet the 50% open space code requirement.

3 WAC 197-11-060(5)

4 An agency with jurisdiction is "an agency with authority to approve, veto, or finance all or part of a nonexempt proposal (or part of a proposal)" (WAC 197-11-714 (3). Typically, this refers to a local, state or federal agency with licensing or permit approval responsibility concerning the proposed project.

Kitsap County

- Preliminary Plat Approval
- Performance Based Development (PBD) Approval
- Shoreline Substantial Development Permit Approval
- Conditional Use Permits
- Administrative Conditional Use Permits
- Road Standard Technical Deviation
- Development Agreement between Kitsap County and the Applicant (potential)

Future permits for construction over the site buildout period could include, but not limited to:

- Building Permit
- Grading / Shoring Permit
- Mechanical Permits
- Electrical Permits
- Plumbing Permits
- Utility Extension Agreements
- Fire System Permits
- Stormwater Management Plan

Regional Agencies

- Puget Sound Clean Air Agency
- Utility Service Providers
  - Water, Electrical Service Availability

State of Washington

- Section 401 Water Quality Certification Approval (if required)
- Construction Stormwater General Permit
- Joint Aquatic Resources Permit Application (JARPA)
- Department of Transportation (SR 104 improvements)
- Department of Ecology (LOSS)
- NPDES Stormwater Discharge Permit (if required)

Authors and Principal Contributors to this EIS

This *Port Gamble Redevelopment Plan* EIS has been prepared under the direction of the Kitsap County, as SEPA Lead Agency. Research and analysis associated with this EIS were provided by the following consulting firms:

- **EA** – lead EIS consultant; document preparation; environmental analysis – Air Quality/Greenhouse Gas Emissions, Land Use, Relationship to Plans and Policies, Parks and Recreation, Aesthetics, and Public Services
- **David Evans and Associates** – Site Planning, Water Resources (stormwater), Utilities, and Aesthetics (viewshed simulations)

- **Anchor Environmental** – Environmental Health
- **Artifacts Consulting** – Historic Resources
- **GeoEngineers** – Plants and Animals, Wetlands
- **TetraTech** – Heron Management Plan
- **SWCA** – Cultural Resources
- **Terracon** – Earth, Water Resources (groundwater)
- **Transpo Group** – Transportation
- **Golder Associates** - Water Resources (hydrogeology)

Location of Background Data

EA Engineering, Science and Technology, Inc., PBC
2200 Sixth Avenue, Suite 707
Seattle, WA 98121
Telephone: 206.452.5350

Kitsap County Department of Community Development
Planning and Environmental Programs Division
614 Division Street, MS-36
Port Orchard, WA 98366

Date of Issuance of this Final EIS

October 8, 2020

Availability of the Draft and Final EIS

Copies of the DEIS and FEIS or a Notice of Availability have been distributed to agencies, organizations and individuals noted on the Distribution List (**Chapter 6** of this document). Notice of Availability of the DEIS has also been provided to organizations and individuals that requested to become parties of record, and that provided EIS Scoping comments.

A limited number of complimentary copies of this FEIS are available – while the supply lasts -- either as a CD or hardcopy from Kitsap County Department of Community Development, which is located at the Kitsap County Administration Building, 619 Division Street, Port Orchard. Additional copies may be purchased from Kitsap County for the cost of reproduction.

The DEIS, FEIS and the appendices are also available online at: https://www.kitsapgov.com/dcd/Pages/default.aspx

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

Summary

CHAPTER 1
SUMMARY

1.1 INTRODUCTION

This chapter provides a summary of the Final Environmental Impact Statement (FEIS) for the Port Gamble Redevelopment Plan. It briefly describes the Proposed Actions and alternatives; contains an overview of significant environmental impacts identified for the Proposed Actions; and, provides a list of mitigation measures. Please see **Chapter 2** of this FEIS for a more detailed description of the Proposed Actions and alternatives and **Chapter 3** for a detailed presentation of the affected environment, significant impacts of the Proposed Actions, mitigation measures, and significant unavoidable adverse impacts.

Olympic Property Group (OPG), the Applicant, is proposing redevelopment of the 318.4-acre Port Gamble site. The proposal would redevelop the site with a mix of residential, commercial, agricultural and open space uses intended to complement the historic character of the site and create an economically sustainable community. Proposed redevelopment of the Port Gamble site could ultimately contain between 226 and 265 new residential units, a 100-room hotel, 50,000 to 171,000 sq. ft. of commercial space, and 239 to 245 acres of open space. Buildout of the proposed redevelopment is anticipated to occur over an approximately 15 year timeframe (2034), although actual buildout would depend on market conditions.

Port Gamble is designated a Type-1 Limited Area of More Intensive Rural Development (Type-1 LAMIRD) in the Kitsap County Comprehensive Plan.[1] In conjunction with the LAMIRD designation, the Port Gamble Rural Historic Town (RHT) ordinance[2] divides Port Gamble into three district zones: Rural Historic Town Residential (RHTR), Rural Historic Town Commercial (RHTC) and Rural Historic Town Waterfront (RHTW) (see **Figure 2-5**). Of the total 318.4-acre Port Gamble site area, approximately 113.4 acres lie within the Type-1 LAMIRD area with the remaining 204.9 acres of the site outside the Type-1 LAMIRD area zoned Rural Residential (RR) and Rural Wooded (RW).

1.2 PROPOSED ACTIONS

To implement the vision for the site, the Proposed Actions for the Port Gamble Redevelopment Plan include:

- Kitsap County Preliminary Plat approval;
- Performance Based Development approval;
- Conditional Use Permit approvals;

[1] The Kitsap County Comprehensive Plan was updated in 2012, with Port Gamble continuing as a LAMIRD.
[2] KCC 17.321B; Ordinance 236.

- Administrative Conditional Use Permit approvals;
- Road Standard Technical Deviation;
- Development Agreement between Kitsap County and the Applicant (potential);
- Kitsap County Shoreline Substantial Development Permit approval;
- Kitsap County Critical Area Administrative reduction of 15 ft. building setback to 5 ft.;
- Legislative Amendments;
- Future local permits for construction (see **Fact Sheet**); and
- State permits and approvals including:
    - Department of Transportation for SR 104 improvements
    - Construction Stormwater General Permit
    - NPDES Stormwater Discharge Permit (if required)
    - Section 401 Water Quality Certification Approval (if required)

1.3 ALTERNATIVES

In order to conduct a comprehensive environmental review, two development alternatives meeting the proponent's objectives are analyzed in this FEIS including Alternative 1 (Proposed Action) and Alternative 2, as well as a No Action Alternative. The development alternatives both fulfill the applicant's objectives (assuming in Alternative 2 the southern portion of the Mill Site is purchased by third parties for conservation) and provide a useful tool for the decision-making process. The development alternatives are described in detail in **Chapter 2** of this FEIS.

Alternative 1 – (Full Buildout)

Alternative 1 assumes site redevelopment reflecting the full amount of development allowed under current zoning. It would feature infill development on the entire site, including the upland Town Site and waterfront Mill Site with approximately 265 residential units (plus 28 existing residences for a total of 293 units), approximately 156,000 sq. ft. of commercial uses, 15,000 sq. ft. of restaurant uses, 30,480 sq. ft. of community/education/industrial uses, and a 100-room hotel (see **Figure 2-6**). Approximately 239 acres of open space and approximately three miles of trails would also be provided. Alternative 1 is anticipated to generate approximately 676 residents and approximately 505 employees.

In general, the majority of the single-family residential units would be located in and around the Town Site in the RHTC and RHTR-zoned portions of the site, but single family residential units may be located within all zones. Cottages are planned for the RHTW and RHTR zones, and are also allowed in the RHTC zone. Condo and mixed use units would also be located in the RHTW and RHTC zones. The majority of the proposed commercial (including hotel/visitor accommodations) and multifamily residential uses (townhomes and cottages) would be located on the Mill Site in the RHTW-zoned portion of the site. Rural residential, agritourism, and agricultural uses would generally be located in the RR and RW-zoned portions of the site.

Alternative 2 (Lesser Development)

Alternative 2 would be similar to Alternative 1 in the RHTR, RHTC, RR and RW-zoned portions of the site, with the primary difference relating to development in the RHTW-zoned portion of the site (Mill Site) (see **Figure 2-7**). Alternative 2 would be dependent on others purchasing a portion of the shoreline area in the Mill Site area for conservation and funding the conservation activity.

Retention of a portion of the Mill Site area for conservation or open space would result in certain differences in site development compared to Alternative 1, including 39 fewer residential units, approximately 121,000 fewer sq. ft. of commercial/retail use, approximately 41,000 less sq. ft. in education/industrial use, and approximately 16 additional acres in open space. Alternative 2 is anticipated to generate approximately 574 residents and approximately 263 employees.

Development in the upland portion of the site (RHTR, RHTC, RR and RW-zoned areas) would be generally similar to Alternative 1. The number of residential units in the upland portion of the site would be the same as under Alternative 1. This alternative assumes that purchase of any portion of the Mill Site for conservation or open space would be accomplished by others. To meet the Applicant's objectives under this alternative, purchase of portions of the Mill Site by public agencies, tribes, or other parties would be necessary.

No Action Alternative

The No Action Alternative includes three different scenarios:

A. Continuation of existing conditions (see **Figure 2-3**).

B. Redevelopment by others under existing zoning. This scenario assumes that the applicant OPG would sell the property and redevelopment would occur in piecemeal fashion by others, including industrial development on the Mill Site (see **Figure 2-11**).

C. Redevelopment of upland area under existing zoning and purchase of the entire Mill Site for conservation. This scenario would assume that purchase of any portion of the Mill Site for conservation, and any funding of conservation activities, would be accomplished by others (see **Figure 2-12**).

Scenario A - Continuation of Existing Conditions

Under Scenario A, no redevelopment would occur. The existing buildings and infrastructure on the Port Gamble site would continue to age and degrade over time. The uses and site coverage would remain the same as existing conditions. This Scenario does not meet the applicant's objectives.

Scenario B - Redevelopment by Others Under Existing Zoning

This scenario would not be built by OPG, but would be developed by others over time. Due to staggered development and potentially several different property owners/developers, this scenario could include a lack of coordination for residential construction, less control over architectural standards and less continuity through the town compared to development by a single owner as under Alternatives 1 and 2. Development standards associated with applicable local and state regulations would be met. Subdivision would occur in a piecemeal fashion over time (i.e. numerous plats/short plats).

Under this scenario, residential development within the RHTR zone would occur within slightly larger lots, and full buildout could occur at a slower rate. The upland RW zone would be platted out with 20-acre lots per code. The Mill Site would be industrialized, including large buildings for manufacturing, boat building and/or shellfish/fish processing facilities, plus open storage yards (as allowed per current code). Limited or no open space would be included, resulting in a loss of existing public access and trails, and no resource/educational facilities would be provided except for what exists currently (i.e. Newfields Laboratory).

Scenario C - Redevelopment of Upland Area by Others Under Existing Zoning and Purchase of Mill Site by Others for Conservation

Scenario C of the No Action Alternative would include the same assumptions for the upland area as under Scenario B (development by others under existing zoning), including slightly larger lots in the RHTR zone and 20-acre lots in the RW zone. This scenario differs from Scenario B in relation to the Mill Site. This scenario assumes the Mill Site would be restored to a natural condition and no new development would occur in this area. Purchase of any portion of the Mill Site for conservation, and any funding of conservation activities, would be accomplished by others. The existing Newfield Laboratory would remain.

For purposes of this FEIS, it is assumed for this scenario that the Mill Site would be left as open space, however it is possible that a future purchaser of the Mill Site could establish a complementary use such as picnic shelters, a visitor center or cultural center which would be subject to separate environmental review.

The number of residential units under Scenario C would be the same as Scenario B (Existing Zoning). No new industrial development is assumed in Scenario C, as the Mill Site would be retained as open space.

1.4 IMPACTS

The following table (**Table 1-1**) highlights the impacts that would potentially result from the alternatives analyzed in this FEIS. This summary table is not intended to be a substitute for the complete discussion of each element that is contained in **Chapter 3**.

Table 1-1
IMPACT SUMMARY MATRIX

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
3.1 EARTH				
Construction				
Subsurface soils Construction activities would include earthwork associated with preparing the site for building and infrastructure development. The following cubic yards of cut and fill could be required on the site: • Approximately 10,000 cubic yards of cut and 175,000 cubic yards of fill at the Mill Site (RHTW-zoned area) • Approximately 15,000 cubic yards of cut and 30,000 cubic yards of fill in RHTR and RHTC-zoned portions of the site • Approximately 35,000 cubic yards of cut and 45,000 cubic yards of fill in the RR and RW-zoned portions of the site.	Grading activities under Alternative 2 would generally occur as described for Alternative 1 although, overall cut and fill within the RHTW-zoned portion of the site would be slightly less due to less area being filled to bring development pads above the flood elevations.	No excavation or fill would be required, and topography and subsurface soils would remain relatively unchanged.	Impacts as a result of grading activities and excavation would be similar to those described for Alternatives 1 and 2.	Impacts as a result of grading activities and excavation would be similar to those described for Alternatives 1 and 2 on the Town Site. It is assumed that no development would occur on the Mill Site, resulting in limited potential for topographic or subsurface soil impacts within this portion of the site.
Vibrations Construction activities could generate a moderate level of vibrations, but given the soil types underlying the Town Site and most of the Mill Site, ground vibrations would be attenuated over relatively short distances. Where construction occurs immediately adjacent to an existing structure, the vibration risk could be addressed by using conventional smaller equipment.	Impacts from vibrations would generally occur as described for Alternative 1.	No redevelopment would occur, and no vibrations from construction would result.	Impacts as a result of construction vibrations would be similar to those described for Alternatives 1 and 2.	Impacts as a result of construction vibrations would be similar to those described for Alternatives 1 and 2.
Static Settlement The greatest potential for static settlement with the proposed redevelopment is within the depression near the center of the Town Site; potential settlement impacts would be addressed by conventional methods, such as over excavation and replacement to granular structural fill or intermediate depth-foundations.	Impacts as a result of static settlement would generally occur as described for Alternative 1.	No redevelopment would occur, and no static settlement from construction would result.	Impacts as a result of static settlement would be similar to those described for Alternatives 1 and 2.	Impacts as a result of static settlement would be similar to those described for Alternatives 1 and 2.
Erosion The steep northern and eastern marine bluffs are prone to surficial erosion, and stormwater runoff flowing over the bluffs could increase the erosion magnitude and risk. The proposed stormwater control system would redirect runoff away from the bluffs, minimizing potential erosion impacts.	Impacts as a result of erosion would generally occur as described for Alternative 1.	No redevelopment would occur and geologic hazards would remain relatively unchanged.	Impacts as a result of erosion would be similar to those described for Alternatives 1 and 2.	Impacts as a result of erosion would be similar to those described for Alternatives 1 and 2.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Landslide The potential for landslide risk on the site is limited to the steep northern and eastern marine bluffs. The proposed stormwater control system would direct runoff away from the bluffs, minimizing the potential for impacts from landslides.	Impacts as a result of landslides would generally occur as described for Alternative 1.	No redevelopment would occur and geologic hazards would remain relatively unchanged.	Impacts as a result of landslides would be similar to those described for Alternatives 1 and 2.	Impacts as a result of landslides would be similar to those described for Alternatives 1 and 2.
Liquefaction The potential for liquefaction during a seismic event (earthquake) is limited to a portion of the Mill Site. The proposed use of conventional geotechnical foundation designs such as drilled or driven piles, mat foundations and aggregate bearing pads would minimize the potential for liquefaction impacts.	Impacts as a result of the liquefaction hazard would generally occur as described for Alternative 1.	No redevelopment would occur, and no additional potential for liquefaction would result from construction.	Impacts as a result of liquefaction hazards would be similar to those described for Alternatives 1 and 2.	Impacts as a result of liquefaction hazards would be similar to those described for Alternatives 1 and 2 for the Town Site. No structures would be developed on the Mill Site, so there would be no buildings subject to liquefaction hazards in this area.
Operation				
The proposed permanent stormwater management system would minimize the potential for erosion and sedimentation with operation of site development.	Impacts from erosion and sedimentation during operation of the site would generally occur as described for Alternative 1.	No redevelopment would occur and geologic hazards and sedimentation would remain relatively unchanged.	Impacts during operation of the site would be similar to those described for Alternatives 1 and 2.	Impacts during operation of the site would be similar to those described for Alternatives 1 and 2.
Sea Level Rise A conservative estimate of potential sea level rise in Hood Canal by 2100 is considered to be up to approximately 50 inches over current levels. Raising site grades on the Mill Site by at least five feet above existing grades as part of the redevelopment would mitigate the potential impact of a long-term sea level rise.	Impact from potential sea level rise would generally occur as described for Alternative 1.	No redevelopment would occur, and no fill would be added to the Mill Site to mitigate the potential sea level rise.	Impacts from potential sea level rise would generally occur as described for Alternative 1 and 2.	No redevelopment would occur on the Mill Site (restoration only), and no fill would be added to the Mill Site to mitigate the potential sea level rise.
3.2 WATER RESOURCES				
Construction				
Wetlands and Streams No wetland areas would be filled during site construction and no direct impacts to wetlands are anticipated. The potential for erosion, sedimentation, and hydrologic impacts to wetlands and steams would be minimized with implementation of the proposed temporary stormwater control system and associated BMPs.	Impacts to wetlands and streams during construction would generally occur as described in Alternative 1.	No redevelopment would occur and there would be no new temporary or permanent impacts to wetlands and streams.	Direct impacts to wetlands and streams would be similar to Alternatives 1 and 2.	Direct impacts to wetlands and streams would be similar to Alternatives 1 and 2.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Floodplains Approximately 175,000 cubic yards of fill would be used at the Mill Site to raise the elevation above the 100-year floodplain. All cut and fill would occur landward of the OHWM of Port Gamble Bay and Hood Canal.	Impacts to floodplains during construction would generally occur as described in Alternative 1.	No redevelopment would occur and there would be no new temporary or permanent impacts to floodplains.	Direct impacts to the floodplain could be similar to Alternatives 1 and 2.	No filling or redevelopment would occur on the Mill Site, thus there would be no new temporary or permanent impacts to floodplains.
Stormwater Construction could result in temporary impacts to stormwater drainage from erosion, sedimentation, pollutants from construction equipment, and the impact to hydrology and water quality functions from vehicles. The use of temporary stormwater control systems and construction BMPs would address potential temporary impacts, and construction of proposed stormwater facilities would be phased-in, thus minimizing the area of disturbance at any one time.	Impacts to stormwater during construction would generally occur as described in Alternative 1.	No redevelopment would occur and existing stormwater control facilities would be maintained. Existing water quality treatment facilities (grass-lined swales along SR 104) would remain.	Temporary construction stormwater conditions would be similar to those under Alternatives 1 and 2, although construction would occur in a piecemeal manner.	The upland portion of the site would be redeveloped under existing regulations and in a piecemeal manner, similar to Scenario B. The Mill Site would be restored to a more natural condition which would increase the potential for erosion and sedimentation during construction. Requiring temporary stormwater control facilities to minimize potential impacts to be implemented.
Hood Canal and Port Gamble Bay No construction activities or staging within the waters of Hood Canal or Port Gamble Bay are proposed. Construction activities in the shoreline buffer would be limited and temporary erosion control measures would be implemented to minimize temporary impacts to marine waters from erosion, sedimentation, and pollutants.	Impacts to Hood Canal and Port Gamble Bay during construction would generally occur as described in Alternative 1.	No redevelopment would occur in or adjacent to Hood Canal and Port Gamble Bay. Since the existing wastewater treatment facility would be maintained, existing degraded water quality in Hood Canal and Port Gamble Bay would continue.	Impacts to Hood Canal and Port Gamble Bay during construction would generally occur as described in Alternative 1, but may be more staggered.	The upland portion of the site would be redeveloped under existing regulations and in a piecemeal manner, similar to Scenario B. Construction activities on the Mill Site associated with restoration would not be anticipated to include rainwater activities and temporary control measures would be implemented
Operation				
Wetlands and Streams The hydrology of on-site wetlands is partially maintained by surface runoff. To minimize the loss of wetland hydrology from development, a portion of runoff generated by rooftops would be diverted back to wetlands. The hydrology of streams on-site would not be significantly altered, and flows to Machias Creek would match existing conditions.	Impacts to wetlands and streams during operation would generally occur as described in Alternative 1.	No redevelopment would occur and there would be no new temporary or permanent impacts to wetlands and streams.	Direct impacts to wetlands and streams could be similar to Alternatives 1 and 2.	Direct impacts to wetlands and streams could be similar to Alternatives 1 and 2.
Floodplains Due to the location of the site adjacent to Hood Canal and Port Gamble Bay no potential for increased downstream flooding would occur with filling of floodplain area at the Mill Site and compensatory floodplain storage would not be required.	Similar to Alternative 1, no potential for increased downstream flooding would occur with filling of the floodplain area at the Mill Site.	No redevelopment would occur and there would be no new temporary or permanent impacts to floodplains.	Floodplain conditions would be anticipated to be similar to Alternatives 1 and 2.	No filling or redevelopment would occur on the Mill Site, thus there would be no new temporary or permanent impacts to floodplains.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Groundwater Potential impacts to shallow groundwater with proposed redevelopment under Alternative 1 would be minimal because the development would not involve any stormwater infiltration systems. Due to the depth and confined nature of the saturated areas where deep aquifers have been identified below the site and the relatively shallow depth of planned excavations and permanent development features, no impacts to deep aquifers would be anticipated	Impacts to groundwater during operation would generally occur as described in Alternative 1.	No redevelopment would occur and existing stormwater control and wastewater treatment facilities would be maintained.	Impacts to groundwater during operation would generally occur as described in Alternative 1 and 2.	The upland portion of the site would be redeveloped under existing regulations and in a piecemeal manner, similar to Scenario B. The Mill Site would be restored to a more natural condition than under the other alternatives and scenarios, reducing the potential impact to groundwater in this area.
Critical Aquifer Recharge Areas (CARAs) With the proposed stormwater treatment features and no proposed use of stormwater infiltration, no significant impacts to designated CARA areas on the site are anticipated.	Impacts to CARAs during operation would generally occur as described in Alternative 1.	No redevelopment would occur and existing stormwater control and wastewater treatment facilities would be maintained.	Impacts to CARAs during operation would generally occur as described in Alternative 1 and 2.	The upland portion of the site would be redeveloped under existing regulations and in a piecemeal manner, similar to Scenario B. The Mill Site would be restored to a more natural condition further reducing the potential impact to the CARA in this area.
Stormwater Quantity Impervious surfaces would increase from 39 acres to 63 acres, resulting in an increase in stormwater runoff. The proposed permanent stormwater system would include a conveyance system, water quality treatment, detention facilities and new and existing outfalls to Hood Canal, Port Gamble Bay, Machias Creek, Ladine-DeCoteau Creek or to onsite wetlands.	Impervious surfaces would be approximately 5 acres less than Alternative 1 (58 acres), and changes to the stormwater outfall in Port Gamble Bay would not occur. Despite these differences impacts to stormwater during operation would generally occur as described in Alternative 1.	No redevelopment would occur and existing stormwater control facilities would be maintained.	Improvements to existing stormwater control facilities would be generally similar to those under Alternative 1 but would be more staggered over time. These facilities could be smaller and more scattered.	The upland portion of the site would be redeveloped under existing regulations and in a piecemeal manner, similar to Scenario B. The Mill Site would be restored to a more natural condition than under the other alternatives and scenarios, reducing the total amount of impervious surface on the site and associated stormwater runoff.
Stormwater Quality Redevelopment would increase pollution-generating surfaces and associated pollutants that could enter surface water runoff. The proposed stormwater system would include water quality treatment features to minimize the potential for pollution to reach receiving waters (Hood Canal and Port Gamble Bay). Because much of the runoff from the site is currently untreated, water quality would improve under Alternative 1.	Impacts to stormwater quality as a result of redevelopment would generally occur as described in Alternative 1.	No redevelopment would occur and existing stormwater control facilities would be maintained. Existing water quality treatment facilities (grass-lined swales along SR 104) would remain.	Impacts to stormwater quality as a result of redevelopment would generally occur as described in Alternative 1.	Impacts to stormwater quality as a result of redevelopment would generally occur as described in Alternative 1.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Large Onsite Septic System (LOSS) In 2016-17 Pope Resources built a new LOSS to serve the site. The LOSS could impact groundwater through an increase in flow; however, the increase would be relatively small and not anticipated to impact groundwater. Groundwater from the LOSS will meet Department of Health (or DOH) standards at the point of compliance (i.e. the property line).	Impacts as a result of the LOSS during operation would generally occur as described in Alternative 1.	No redevelopment would occur and existing wastewater treatment facilities would be maintained.	Impacts as a result of the LOSS during operation would generally occur as described in Alternative 1 and 2.	Impacts as a result of the LOSS during operation would generally occur as described in Alternative 1 and 2, except that the LOSS would disperse less water back into the groundwater due to reduced sewer demand from restoring the Mill Site to a natural condition.
Hood Canal and Port Gamble Bay Stormwater control and wastewater treatment facilities would improve water quality in Hood Canal and Port Gamble Bay. As a result no significant impacts to Hood Canal and Port Gamble Bay are expected from operation.	Impacts to Hood Canal and Port Gamble Bay during operation would generally occur as described in Alternative 1.	No redevelopment would occur and existing degraded water quality in the Hood Canal and Port Gamble Bay would continue.	Impacts to Hood Canal and Port Gamble Bay during operation would generally occur as described in Alternative 1 and 2, except that improvements to stormwater control and water quality facilities would be more staggered over time.	The upland portion of the site would be redeveloped under existing regulations and in a piecemeal manner, similar to Scenario B. The Mill Site would be restored to a more natural condition than under the other alternatives and scenarios, enhancing the potential for improved water quality in this area.
3.3 PLANTS AND ANIMALS				
Construction				
Upland Habitats Existing upland natural and wooded areas would be reduced from 122.4 acres to 45.8 acres. Upland species would likely not be affected, though species that have a potential to occur on the site could be affected if these species utilize on-site habitats.	Impacts to upland habitats from construction would generally occur as described in Alternative 1.	No redevelopment would occur and there would be no new temporary or permanent impacts to existing upland plant and animal species and habitat.	Piecemeal development of the site by different property owners would result in a greater loss of upland habitat (+20 acres) than Alternatives 1 and 2, and greater fragmentation of natural areas.	Piecemeal development of the upland portion of the site by different property owners would result in a greater loss of upland habitat (+20 acres) than Alternatives 1 and 2, and greater fragmentation of natural areas.
Wetland and Stream Habitats Construction activities associated with direct impacts to Machias Creek would result in temporary impacts to riparian vegetation from clearing and grading. These areas would be restored with native vegetation in accordance with Kitsap County critical areas requirements, resulting in no significant construction-related impacts. Wetland and stream buffer averaging is proposed in some areas of the site. Because the existing buffers in these areas are generally degraded the proposed development through buffer averaging in these areas would not result in a change from existing conditions.	Impacts to wetland and stream habitats from construction would generally occur as described in Alternative 1, but no wetland buffer averaging would occur under Alternative 2.	No redevelopment would occur and there would be no new temporary or permanent impacts to existing wetland and stream plant and animal species and habitat.	Piecemeal development of the site by different property owners could result in greater impacts of construction on wetland and stream species and habitat, but impacted areas would be restored in accordance with Kitsap County critical areas requirements and other applicable regulations.	Piecemeal development of the site by different property owners could result in greater impacts of construction on wetland and stream species and habitat, but impacted areas would be restored in accordance with Kitsap County critical areas requirements and other applicable regulations.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Marine and Shoreline Habitats Grading and development in the Mill Site and shoreline buffer would include both cut and fill, which could result in temporary impacts to marine waters from erosion, sedimentation, construction pollutants, and underwater noise. Construction work would occur within the permitted salmon "work window", and nearshore marine and intertidal habitat for forage fish, shellfish and habitat for federally-listed fish and marine mammal species would not be significantly impacted.	Impacts to shoreline habitats from construction would generally occur as described in Alternative 1, but nine acres adjacent to the shoreline at the Mill Site would be restored, and grading in the shoreline buffer would be less. The development footprint at the Mill Site and impacts on shoreline habitats would also be decreased.	No redevelopment would occur and there would be no new temporary or permanent impacts to existing shoreline plant and animal species and habitat.	Impacts to shoreline habitats from construction would generally occur as described in Alternative 1,	The restoration of the Mill Site to a more natural condition than under the other alternatives would provide greater potential for the improvement of nearshore habitat. Human-induced noise and light and glare would be significantly reduced.
Operation				
Upland Habitats Habitat for species identified as occupying upland forested habitats would be reduced. Those species that typically occupy upland forests along shoreline bluffs would remain unaffected.	Impacts to upland habitats from operation would generally occur as described in Alternative 1.	No redevelopment would occur and there would be no new temporary or permanent impacts to existing upland plant and animal species and habitat.	Piecemeal development of the site by different property owners would result in a greater loss of upland habitat (+20 acres) than alternatives 1 and 2, and greater fragmentation of natural areas.	Piecemeal development of the upland portion of the site by different property owners would result in a greater loss of upland habitat (+20 acres) than alternatives 1 and 2, and greater fragmentation of natural areas.
Wetland and Stream Habitats Approximately 103 acres of the site would be permanently maintained as critical areas and associated buffers. The wetland and stream habitat on site would not be reduced by development, and as such no significant impact on wetland and stream species is anticipated.	Impacts to wetland and stream habitats from operation would generally occur as described in Alternative 1, but no wetland buffer averaging would occur under Alternative 2.	No redevelopment would occur and there would be no new temporary or permanent impacts to existing wetland and stream plant and animal species and habitat.	Impacts to wetland and stream habitats from operation would generally occur as described in Alternative 1, but piecemeal development of the site by different property owners could result in fewer acres of wetlands being maintained as critical areas or associated buffers.	Impacts to wetland and stream habitats from operation would generally occur as described in Alternative 1, but piecemeal development of the site by different property owners could result in fewer acres of wetlands being maintained as critical areas or associated buffers.
Marine and Shoreline Habitats Permanent changes to the existing shoreline and nearshore marine habitat would occur, and development would increase activity levels along the shoreline. The stormwater control system and LOSS system would improve water quality and existing marine habitats. The restoration of shoreline buffer would increase shoreline habitat function and could benefit marine species.	Impacts to shoreline habitats from operation would generally occur as described in Alternative 1, but nine acres adjacent to the shoreline at the Mill Site would be restored. The development footprint at the Mill Site and impacts on shoreline habitats would also be decreased and human and pet activity along the shoreline would also be reduced compared to Alternative 1.	No redevelopment would occur and there would be no new temporary or permanent impacts to existing shoreline plant and animal species and habitat. The continued operation of the limited stormwater control system and existing sewer treatment system would continue to impact marine resources.	Impacts to shoreline habitats from operation would generally occur as described in Alternative 1, but the development footprint at the Mill Site and impacts on shoreline habitats could be increased as a result of development for industrial use, or due to piecemeal development of the site.	The restoration of the Mill Site to a more natural condition than under the other alternatives would provide greater potential for the improvement of nearshore habitat. Human-induced noise and light and glare would be significantly reduced.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Wildlife Networks and Corridors Much of the existing forested, wetland, and riparian areas would remain intact with redevelopment, which occurs mainly in previously disturbed areas. The extension of Carver Road would limit wildlife movement between Carver Road and SR 104, and development in the western portion of the site could limit species movement to natural areas to the west. Wildlife movement along creeks and shorelines would not be altered by development.	Impacts to wildlife networks and corridors from operation would generally occur as described in Alternative 1.	No redevelopment would occur and there would be no new temporary or permanent impacts to existing wildlife networks and corridors.	Piecemeal development of the site by different property owners could result in a greater loss of natural areas than Alternatives 1 and 2, and greater fragmentation of these areas, impacting wildlife movement. Carver Road would not be extended under this scenario, however, retaining the wildlife network in this area.	Piecemeal development of the upland portion of the site by different property owners would result in a greater loss of upland habitat (+20 acres) than alternatives 1 and 2, and greater fragmentation of natural areas. Carver Road would not be extended under this scenario, however, retaining the wildlife network in this area.
3.4 ENVIRONMENTAL HEALTH				
Construction				
Soil Management Impacts to subsurface soils across the Mill Site would be extremely minor, because excavation would largely occur within the new fill material being used to raise surface grades. Only excavation for deep foundations or deep utilities (if any) would extend into existing Mill Site soils. Grading, infrastructure construction, and development utilizing deep foundations could disturb contaminated soils at the site. This would be mitigated by compliance with safety protocols and control measures.	Impacts from soil management issues would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	The impacts to environmental health and mitigation measures would be similar to those generally described under Alternatives 1 and 2.	Because the Mill Site would be restored to a more natural condition and no new development would occur at the Mill Site the potential for contamination from previously undisturbed soils would be less.
Worker Health & Safety Subsurface construction activities in some areas of the site after cleanup could result in exposure of workers to contaminated soils that may require special training, monitoring, or work practices. This would be mitigated by compliance with safety protocols and control measures.	Impacts from worker health and safety issues would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	The impacts to environmental health and mitigation measures would be similar to those generally described under Alternatives 1 and 2.	Because the Mill Site would be restored to a more natural condition and no new development would occur at the Mill Site, the potential for contamination from previously undisturbed soils would be less.
Stormwater Quality Construction activities involving deep foundations or deep utilities could disturb previously undisturbed contaminated soils, and pollutants could be entrained in stormwater runoff. Cover soil over contaminated soils would be maintained and stormwater treatment could be implemented if necessary.	Impacts from stormwater quality issues would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	The impacts to environmental health and mitigation measures would be similar to those generally described under Alternatives 1 and 2.	Because the Mill Site would be restored to a more natural condition and no new development would occur at the Mill Site the potential for contamination from previously undisturbed soils would be less.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Groundwater Quality Cleanup at the Mill Site could include activities to contain, treat, monitor, or divert groundwater to comply with applicable cleanup levels and requirements. Construction activities could interfere with cleanup actions and monitoring. Strong compliance with site-specific control plans would occur during cleanup and construction.	Impacts from groundwater quality issues would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	The impacts to environmental health and mitigation measures would be similar to those generally described under Alternatives 1 and 2.	Because the Mill Site would be restored to a more natural condition and no new development would occur at the Mill Site the potential for contamination from previously undisturbed soils would be less.
Facility/Land Use Siting Some redevelopment could be relocated or restricted as part of cleanup plans in certain portions of the Mill Site. Improper siting of infrastructure and redevelopment could result in non-compliance with site cleanup requirements. A review of use restrictions would occur as part of the building permit review process, and conflicts would be addressed through modification of the redevelopment plan or implementation of additional removals.	Impacts from facility/land use siting issues would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	The impacts to environmental health and mitigation measures would be similar to those generally described under Alternatives 1 and 2.	Because the Mill Site would be restored to a more natural condition and no new development would occur at the Mill Site the potential for contamination from previously undisturbed soils would be less.
Discovery of New Cleanup Issues Previously undocumented environmental contamination issues could be discovered at the Mill Site. Should this occur, mitigation of hazards would be conducted by complying with release reporting investigation and cleanup provisions of applicable MTCA regulations.	Impacts from the discovery of new cleanup issues would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	The impacts to environmental health and mitigation measures would be similar to those generally described under Alternatives 1 and 2.	Because the Mill Site would be restored to a more natural condition and no new development would occur at the Mill Site the potential for contamination from previously undisturbed soils would be less.
Beneficial Impacts				
The extent of cleanup required would be more stringent than the cleanup required for other industrial uses supported under the No Action Alternative, Existing Zone Scenario, due to proposed residential uses on the Mill Site under Alternative 1. Coordination of the cleanup would be completed in a shorter timeframe for redevelopment than without redevelopment.	The extent of cleanup required would be more stringent than the cleanup required for other industrial uses supported under the No Action Alternative, Existing Zone Scenario, due to proposed residential uses on the Mill Site under Alternative 2. Coordination of the cleanup would be completed in a shorter timeframe for redevelopment than without redevelopment.	N/A	The benefits of a more stringent cleanup to support mixed-use redevelopment on the Mill Site would not occur; similarly, the potential for a more rapid time frame for cleanup may not be actualized.	N/A
Operation				

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Soil Management and Worker Safety During maintenance and repair of subsurface utilities, soil management and worker safety requirements could be triggered, and would be mitigated through development of utility corridors in clean backfill where practicable and use of soil management and worker safety provisions in other areas.	Impacts from soil management and worker safety issues would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	The impacts to environmental health and mitigation measures would be similar to those generally described under Alternatives 1 and 2.	Because the Mill Site would be restored to a more natural condition and no new development would occur at the Mill Site, the potential for contamination from previously undisturbed soils would be less.
Future Hazardous Materials Use Commercial uses in the RHTW, RHTC, RR, and RW areas could use, store, or process certain hazardous materials. If not properly stored, used, or disposed of these materials could result in impacts to the environment. Mitigation would involve compliance with applicable regulations for these hazardous materials.	Impacts from future hazardous materials would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	The assumed level of use of industrial use under the Existing Zoning Scenario would allow more businesses to use, store, or process hazardous materials at the site, increasing potential risks and impacts. Compliance with applicable regulations would mitigate this increased use	Because the Mill Site would be restored to a more natural condition and no new development would occur at the Mill Site, the potential for contamination from previously undisturbed soils would be less.
Cumulative or Indirect Impacts				
Sediment Disturbance During Construction Construction associated with future in-water work associated with separate projects (i.e. the dock) in areas of capped contaminated sediments could result in disturbance of buried sediment, which could impact sediment and water quality. Impacts would be mitigated by integrating the design, permitting, and construction of in-water work and proposed cleanup and redevelopment activities.	Impacts from sediment disturbance during construction would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	Impacts from sediment disturbance during construction would generally occur as described for Alternatives 1 and 2.	Impacts from sediment disturbance during construction would generally occur as described for Alternatives 1 and 2.
Navigation Disturbance to Capped Sediment Areas Cleanup activities in Port Gamble Bay and associated areas as part of separate projects (i.e. the dock) could include containment of subsurface impacted sediments. This work was designed and constructed in a manner that ensures protection of environmental quality, but future in-water uses could result in sediment disturbance and recontamination. Mitigation would occur through making sure future navigation uses are consistent with designed uses and site control plans.	Impacts from navigation disturbance to the capped sediment area would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	Impacts from navigation disturbance to the capped sediment area would generally occur as described for Alternatives 1 and 2.	Impacts from navigation disturbance to the capped sediment area would generally occur as described for Alternatives 1 and 2.
3.5 CULTURAL RESOURCES				

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Ground disturbance from construction has the potential to impact recorded and unrecorded archaeological material.	Potential for impacts similar to Alternative 1, although lower potential at the Mill Site (RHTW) given conservation of the portion of this area.	No redevelopment would occur and existing cultural resources would not be impacts by construction ground disturbance. There is a potential for impacts associated with maintenance or other activities associated with existing uses.	Potential for impacts would be similar to those under Alternatives 1 and 2.	Potential for impacts would be similar to those under Alternatives 1 and 2.
Potential to impact Buena Vista Cemetery considered low.	Potential for impact to the Buena Vista Cemetery similar to Alternative 1.	Potential for impact to Buena Vista Cemetery considered low.	Potential for impacts would be similar to those under Alternatives 1 and 2	Potential for impacts would be similar to those under Alternatives 1 and 2
Excavations below approximately 6 feet in the vicinity of the pre-contact shell midden has the potential to impact this resource. If construction in this area is not avoided and excavations below 6 feet are proposed, DAHP and other concerned parties would be consulted to develop ways to mitigate impacts.	Given conservation of a portion of the Mill Site (RHTW), potential for impact lower than under Alternative 1.	No redevelopment would occur with less potential for impact than under Alternatives 1 and 2.	Potential for impact would be similar to Alternatives 1 and 2.	Potential for impact would be similar to Alternatives 1 and 2.
Given the low level of development in the vicinity of the Babcock Dairy and Dance hall sites, avoidance of this resources is anticipated.	Potential for impact similar to Alternative 1.	Potential for impact similar to or less than under Alternative 1 and 2.	Potential for impact would be similar to Alternatives 1 and 2.	Potential for impact would be similar to Alternatives 1 and 2.
The Port Gamble Chinese Laundry and Residence site is primarily within wetland area and extends towards proposed Talbot Street NE. Alternative 1 avoids locating new uses in this area.	Potential for impact similar to Alternative 1.	Potential for impact similar to or less than under Alternative 1 and 2.	Potential for impact would be similar to Alternatives 1 and 2.	Potential for impact would be similar to Alternatives 1 and 2.
Excavations below approximately 2 feet at the Port Gamble Workers Housing Debris Scatter site at the base of the bluff in the RHTW area has the potential to impact this resource. If construction in this area is not avoided and excavation below 2 feet is proposed, DAHP and other concerned parties would be consulted to develop ways to mitigate impacts.	Given conservation of a portion of the Mill Site (RHTW), potential for impact lower than under Alternative 1.	Potential for impact less than under Alternative 1 and 2.	Potential for impact similar to Alternative 1.	Potential for impact less that Alternative 1 and similar to Alternative 2.
Construction in the area of the two culturally modified cedar trees would be avoided and no construction related impacts are anticipated.	Potential for impact similar to Alternative 1.	Potential for impact similar to Alternative 1.	Potential for impact similar to Alternative 1.	Potential for impact similar to Alternative 1.
Operational impacts to recorded archaeological properties as well as undiscovered properties in sensitive areas are possible due to increased site population, increased recreational use of the site and a potentially associated increase in vandalism. With implementation of identified mitigation measures, including an archaeological resources management plan, no significant operational impacts are anticipated.	Potential for operational impact similar to Alternative 1.	Potential for operational impact less than under Alternative 1 and 2.	Potential for operational impact similar to Alternatives 1 and 2.	Potential for operational impact similar to Alternative 1 and 2.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
3.6 HISTORIC RESOURCES				
Construction				
All 78 structures on the site that are considered historic and contributing to the Port Gamble Historic District would be retained. Retained structures include 28 structures in the RHTR area and 21 structures in the RHTC area. The RHTW (Mill Site), RR and RW areas do not contain any historic properties. Approximately 12 ancillary structures (i.e. sheds and garages) that are considered secondary, contributing resources are proposed to be demolished. These structures, many of which are considered to be in poor condition, would be reviewed and documented by a qualified consultant prior to demolition.	Retention of existing historic structures would be as under Alternative 1. Demolition of existing ancillary structures would be as under Alternative 1.	No redevelopment would occur and existing historic resources would remain. These resources would experience gradual deterioration. Multiple owners of the site could include the potential for individual building rehabilitation as needed over time, but a unified vision for a historic company town would be lost. Existing ancillary structures would remain.	Impacts to historic resources would generally be similar to those under Alternative 1, but less commercial development would occur in the RHTC area, and additional housing would be included, which would require careful siting and landscaping to avoid inappropriate visual impacts to some historic resources. Demolition of existing ancillary structures would generally be as described for Alternative 1.	Impacts of Scenario C on historic resources would be as generally described for Scenario B, but with the exception of proposed development at the Mill Site. Restoration of the Mill Site to a natural state would not reflect the historic character of the Mill Site. Demolition of existing ancillary structures would generally be as described for Alternative 1.
The integrity of the existing historic trees that contribute to the historic district would be retained (removal would only occur for safety considerations and/or to accommodate street improvements).	Retention of existing trees would be as under Alternative 1.	Existing trees on the site would remain. The potential for multiple owners of the site could result in the loss of coordinated tree maintenance.	Existing trees on the site would remain. The potential for multiple owners of the site could result in the loss of coordinated tree maintenance.	Existing trees on the site would remain. The potential for multiple owners of the site could result in the loss of coordinated tree maintenance.
Operation				
The proposed redevelopment plan is intended to reflect regulations applicable to the Port Gamble National Historic Landmark District, including Kitsap County Town Development Objectives. Primary areas of historic considerations include: site design, lot orientation, rehabilitation and adaptive reuse, infill development, open space, and circulation.	Alternative 2 would also reflect historic regulations.	No redevelopment would occur and existing historic resources would remain.	Potential for historic impacts would be similar to Alternative 1. However, this scenario would include larger lot sizes, which could be incompatible with historic precedent.	Potential for historic impacts would be similar to Alternative 1 and Alternative 2.
Site Design The site plan maintains and reflects the historic street grid. Deviations from the historic grid, including curvilinear streets, are proposed in portions of the RHTR area to avoid direct impacts to critical areas. The site plan is intended to reestablish historic uses (commercial and residential) and public character by introducing new uses and infill buildings in appropriate portions of the RHTR, RHTC, and RHTW areas of the site.	Although the site design is slightly modified under Alternative 2, these modifications would not have any additional impacts on historic resources, which would be as generally described for Alternative 1.	No redevelopment would occur and existing historic resources would remain. These resources would experience gradual deterioration. Multiple owners of the site could include the potential for individual building rehabilitation over time, but a unified vision for a historic company town would be lost.	Impacts to historic resources would generally be similar to those under Alternative 1, but would include larger lot sizes in the RHTR, which could be incompatible with the historic presence and alter development patterns of certain lots. Additional housing would be included in the RHTC, which would require careful siting and landscaping to avoid inappropriate visual impacts to some historic resources.	Impacts of Scenario C on historic resources would be as generally described for Scenario B. However, restoration of the Mill Site to a natural condition would not reflect the historic nature of the Mill Site.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Lot Orientation, Size, and Setbacks Alternative 1 would generally maintain historic lot patterns, although some lot orientations would be adjusted to better reflect the proposed street/alley layout in portions of the RHTR area. Setbacks would generally reflect the historic development patterns of varying setbacks in different neighborhoods.	Although there would be fewer lots under Alternative 2, these modifications would not have any additional impacts on historic resources, and impacts would be as generally described for Alternative 1.	No redevelopment would occur and existing historic resources would remain in their current condition. Existing lot orientation and size conditions would remain..	Impacts to historic resources would generally be similar to those under Alternative 1, but would include larger lot sizes in the RHTR, which could be incompatible with the historic presence and alter development patterns of certain lots.	Impacts of Scenario C on historic resources regarding lot orientation, size and setbacks would be as generally described for Scenario B. However, restoration of the Mill Site to a natural condition would not reflect the historic nature of the Mill Site.
Rehabilitation and Adaptive Reuse All 78 structures on the site that are considered historic and contributing to the Port Gamble Historic District would be retained. Retained historic structures would primarily be used for residential and commercial uses, which generally reflect historic uses. Any rehabilitation of existing structures would be completed in accordance with SOI standards and other applicable design guidelines.	Impacts of Alternative 2 on historic resources would be as generally described for Alternative 1.	No redevelopment would occur and existing historic resources would remain. These resources would experience gradual deterioration. Multiple owners of the site could include the potential for individual building rehabilitation over time, but a unified vision for a historic company town would be lost.	Impacts to historic resources regarding rehabilitation and adaptive reuse would generally be similar to those under Alternative 1.	Impacts of Scenario C on historic resources regarding rehabilitation and adaptive reuse would be as generally described for Scenario B, except for the Mill Site. No historic resources exist on the Mill Site. However, restoration of the Mill Site to a natural condition would not reflect the historic nature of the Mill Site.
Infill Development Alternative 1 proposes significant new residential and commercial construction, including 144 new historically appropriate residences. Design guidelines would be carefully flowed for additional direction of infill development. New construction would include contemporary designs that respect the siting, scale, massing, and materials of historic structures but do not mimic those structures.	Although the overall number of new residential units would be less, the overall infill conditions would be similar to Alternative 1.	No redevelopment would occur and existing historic resources would remain. These resources would experience gradual deterioration. Multiple owners of the site could reduce the potential for a unified vision for a historic company town, including infill development to better reflect historic conditions.	Impacts to historic resources regarding infill would generally be similar to those under Alternative 1, but would include larger lot sizes in the RHTR, which could be incompatible with the historic presence and alter development patterns of certain lots. Less commercial development is proposed for the RHTC zone than alternative 1, and additional housing would be included, which would require careful siting and landscaping to avoid inappropriate visual impacts to some historic resources. The scale of buildings on the Mill Site would be greater than those under Alternatives 1 and 2, but would be consistent with historic levels of development.	Impacts of Scenario C on historic resources regarding infill would be as generally described for Scenario B. However, restoration of the Mill Site to a natural condition would not reflect the historic scale of development.
Open Space, View Corridors, and Landscaping Alternative 1 would preserve the bluff areas and create small neighborhood parks and recreation areas, which would adhere with design guidelines and regulations. This would also reaffirm important vistas to and from the Mill Site, view corridors to the water, and corridors in to town. Therefore there would be no expected significant impact on open space.	The retention of bluff areas and provision of parks would be similar to that described for Alternative 1.	The existing open space at the site reflects a historic removal of prior residential buildings. No redevelopment would occur and existing historic resources and open space would remain. The potential for multiple owners of the site could result in the loss of coordinated landscape maintenance.	Impacts to open space and view corridors would generally be similar to those under Alternative 1, but would include larger lot sizes in the RHTR, which could be incompatible with the historic presence and alter development patterns of certain lots. Less commercial development is proposed in the RHTC, and additional housing would be included, which would require careful siting and landscaping to avoid inappropriate visual impacts to some historic resources.	Impacts of Scenario C on historic resources regarding open space and view corridors would be as generally described for Scenario B. The restoration of the Mill Site to a natural condition would provide additional open space, but this open space would not reflect the historic scale of development.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
The integrity of the existing historic trees that contribute to the historic district would be retained (removal would only occur for safety considerations and/or to accommodate street improvements), and new street trees, landscaping, and screening would be provided in some areas consistent with the design guidelines.	The retention of historic trees would be similar to that described for Alternative 1.	Existing trees on the site would remain. The potential for multiple owners of the site could result in the loss of coordinated tree maintenance.	Existing trees on the site would remain. The potential for multiple owners of the site could result in the loss of coordinated tree maintenance.	Existing trees on the site would remain. The potential for multiple owners of the site could result in the loss of coordinated tree maintenance.
Circulation Alternative 1 would generally maintain the historic circulation pattern in this area. Changes would be undertaken to reduce speed in the area, including a roundabout (which would require an additional access road), the closure of vehicular traffic in some areas. Alternative 1 would also include new alleys and proposed parking lots, as well as a sidewalk and trail system. These features would not adversely affect primary features of the Port Gamble NHL district and would meet SOI and other design standards. Historic road names should be retained with redevelopment, and parking lots would be screened with appropriate landscaping.	Circulation conditions under Alternative 2 as they relate to historic resources would be as generally described for Alternative 1.	No redevelopment would occur and existing circulation patterns would remain.	Impacts to circulation would generally be similar to those under Alternative 1, but would not include the Carver Drive extension to Olympian Drive nor alley extensions. Less commercial development is proposed in the RHTC zone, and additional housing would be included, which would require careful siting to avoid impacts to circulation.	Impacts of Scenario C on historic resources would be as generally described for Scenario B.
3.7 AIR QUALITY/GREENHOUSE GAS EMISSIONS				
Construction				
Air quality impacts from construction would be temporary and mitigation measures would be implemented to provide controls of dust, odor, and exhaust. Construction activities would not significantly impact air quality.	Impacts from construction would generally occur as described for Alternative 1.	No redevelopment would occur and existing air quality would remain at current levels.	Impacts from construction would generally occur as described for Alternative 1.	Impacts from construction would generally be less than described for Alternatives 1 and 2, as no development would occur at the Mill Site.
Operation				
Air Quality Activities associated with operation of the redevelopment plan would result in the emission of air pollutants from traffic to and from the site, as well as from heating, ventilation systems, and cooling. Analysis of traffic intersections indicates that, with mitigation measures, traffic at all intersections would not rise to the level of requiring a quantitative analysis of possible CO levels.	Impacts to air quality would generally occur as described for Alternative 1.	Existing levels of air quality impacts would continue on the site.	Air quality impacts could be greater than those identified under Alternatives 1 and 2, due to more intensive industrial development at the Mill Site.	Air quality impacts would be greater than existing conditions but less than impacts identified under Alternatives 1 and 2, as no development would occur at the Mill Site.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Greenhouse Gas Emissions Development under Alternative 1 would produce approximately 10,017 MTCO2e, mainly from emissions related to transportation, and not accounting for potential mitigation measures related to GHG emissions. This amount does not exceed the threshold for potential significance as identified by Ecology, which is 25,000 MTCO2e.	Alternative 2 would result in approximately 7,386 MTCO2e, not accounting for mitigation measures, which does not exceed the threshold for potential significance.	Existing conditions, levels of energy use and GHG emissions would continue on the site.	Energy use and GHG emissions could be greater than those identified under Alternatives 1 and 2, due to more energy intensive, industrial development at the Mill Site.	Energy use and GHG emissions would be greater than existing conditions but less than impacts identified under Alternatives 1 and 2, as no development would occur at the Mill Site.
3.8 LAND USE				
Construction				
Site preparation and construction could result in periodic, temporary impacts to adjacent land uses near the boundary of the site or in close proximity to the existing residential uses within the site boundary.	Impacts from construction would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses would remain.	Impacts from construction would generally occur as described for Alternative 1.	Impacts from construction would generally occur as described for Alternative 1.
Relationship to Existing Onsite Uses Except for the Mill Site, existing uses at the Port Gamble site are anticipated to continue to be in active use during construction. Construction could introduce new sources of noise, dust, and equipment emissions, and truck traffic that could affect operations on a temporary basis. However construction impacts would be temporary.	Impacts on existing site uses would generally occur as described for Alternative 1.	No development would occur at the site, and existing uses would not be disrupted.	Impacts on existing site uses would generally occur as described for Alternative 1.	Impacts on existing site uses would generally occur as described for Alternative 1.
Operation				
Displacement of Existing Uses Existing residential and town uses in the RHTR and RHTC zones would be retained under Alternative 1. The Newfields Laboratory would remain in the RHTW zone. OPG's Hood Canal Nursery would remain in the RR zone, and the recreational trails in the RW zone would also remain. Alternative 1 is not expected to result in significant adverse land use displacement impacts.	Impacts from the displacement of existing uses would generally occur as described for Alternative 1.	No development would occur at the site, and existing land uses would not be displaced.	Piecemeal development of individual sites by multiple owners could result in a greater displacement of existing uses, and less remaining open space.	Piecemeal development of individual sites by multiple owners could result in a greater displacement of existing uses, though the restoration of the Mill Site to natural conditions would provide additional open space.
Transition in Land Use Patterns The range of proposed land uses and densities could result in potential land use impacts, but it is assumed that the implementation of proposed project features would adhere to applicable development regulations.	Impacts from the transition in land use patterns would generally occur as described for Alternative 1.	No development would occur at the site, and no transition in land use patterns would occur.	Impacts from the transition in land use patterns would generally occur as described for Alternative 1.	Impacts from the transition in land use patterns would generally occur as described for Alternative 1.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Conversion of Land Uses Over the 15-year buildout period, redevelopment would change the type, character, and pattern of land uses on the site, particularly on the Mill Site (RHTW zoned area). Land uses within the five zoning areas would be converted as follows:	Over the 15-year buildout period, redevelopment would change the type, character, and pattern of land uses on the site. Land uses within the five zoning areas would be converted as follows:	No redevelopment would occur and existing land uses would remain.	Over the 15-year buildout period, redevelopment would change the type, character, and pattern of land uses on the site. Land uses within the five zoning areas would be converted as follows:	Over the 15-year buildout period, redevelopment would change the type, character, and pattern of land uses on the site. Land uses within the five zoning areas would be converted as follows:
• RHTW–converted to 78 multifamily housing units, 121,000 sq. ft. of commercial uses, and a 100-room hotel.	• RHTW–converted to 38 multifamily housing units, 15,000 sq. ft. of restaurant uses, and a 100-room hotel.	• RHTW--No redevelopment would occur and existing land uses would remain.	• RHTW--New uses would include approximately 200,000 sq. ft. of industrial use, including 7 large warehouse buildings on the Mill Site, and parking lots and a material stockpile area.	• RHTW--The Mill Site would be restored to a natural condition and no new development would occur in this area.
• RHTR–converted to 144 new residential units, integrated with existing uses that would be retained.	• RHTR–Overall, new development within the RHTR-zoned areas of the site would be as described for Alternative 1.	• RHTR--No redevelopment would occur and existing land uses would remain.	• RHTR--New development within the RHTR-zoned areas of the site would be similar to Alternative 1.	• RHTR--New development within the RHTR-zoned areas of the site would be similar to Alternative 1, but with slightly larger lots.
• RHTC-converted to 33 new multifamily homes and approximately 35,000 sq. ft. of new commercial uses.	• RHTC– Overall, new development within the RHTC-zoned areas of the site would be as described for Alternative 1.	• RHTC--No redevelopment would occur and existing land uses would remain.	• RHTC--New development within the RHTC-zoned areas of the site would be similar to Alternative 1.	• RHTC--New development within the RHTC-zoned areas of the site would be similar to Alternative 1.
• RR-converted to a new West Sound Wildlife Shelter and active open space uses, including agricultural activities and associated structures.	• RR– New development within the RR-zoned areas of the site would be similar to Alternative 1.	• RR--No redevelopment would occur and existing land uses would remain.	• RR--New development within the RR-zoned areas of the site would be similar to Alternative 1.	• RR--New development within the RR-zoned areas of the site would be similar to Alternative 1.
• RW-converted to ten single family homes and larger agricultural uses that could include a vineyard, demonstration hops growing, equine facilities, beer brewery, barns, outdoor recreation, and open space.	• RW–New development within the RW-zoned area of the site would be as described for Alternative 1.	• RW--No redevelopment would occur and existing land uses would remain.	• RW--New development within the RW-zoned areas of the site would be similar to Alternative 1, except that no agricultural-related uses would be built in this area and residential lots would not be clustered.	• RW--New development within the RW-zoned areas of the site would be similar to Alternative 1, except that no agricultural-related uses would be built in this area and residential lots would not be clustered.
Relationship to Surrounding Uses The proposed land uses for Alternative 1 would reflect existing uses on the site and would be similar to surrounding land uses, but building density and land use intensity would be greater than existing densities. Land uses at the site would, however, reflect historic densities. New activity on the site could be considered an extension and intensification of existing commercial and residential uses.	The relationship to surrounding areas would be as generally described for Alternative 1.	No new development would occur, and the relationship to surrounding areas would remain unchanged.	The relationship to surrounding areas would be as generally described for Alternative 1.	The relationship to surrounding areas would be as generally described for Alternative 1.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Building Height/Bulk/Scale The proposed redevelopment would add new one to three-story buildings, with a maximum height of 35 ft. (30 ft. within 200 ft. of the shoreline in the RHTW area). Overall, buildings associated with the Port Gamble redevelopment would be compatible with the bulk/height and scale of buildings on the site and in the vicinity.	The building height, bulk, and scale would be as generally described for Alternative 1.	No new development would occur, and the bulk, height, and scale of existing buildings would remain in the current condition.	Development would occur in a piecemeal manner, with individual buildings being developed by multiple owners, and industrial uses would be more intensive. The development of these sites would be consistent with existing zoning designation.	Development of the upland area would be similar to Scenario B, but would include slightly larger lots, and the restoration of the Mill Site to natural conditions, with no development on this portion of the site.
Relationship to Existing Onsite Uses Except for the Mill Site, existing uses at the Port Gamble site are anticipated to continue to be in active use through construction and full occupancy. Existing uses on the Mill Site would be discontinued, with the exception of the Newfields Laboratory. The design and layout of the new development proposed under Alternative 1 is intended to be compatible with existing land uses, and to reflect and respect the historic patterns of the Port Gamble Community.	Impacts from the displacement of existing uses would generally occur as described for Alternative 1, but could provide slightly fewer residential and employment opportunities than Alternative 1.	No development would occur at the site, and existing uses would not be disrupted.	Impacts from the relationship of existing uses would likely occur as described for Alternative 1. Although a more industrial use of the Mill Site would be historically consistent with existing land uses, it could be perceived as incompatible with current commercial and residential uses on the Port Gamble site.	Impacts from the relationship of existing uses would likely occur as described for Alternative 1. Without redevelopment of the Mill Site, there would not be enough new development to sustain the existing town economically.
Indirect Impacts Redevelopment would contribute to the cumulative residential growth and employment in the community and county, which could increase vehicular traffic, the demand for goods and services, and other development. However, new development would be controlled by existing zoning, and no significant indirect/cumulative impacts on land uses would be anticipated.	Alternative 2 would contribute to the cumulative and indirect impacts on land uses in a manner similar to Alternative 1.	No new development would occur at the site, and there would be no indirect or cumulative impacts on land use.	Scenario B would likely contribute to the cumulative and indirect impacts on land uses in a manner similar to Alternative 1.	Scenario C would likely contribute to the cumulative and indirect impacts on land uses in a manner similar to Alternative 1, but to a lesser extent due to the restoration of the Mill Site to a natural condition.
3.10 AESTHETICS/LIGHT AND GLARE				
Construction				
Light and Glare Alternative 1 would introduce new temporary sources of light during construction activities from infrastructure, building construction, trucks and other equipment, and improvements to building interiors. However construction could be limited by county regulations, which could limit construction lighting.	The light and glare from Alternative 2 would be as generally described for Alternative 1.	No new development would occur on the site and light and glare conditions would remain the same.	Light and glare under Scenario B would be similar to Alternatives 1 and 2 in the RHTR, RHTC, RR, and RW zone areas. In the RHTW-zone, industrial development at the Mill Site could result in greater glare generation than Alternatives 1 and 2, depending on the materials used for the buildings.	Light and glare under Scenario C would be similar to Alternatives 1 and 2 in the RHTR, RHTC, RR, and RW zone areas. In the RHTW-zone, the Mill Site would be restored to a natural condition, and minimal new generators of light and glare would occur in this area.
Operations				

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Aesthetics Although the exact design of the redevelopment cannot be provided, the design and scale is intended to respect the historic character of the site, but not mimic structures present at the site. At full buildout Alternative 1 would change the aesthetic character of the site by increasing the overall level of building development. The aesthetic character of the site would reflect that of a small town in the RHTC, RHTR, and RHTW zones, and would reflect historic densities.	The visual character of the Mill Site would be similar to that under Alternative 1, with the exception of the southern portion of the site that would be restored to a natural condition. Similar to Alternative 1, Alternative 2 would change the aesthetic character of the site by increasing the overall building development. Changes to the RHTR, RHTC, RR and RW zones would be similar to changes described under Alternative 1.	No new development would occur on the site, and visual conditions would remain the same.	The visual character of the site would be determined by the development of individual sites by multiple owners, and thus would likely have a less unified visual character in the RHTW zone. Assumed redevelopment would result in a similar change in aesthetic character as Alternative 1 in the RHTR, RHTC, RR and RW zones. Industrial development consistent with existing zoning would occur on the Mill Site, but building modulation and design details would be less than under Alternative 1.	The visual character of the site would be determined by the development of individual sites by multiple owners, and thus would likely have a less unified visual character. This scenario would also include the restoration of the Mill Site to a natural condition.
Light and Glare Alternative 1 would introduce temporary light sources during the long-term buildout of the site from infrastructure and interior building lighting. Light sources would primarily occur in the RHTR, RHTC, and RHTW zones and would be brighter than the surrounding areas, while light sources in the RR and RW would be similar to the surrounding areas.	The light and glare from Alternative 2 would be as generally described for Alternative 1.	No new development would occur on the site and light and glare conditions would remain the same.	Light and glare under Scenario B would be similar to Alternatives 1 and 2 in the RHTR, RHTC, RR, and RW zone areas. In the RHTW-zone, industrial development at the Mill Site could result in greater glare generation than Alternatives 1 and 2, depending on the materials used for the buildings.	Light and glare under Scenario C would be similar to Alternatives 1 and 2 in the RHTR, RHTC, RR, and RW zone areas. In the RHTW-zone, the Mill Site would be restored to a natural condition, and minimal new generators of light and glare would occur in this area.
3.11 PARKS AND RECREATION				
Construction				
Use of existing trails within the site area would be disrupted during construction, and impacts could include partial or full blockage of trails. Signage, detours, and safety measures would ensure safe travel to mitigate these impacts. Existing recreation areas would also be removed during construction, including two small play areas (east of Puget Way and Olympian Avenue) and the baseball/soccer field west of North Teekalet Avenue.	Impacts from construction would generally occur as described for Alternative 1.	No redevelopment would occur and existing land uses and open spaces would remain.	The impacts to parks and recreation would be similar to those generally described under Alternatives 1 and 2.	Impacts from construction would generally occur as described for Alternative 1.
Operation				
Redevelopment would result in a net loss of open space by approximately 15 percent compared to existing conditions. However, redevelopment would include approximately 165 acres of open space and 1.67 acres of community parks. Open space within the Mill Site would include public access to the shoreline and a shoreline trail; a total of approximately three miles of new trails would also be provided on the site.	Impacts from operation would generally occur as described for Alternative 1, but Alternative 2 would include the conservation of approximately 16 acres of shoreline area, with limited trails and access. Therefore Alternative 2 would provide additional trails when compared to Alternative 1.	No redevelopment would occur and existing land uses and open spaces would remain.	The impacts to parks and recreation would be similar to those generally described under alternatives 1 and 2. The development of approximately 200,000 sq. ft. of industrial uses at the Mill Site would result in no parks or trails being constructed in the Mill Site, and no public access to the shoreline.	The impacts to parks and recreation in the upland area would be similar to those generally described under Alternatives 1 and 2. Under this alternative, the Mill Site would be restored to a natural condition, and public access would be dependent on the restoration plans for the site. This would result in additional open space for the site.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
3.12 PUBLIC SERVICES				
Construction				
Law Enforcement Service calls to the Kitsap County Sheriff's Office could increase during construction due to potential construction site theft or vandalism. Existing Kitsap County Sheriff's Office staff are anticipated to be sufficient to respond to the potential increase in service calls.	Law enforcement construction-related impacts would be generally similar to those described for Alternative 1.	No redevelopment would occur and demands for law enforcement services would remain as under existing conditions.	Law enforcement construction-related impacts would be generally similar to those described for Alternative 1.	Law enforcement construction-related impacts would be generally similar to those described for Alternative 1.
Fire and EMS Fire Department service calls related to inspection of specific construction projects and response to potential construction-related accidents and injuries and fires could increase. Existing staff are anticipated to be sufficient to respond to potential increase in service calls.	Fire and EMS construction-related impacts would be generally similar to those described for Alternative 1.	No redevelopment would occur and demands for fire and EMS services would remain as under existing conditions.	Fire and EMS construction-related impacts would be generally similar to those described for Alternative 1.	Fire and EMS construction-related impacts would be generally similar to those described for Alternative 1.
Operation				
Law Enforcement Redevelopment would generate an increased demand for services. The additional demand could exacerbate pre-existing service issues and could contribute to negatively impacting response times in the north area of the County. It is anticipated that tax revenues generated from redevelopment of the site would accrue to Kitsap County and would help to offset the increased demands for law enforcement services.	Law enforcement impacts would be generally similar to those described for Alternative 1.	No redevelopment would occur. No increases in employment or the residential population would occur. Demands for law enforcement services would remain as under existing conditions.	Calls for law enforcement service would increase, but likely at a lower level than Alternatives 1 and 2.	Law enforcement impacts would be generally similar to those described for Scenario B.
Fire and EMS At full buildout, Alternative 1 could result in an estimated increase of approximately 135 calls for service per year. In order to effectively handle the increased number of calls, the Poulsbo Fire Department would need to ensure full time staffing of Station 72. It is anticipated that tax revenues generated from redevelopment of the site would accrue to Kitsap County and would help to offset the increased calls for fire and EMS services.	Alternative 2 could result in an estimated increase of approximately 115 calls for service per year. As noted for Alternative 1, in order to effectively handle the increased number of calls, the Poulsbo Fire Department would need to ensure full time staffing of Station 72.	No redevelopment would occur. No increases in employment or the residential population would occur. Demands for fire and EMS services would remain as under existing conditions.	The Poulsbo Fire Department estimates that approximately 62 calls per year could result under No Action Scenario B. As with Alternatives 1 and 2, in order to effectively handle the increased number of calls resulting from No Action Scenario B, the Poulsbo Fire Department would need to ensure full time staffing of Station 72.	It is assumed that the same amount of residential development would occur on the Port Gamble site as No Action Scenario B. Impacts to fire and EMS services would be similar to or somewhat less than those described for No Action Scenario B due to the lesser amount of commercial development.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Public Schools Alternative 1 could result in approximately 113 new students at full buildout of the site. It is anticipated that the potential projects identified as part of the District's capital facilities process (including new elementary schools, a new middle school, and additions to the comprehensive high schools) could accommodate projected students generated under Alternative 1.	Alternative 2 could result in approximately 99 new students at full buildout of the site.	No redevelopment would occur. No increases in employment or the residential population would occur. Demands for public school services would remain as under existing conditions.	Approximately 83 new students could be generated by Scenario B of the No Action Alternative. Since the resulting projected student generation would be less than what is generated under Alternatives 1 and 2, no significant impacts would be anticipated to result to public schools.	School impacts would generally be similar to those described for Scenario B.
3.13 TRANSPORTATION				
Construction				
Construction Truck Trips Truck trips to the site would result from the importation of fill for the Mill Site. No significant impact on weekday peak hour traffic operations would be anticipated.	Construction truck trip traffic would occur generally as described for Alternative 1.	No redevelopment would occur and no transportation impacts would result from construction.	Due to staggered development and potentially several different property owners/developers, this scenario could include a lack of coordination for residential construction. As a result, construction related impacts throughout the wider transportation system are likely to be less concentrated during any particular time period, and generally would be somewhat less than those identified for Alternatives 1 or 2.	Construction truck trip traffic would occur generally as described for No Action Scenario B.
Construction Employee Traffic Construction employees would travel to the site, however, overall construction traffic is anticipated to be less than traffic generated by build-out of the planned uses.	Construction employee traffic would occur generally as described for Alternative 1.	No redevelopment would occur and no construction employee traffic would be generated.	Construction employee traffic would occur generally as described for Alternative 1.	Construction employee traffic would occur generally as described for Alternative 1.
Street System Changes to the street system would include changes too street alignments and intersection control devices at certain intersections including realignment of Puget Way and construction of a roundabout at Puget Way.SR 104.	Changes to the street system would occur generally as described for Alternative 1.	No on-site redevelopment or changes to the existing street system would occur.	The on-site street system would be similar to that under Alternative 1. Several internal street connections would not be provided compared to Alternative 1, including a roadway connection between the Town Site (RHTR and RHTC-zoned areas) and the agricultural uses in the RR-zoned area.	The on-site street system would be similar to that under No Action Scenario B, with the exception of no new roadways on the Mill Site.
Non-Motorized Transportation System A network of sidewalks, trails, and shared use paths that accommodate pedestrian and bicycle activities would be provided throughout the site.	Sidewalks, trails, and shared use paths would be provided generally as described for Alternative 1.	No changes to the pedestrian and bicycle system would occur.	Redevelopment would be sponsored by different developers and would occur on a case-by-case basis and changes or additions to the non-motorized transportation system would occur in conjunction with each individual redevelopment proposal.	Changes or additions to the non-motorized system would occur similarly to those described for No Action Scenario B.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Parking The existing on-street parking supply would remain, and additional on-street parking would be formalized or added with new construction. Parking would be subject to County code requirements to ensure adequate parking supply.	The existing parking supply would remain and additional parking would be formalized or added generally as described for Alternative 1.	No changes to existing parking conditions would occur.	The existing parking supply would remain and additional parking would be formalized or added generally as described for Alternative 1.	The existing parking supply would remain and additional parking would be formalized or added generally as described for Alternative 1.
Transit Given the relatively modest transit facilities in the site vicinity Alternative 1 is not anticipated to noticeably impact transit operations or performance within the study area	Transit impact would be generally as described for Alternative 1.	No increase in transit ridership would be anticipated as no redevelopment would occur on the site.	Similar to Alternatives 1 and 2, no impact to Kitsap Transit's service or operations would be anticipated.	Similar to Alternatives 1 and 2, no impact to Kitsap Transit's service or operations would be anticipated.
Safety Traffic generated under Alternative 1 would be anticipated to result in a proportionate increase in the probability of collisions. However, no safety hazards or significant increases in the number of collisions would be anticipated. The proposed roundabout would provide a safer form of traffic control for the SR 104/ Puget Way intersection.	Safety impacts would occur generally as described for Alternative 1.	With the forecasted increase in background traffic volumes of 1.5 percent per year, a proportionate increase in the probability of collisions would likely occur. However, no safety hazards or significantly increased collisions would be anticipated to result.	Safety impacts would occur generally as described for Alternative 1.	Safety impacts would occur generally as described for Alternative 1.
Trip Generation Alternative 1 is anticipated to generate 675 weekday PM peak hour trips. An estimated additional 196 weekday PM peak hour trips would be pass-by trips attracted from background traffic volumes.	Alternative 2 is anticipated to generate 449 weekday PM peak hour trips. An estimated additional 90 weekday PM peak hour trips would be pass-by trips attracted from background traffic volumes.	Because no redevelopment would occur under this scenario no new trips would be generated within the Port Gamble site under No Action Scenario A.	No Action Scenario B is estimated to generate approximately 391 weekday PM peak hour trips. An estimated additional 50 weekday PM peak hour trips would be pass-by trips attracted from background traffic volumes.	No Action Scenario B is estimated to generate approximately 231 occurring during the PM peak hour. An estimated additional 50 weekday PM peak hour trips would be pass-by trips attracted from background traffic volumes.
Traffic Operations All of the study area intersections would operate at LOS C or better with trips generated under Alternative 1, with the exception of the signalized SR 3/SR 104 and SR 307/SR 104 intersections which would fall to LOS D and R, respectively.	All of the study area intersections would operate at LOS C or better with trips generated under Alternative 2, with the exception of the NE Carver Drive extension and the SR 307/SR 104 intersection.	All study area intersections are anticipated to operate at LOS C or better and meet WSDOT's LOS C standard, under the No Action Scenario A forecasted (2027) conditions.	All study area intersections are anticipated to operate at LOS C with trips generated under the No Action Scenario B, with the exception of the intersection of SR 104/Puget Way (LOS C to LOS F) and SR 307/SR 104 (LOS C to LOS E).	All study area intersections are anticipated to operate at LOS C with trips generated under the No Action Scenario C, with the exception of the SR 307 / SR 104 and SR 104/Puget Way intersections, which would fall below the LOS C standard to LOS D.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
3.14 UTILITIES				
Construction				
Water Service Construction of proposed water service infrastructure would not substantially interrupt water service to existing users, and would occur during ongoing construction. The existing system would be phased out to allow continued water service and fire protection as the new system was constructed.	Water service impacts would occur generally as described for Alternative 1.	No redevelopment would occur and the existing infrastructure would remain.	Water service impacts would occur generally as described for Alternatives 1 and 2.	Water service impacts would occur generally as described for Alternatives 1 and 2.
Sewer Service Construction of the proposed sanitary sewer infrastructure would occur with phased development and would likely be scheduled with other infrastructure improvements. Construction would not substantially interrupt sanitary sewer service.	Sewer service impacts would occur generally as described for Alternative 1.	No redevelopment would occur and the existing infrastructure would remain.	Sewer service impacts would be similar to Alternatives 1 and 2.	Sewer service impacts would be similar to Alternatives 1 and 2.
Operation				
Water Service A new system for potable water and fire flow would connect to the KPUD system, and a new reservoir would be constructed for fire flow storage. Water demand would be anticipated to be less than expected due to water conservation measures, with an estimated use of 360-500 ERUs, and 65,000-90,000 gpd.	Water service impacts would occur generally as described for Alternative 1, but the estimated use would be 304-415 ERUs, and 55,000-75,000 gpd.	No redevelopment would occur and the existing infrastructure would remain, and would continue to age and degrade over time.	Impacts would be similar to Alternative 1, but development in the Mill Site could include industrial uses that generate a high water demand, and could exceed proposed uses under Alternatives 1 and 2. These users would not impact the planned water system improvements, however, without some other separate mitigating action, they may be prevented from occupying the site if their water use resulted in a high sewer discharge that exceeded the capacity of the LOSS.	As a result of the restoration of the Mill Site to natural conditions under Scenario C, water demand would be less than Alternatives 1 and 2. Existing water systems would be replaced with a new water system, similar to Scenario B.
Sewer Service The recently constructed LOSS has been permitted to receive a peak flow of 55,800 gpd, allowing for a service of 207 ERUs. The new LOSS system would have adequate capacity to accommodate increased demand under Alternative 1, and no significant impacts would be anticipated. The 55,800 gallon per day limit could be increased if additional studies validate drainfield capacity or if expanded facilities are provided in the future under separate approvals, if needed.	Sewer service impacts would occur generally as described for Alternative 1.	No redevelopment would occur and the existing infrastructure would remain, and would continue to age and degrade over time. Water quality issues in Hood Canal would continue to exist.	Impacts would be similar to Alternative 1, but development in the Mill Site could include industrial uses that generate a high water demand. Without some other separate mitigating action, these users may be prevented from occupying the site if their water use resulted in a high sewer discharge that exceeded the LOSS.	As a result of the restoration of the Mill Site to natural conditions under Scenario C, sewer demand would be less than Alternatives 1 and 2. Existing sewer systems would be replaced with a new LOSS system.

Alternative 1	Alternative 2	No Action Alternative Scenario A	No Action Alternative Scenario B	No Action Alternative Scenario C
Electrical and Natural Gas Service Natural gas would not be extended to the Port Gamble site for proposed development, and use of private propane tanks could continue. The available electric supply would be adequate to support future uses, though it is possible that some infrastructure upgrades would be needed.	Electrical and natural gas service impacts would occur generally as described for Alternative 1.	No redevelopment would occur and the existing infrastructure would remain, and would continue to age and degrade over time.	Impacts would be similar to Alternative 1, but development in the Mill Site could include industrial uses that have a high electric consumption, and on-site electrical may not be adequate for this use, resulting in the need for upgrades to on-site facilities.	As a result of the restoration of the Mill Site to natural conditions under Scenario C, utility demand would be less than Alternatives 1 and 2.

1.5 MITIGATION MEASURES AND SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

The following list highlights the mitigation measures and significant unavoidable adverse impacts that would potentially result from the alternatives analyzed in this FEIS. This list is not intended to be a substitute for the complete discussion of mitigation measures within each element that is contained in **Chapter 3.**

Required/Proposed mitigation measures are those actions which the applicant has proposed at this point in time, and/or that are required by code, laws, or local, state, and federal regulations.

Possible mitigation measures are additional actions that could be undertaken, but are not necessary to mitigate significant impacts, and are above and beyond those proposed by the applicant.

Earth

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would address potential impacts to soils and geologic conditions associated with Port Gamble Redevelopment under Alternatives 1 and 2.

Prior to and During Construction

- The Mill Site surface grades would be raised above the flood plain, which would provide protection for structures on the site.[3] Future excavations for footings, utilities and other development-related features would occur primarily within new fill soils; which would minimize excavations into existing Mill Site soils.
- All utility excavations would be immediately backfilled with suitable fill soils, and all fill soils would be compacted to achieve a dense condition.
- During the appropriate dry seasons, wherever possible, soils excavated from the site would be reused as on-site structural fill.
- If construction work is performed immediately adjacent to an existing structure, conventional smaller equipment would be used to address the potential for vibration and settlement.
- Site soils would be over excavated and replaced with granular structural fill, or intermediate-depth foundations would be installed in the depression in the center of the Town Site and in other localized zones of compressible soils to prevent long-term static settlement.

[3] Based on compliance with FEMA standards for floodplain development.

- If pile-driving or other heavy construction must be performed here (such as for a new boardwalk or wharf), work would be completed before building any settlement-sensitive structures nearby. Pile-driving vibrations would be significantly reduced by using low-displacement pile types (such as H piles) instead of high displacement piles (such as pipe piles).
- Mitigation factors related to erosion, liquefaction, and settlement hazards are summarized below.
    - A Temporary Erosion and Sedimentation Control Plan (TESCP) would be prepared and implemented, per the Kitsap County Stormwater Design Manual and would include any or all of the following:
    - Earthwork would be scheduled for the drier summer months, whenever possible, especially in the case of construction sites on sloping terrain.
    - Disturbance of existing trees and undergrowth on sloping terrain would be minimized.
    - Best-management practices would be applied on all construction sites, such as silt fences, bioswales, check dams, stockpile covers, and grate filters.
    - Trees and groundcover vegetation would be replanted as soon as feasible in areas that are necessarily disturbed by earthwork activities.
    - Temporary erosion-control blankets or permanent rock armoring on steep terrain would be provided where vegetation is slow to get established.
    - Temporary or permanent tightline pipes installed, where practical, to convey stormwater from steep areas to appropriate downslope facilities on flatter terrain to prevent erosion (see **Section 3.2**, **Water Resources**, for details).
    - The permanent stormwater control system would include runoff diversion systems, such as swales, curbs, berms, or pipes, to prevent flow directly over steep slopes (see **Section 3.2**, **Water Resources**, for details).

- Development would generally adhere to Kitsap County requirements for buffers and setbacks adjacent to landslide hazard areas. Actual setbacks and buffers would comply with the following criteria:
    - ***Northern Bluff***: The northern bluff and a 25-ft.-wide strip of ground immediately behind the brink (the intersection of the slope face and the upland surface) would be protected from disturbance of any native vegetation and would be free from construction of any impervious surfaces. All buildings would be setback a minimum horizontal distance equal to 1.3 times the vertical height of the slope or equal to the vertical slope height plus 25 ft., whichever is greater.

    - ***Eastern Bluff***: The slope itself and a 25-ft.-wide strip of ground immediately behind the brink (the intersection of the slope face and the upland surface) would be protected from disturbance of any native vegetation and would be free from construction of any impervious surfaces. All buildings would be setback a minimum horizontal distance of 40 ft. from the top of slope.

- Conventional geotechnical foundation designs, such as drilled or driven piles, mat foundations and aggregate bearing pads would be used along the peripheral margin of the Mill Site to address liquefaction hazards during earthquakes. The actual foundation designs would depend on several variables, including the specific structure location, the structure type and the risk-tolerance.

Significant Unavoidable Adverse Impacts

With the implementation of the required/proposed mitigation measures listed above, no significant unavoidable adverse earth-related impacts are anticipated with development of the Port Gamble site.

Water Resources

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would address potential impacts to water resources associated with Port Gamble Redevelopment under Alternatives 1 and 2.

Prior to and During Construction

- Construction would be conducted in accordance with the conditions of all applicable permits issued by regulatory agencies (Kitsap County, DFW, DOE, Washington Department of Health, Corps). In particular, Site Development Activity Permits issued by Kitsap County will be required for all clearing, grading, construction of utilities and infrastructure to support the ultimate built development.
- Construction equipment would be stationed above the OHWM of Hood Canal and Port Gamble Bay whenever possible, and would operate as far from the water's edge as possible. Construction equipment would not enter any waterbody without authorization from appropriate agencies.
- Debris and sediments would be disposed of outside water resources (wetlands, streams, shorelines) and associated buffers in accordance with Kitsap Health District rules.
- Waste materials would be transported offsite and disposed of in accordance with applicable regulations.
- A spill prevention, control and containment (SPCC) plan would be developed to ensure that all pollutants and products are controlled and contained.
- A TESC plan and a source control plan would be developed and implemented, including BMPs.
- BMPs would be implemented to ensure that no foreign material such as oil or fuel from construction equipment enters marine waters and that sedimentation is minimized.
- Adequate material and procedures to respond to unanticipated weather conditions or accidental release of materials would be available onsite.

- Contract documents would specify that equipment used for this project would be free of external petroleum-based products while work is performed around the water.
- Equipment staging and/or materials storage would be restricted to existing un-vegetated surfaces.
- Daily inspections of the erosion control measures would be conducted throughout the construction period. This would ensure the effectiveness of the measures and determine the need for maintenance, repairs, or additional measures.
- All construction debris would be removed on a daily basis before workers leave the construction area for the work day.
- Disturbance would be limited to those areas necessary for construction, which would be identified in on-site plans and marked on the site before construction begins.
- Additional site-specific engineering studies of water resources could be required during permitting to evaluate potential impacts associated with any utility work below the OHWM.
- A permanent stormwater control system would be installed in accordance with the 2010 Kitsap County Stormwater Design Manual to avoid erosion, sedimentation and pollutant impacts on water resources (see Appendix E for details).
- Groundwater recharge across the Mill Site would be maintained closer to current levels by using granular fill soils to raise Mill Site surface grades, and by using pervious hardscapes where practical.
- No deep subsurface excavations or structures would be used, which would prevent impacts to deep aquifers.

During Operation

- Interpretive or educational materials would be developed and made available in order to foster an understanding and appreciation of the primary natural features (e.g. shoreline, wetlands and creeks) of the Port Gamble site and vicinity by future residents, employees, and visitors.
- The permanent stormwater control system would not incorporate any stormwater infiltration, which would prevent impacts to shallow groundwater.
- Stormwater runoff from parking lots and other possible contaminant sources would be treated by facilities included in the permanent stormwater control system in order to protect CARAs onsite (see **Appendix B** for details).

Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts to water resources, including wetlands, streams, and adjacent water bodies such as Port Gamble Bay and Hood Canal, are anticipated with implementation of the mitigation measures listed above.

Plants and Animals

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would address potential impacts to plants and animals that could result from the construction and long-term use of Alternatives 1 and 2.

Prior to and During Construction

- Construction would be conducted in accordance with the conditions of all applicable permits issued by regulatory agencies (Kitsap County, WDFW, Ecology, U.S. Army Corps of Engineers).
- All work below the MHW level would be conducted during the approved work windows for fish species that may occur in the project area.
- A forage fish survey may be required along the Hood Canal and Port Gamble Bay shorelines prior to construction, consistent with WDFW requirements.
- Forage fish monitoring may be required during construction.
- Construction equipment would be stationed above the OHWM of Hood Canal and Port Gamble Bay, and would operate as far from the water's edge as possible. Construction equipment would not enter any waterbody without authorization from appropriate agencies.
- Debris and sediments would be disposed of outside all critical areas and associated buffers.
- Waste materials would be transported off-site and disposed of in accordance with all applicable regulations.
- A spill prevention, control and containment (SPCC) plan would be developed to ensure that all pollutants and products are controlled and contained.
- A TESC plan and source control plan would be developed and implemented, including BMPs.
- BMPs would be implemented to ensure that no foreign materials such as oil or fuel from construction equipment enters marine waters and that sedimentation is minimized.
- Adequate material and procedures to respond to unanticipated weather conditions or accidental release of materials would be available onsite.
- Contract documents would specify that equipment used shall be free of external petroleum-based products while works is performed around water.
- Equipment staging and/or materials storage would be restricted to existing un-vegetated surfaces.

- Daily inspections of the erosion control measures would be conducted throughout the construction period to ensure the effectiveness of the measures and determine the need for maintenance, repairs or additional measures.

- All construction debris would be removed or contained on a daily basis before leaving the construction area for the work day.

- Disturbance would be limited to those areas necessary for construction, which will be identified on site plans and marked on site before construction begins.

- The project would comply with KCC Title 19, Kitsap County Critical Area regulations, including:
    - Preparation of a detailed Habitat Management Plan addressing potential impacts to species regulated under County Code, including the bald eagle; this may include a nesting survey.

- Shoreline and shoreline buffer enhancement would be provided, including:
    - Removal and restoration of existing rip/rap in areas in areas of stormwater outfall improvements, and
    - Installation of native vegetation (planting trees in the shoreline environment could contribute to habitat benefits for birds of prey, such as bald eagles and osprey, as well as herons, which use shoreline trees for rookeries).

- Additional site-specific critical area and engineering studies would be prepared during permitting to evaluate potential impacts associated with any utility work below OHWM, as necessary.
- Native plants would be incorporated into the landscaping in commercial areas, multifamily residential areas and parks. Residents in single family residential areas would also be encouraged to incorporate native plants into their landscaping.
- A permanent stormwater control system would be installed as approved by Kitsap County to avoid erosion, sedimentation and pollutant impacts on water resources and their associated habitat on and in the vicinity of the site.
- If development is proposed in the vicinity of an eagle nest, USFWS guidelines would be implemented during the local permitting process and a HMP would be developed.

During Operation

- Interpretive or educational materials would be developed and made available in order to foster an understanding and appreciation of the primary natural features (e.g. shoreline, wetlands and creeks) of the Port Gamble site and vicinity by future residents, employees, and visitors.

Significant Unavoidable Adverse Impacts

Permanent loss of habitat would occur, similar to any major development project on a partially undeveloped site. However, with the implementation of the required/proposed mitigation measures listed above, no significant unavoidable adverse plants and animal impacts would be anticipated.

Environmental Health

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would be implemented to preclude significant impacts on environmental health.

Prior to and During Construction

- **Demolition Activities:** Completion of pre-demolition surveys and applicable asbestos and/or lead abatement activities where required by local, state and federal air quality or worker safety regulations.
- **Soil Management:** Compliance with the soil management provisions of cleanup site institutional controls, and ensuring compliance of all future site construction activities with these control measures.
- **Worker Health & Safety:** Compliance with construction worker safety protocols defined as part of cleanup site institutional controls, and ensuring compliance of all future site construction activities with these control measures.
- **Stormwater Quality Impacts:** Maintenance of cover soil over contaminated soils where practicable and/or implementation of stormwater treatment and monitoring during construction activities that could disturb contaminated soils.
- **Groundwater Quality:** Ensuring compliance with the site-specific institutional controls during site cleanup and redevelopment construction activities.
- **Facility/Land Use Siting:** Incorporating a review of use restrictions associated with institutional control plans as part of future building permit reviews, and either 1) ensuring that all proposed uses comply with these use restrictions, or 2) conducting additional removals of the contained hazardous materials in coordination with Ecology, as necessary, to remove the use restrictions.
- **Discovery of New Cleanup Issues:** Complying with release reporting, investigation and applicable cleanup provisions of the MTCA and SMS regulations.

During Operation

- **Soil Management and Worker Safety:** Initial development of utility corridors in clean backfill material where practicable; where this is not practicable, the same soil management and worker safety provisions applicable to construction activities (e.g., compliance with worker training, monitoring and work practice requirements defined in

site institutional control plans) would apply to utility maintenance or other subsurface maintenance activities.

- **Future Hazardous Materials Use:** Compliance with local (e.g., fire department hazardous materials regulations), state (e.g., Washington underground storage tank regulations) and federal regulations (e.g., federal spill prevention control and counter-measures requirements) relating to the use, storage or processing of hazardous materials.

Significant Unavoidable Adverse Impacts

No adverse environmental impacts that could not be mitigated would result under either redevelopment Alternatives 1 or 2, or under the No Action Alternative.

Cultural Resources

Required/Proposed Mitigation Measures

At this time only the *Buena Vista Cemetery*, is eligible for the NRHP. Mitigation measures that follow assume evaluation of the archaeological properties is completed and that all sites in **Table 3.5-1** indicated as "considered eligible for NRHP" are determined eligible for listing in the NRHP. In addition, the Port Gamble Historic District is assumed to delineate an area of high sensitivity for future discovery of additional archaeological sites.

- **Avoidance**. Impacts to an archaeological site can be avoided by re-designing elements of the proposal to by-pass the archaeological site boundaries and a buffer area. Avoidance requires delineation of archaeological site boundaries and project impacts, and agreement on appropriate site buffers.
  Buena Vista Cemetery - impacts (the potential to encounter unmarked interments) can be avoided by establishing a sufficient buffer zone through consultation with DAHP around the existing fence at the base of the slopes on the east and west, at the north edge of the road along the south boundary, and between the fence and the bluff scarp on the north edge.

  Pre-Contact Shell Midden - impacts can be avoided by limiting the depth of excavation on the Mill Site to six feet or less, or by raising the elevation of the existing ground surface and thereby the depth of excavation relative to the site location.

  Port Gamble Workers Housing - impacts can be avoided by establishing a buffer to prevent excavation below existing grade that is 15 meters (50-feet) wide around the boundary. Increased protection would be provided by adding fill to the site to increase the distance below proposed surface to the site. Data recovery would be provided where it is determined that avoidance cannot be fully observed.

- **Data Recovery**. Recovery of the information that makes a site significant can be implemented through consultation among the County, DAHP, affected Tribes, and other

appropriate consulting parties. A research design guides excavation under permit from DAHP.

The *Port Gamble Dance House and Babcock Dairy*, the *Port Gamble Chinese Laundry and Residences*, and the *Port Gamble Workers' Housing* sites could require data recovery of all or part of each site, depending on final project design.

- **Inadvertent Discovery Plan**. A plan to be implemented on the discovery of archaeological deposits or human remains at any time within the redevelopment area would minimize impacts over the life of the redevelopment and beyond.

- **Monitor**. Ground disturbance related to infrastructure development would be monitored by a qualified archaeologist under the guidance of a Monitoring and Discovery Plan (MDP) approved by DAHP, the County and other consulting parties. The MDP would provide notification protocols to be followed upon discovery.

- **Archaeological Resources Management Plan**. The Port Gamble Redevelopment Project assumes a long period of development. Given the identified archaeological sites and indication of the correlation of buried remains with historic maps in the *Port Gamble Historic District*, development of an archaeological resource management plan (ARMP) for the entire redevelopment area is the best way to guide identification, evaluation, and treatment of archaeological properties through the course of future development. The ARMP would be developed by a professional archaeologist in consultation with Kitsap County, OPG, DAHP, and affected tribes at a minimum.
  The ARMP would include a long-term research design based on an historic context expanded from HAER documentation prepared by Eakins 1997a, the overview of Sharley et al. 2010, and the technical investigations of Rinck et al. 2013. The research design would identify significant gaps in current understanding and would pose research questions to fill those gaps which archaeological research could help to answer. Also included would be methodologies for survey, testing, and data recovery and thresholds for their implementation. Provisions for curation, reporting, and continued consultation would also be included as would a comprehensive guide to existing archival resources, including those kept by the Puget Mill Company and its successors.

  The ARMP would provide GIS-based management tools at various scales related to archaeological potential to ensure that cultural resources are protected during the extended development. GIS would indicate the sensitivity level of a parcel, tract, or alignment and might recommend: 1) additional cultural resource investigation; 2) investigation to identify boundaries or establish buffers for a known site; 3) archaeological monitoring during construction or; 4) guidelines for development of mitigation measures, like data recovery. The plan would also provide an inadvertent discovery protocol that would guide consultation with DAHP, the Tribes, and other consulting parties in the event of unplanned discovery of human remains or

archaeological deposits. Such a management plan would be adjusted through the life of the project as data was collected.

- In the case of inadvertent discovery of cultural resources within the RHTR, RHTC and RHTW areas, the proposed use resulting in the discovery could be moved to the "reserve lots" to avoid disturbance of the discovered resources.

Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts on archaeological resources are anticipated with implementation of the required/proposed mitigation measures listed above.

Historic Resources

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would address potential impacts to historic resources that could result from the construction and long-term use of Alternatives 1 and 2.

- All 78 of the on-site structures that are considered historic and contributing to the historic Port Gamble district would be retained with proposed redevelopment.
- Secondary, contributing structures (i.e., garages and sheds) that are identified for demolition would be documented and their removal would be reviewed by a qualified consultant prior to demolition.
- The historic circulation network (i.e., roads, alleys and sidewalks) and grid alignment would largely be maintained with proposed redevelopment.
- The majority of the remaining historic trees that contribute to the historic district would be retained (removal would only occur for safety consideration and/or street improvements). Additional street trees would be planted to help maintain the historic character of the town.
- Wherever possible, existing historic-contributing landscape features (i.e., lawns around buildings and sidewalks, low picket fences and the tennis court) would be maintained.
- Design guidelines would be included in the proposed future Development Agreement between the applicant and Kitsap County to ensure that proposed development would meet the standards outlined in the County Town Development Objectives (TDOs) for the site's RHT zones.
- Further evaluation of any above-grade utility, data, communication, and underground water, sewer and other infrastructure construction would occur during project permitting to ensure no significant impacts on historic resources.

Other Possible Mitigation Measures

Demolition

- If feasible, ancillary structures that are secondary, contributing resources and proposed for demolition could be deconstructed and relocated.

Lot Layout and Orientation

- The proposed site plans under Alternatives 1 and 2 largely maintain the historic street gird pattern. Potential modifications to the Alternative 1 and 2 site plans to further reinforce the historic grid pattern could include:
  - South of Pope Street, along Olympian Avenue, and along Talbot Street, the historic grid could be simulated by slightly re-configuring Lots 46 and 50-53, as possible, avoiding the curve and aligning structures on Lots 50-53 to provide visual reinforcement of the grid from Pope Street. Appropriate landscaping south of the Olympian Avenue NE and Talbot Street NE intersection could also help to disguise the new curved roads in this area.
  - Lots 113 and 114 could be re-oriented in an east-west orientation to reflect the historic platting pattern and help to reinforce the historic grid along Puget Way. If possible, roof lines should align with the existing structures in the area.
  - Structures on Lots 83, 97 and 109 could strive for continuous building line and possible secondary facades along Pope Street to recreate a sense of the original plat in this area.

Driveways and Garages

- Where alley access is not available and shared driveways or ganged garages are proposed, driveways directly off of streets would not be preferred and street parking could be provided as an alternative.

Circulation Pattern, Street Names and Parking

- Landscaping, road markings or interpretive signage/markers could be considered as part of the proposed Pope Street roundabout.
- Retention of the Kitsap Avenue-Pope Street could be investigated further to retain the historic grid and roadway system; however, retention may not be feasible due to safety issues associated with intersection spacing.
- Alley C between N Talbot Street and Pope Street could be renamed as Olympia Avenue as it was historically known and the proposed Olympian Avenue could be renamed Pacific Avenue as it lies on the approximate location of that historic roadway.
- The proposed parking lot in the RHTC should be screened with landscaping as tall fencing would not be appropriate for the Port Gamble NHL District.

- Access to proposed parking areas could be provided through a minimal opening to the street to minimize impacts from the street, cemetery and other historic buildings in the area; landscaping could also be provide to lessen impacts.

Trees

- Street trees along Rainier Avenue and Pope Street are historically significant and should be maintained if possible. If trees are required to be removed from these streets, new plantings should be provided.

Interpretation

- An interpretive plan could be developed to provide historic information for visitors, residents and employees. Elements could include story boards, interpretive exhibits, smart phone applications, the trail system and design elements in new construction projects.

Historic Resource Protection

- A qualified consultant currently provides and will continue to provide recommendations on proposed development in the RHT zone. Additional resources for County staff (e.g. training) could provide the expertise and processes to encourage and direct appropriate redevelopment on the site.
- Covenants, Conditions and Restrictions (CC&Rs) could be provided to address specific design issues.
- Kitsap County could become a Certified Local Government (CLG) to boost its overall capacity to work effectively with historic properties and take advantage of funding, training and expertise provided by the National Park Service and the Washington State Historic Preservation Office.

Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts on historic resources are anticipated with implementation of the required/proposed mitigation measures listed above. Implementation of the other possible mitigation measures above would further reduce other potential impacts on historic resources, but are not required to avoid significant unavoidable adverse impacts.

Air Quality/Greenhouse Gas (GHG) Emissions

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would be implemented to preclude significant impacts on air quality and greenhouse gas emissions.

Prior to and During Construction

- Site development and construction activities would comply with applicable Puget Sound Clean Air Agency (PSCAA) regulations regarding construction-related emissions.

During Operation

- Emissions related to building operations would be required to meet all applicable standards, including PSCAA regulations.

Significant Unavoidable Adverse Impacts

Development of the Port Gamble site under Alternatives 1 and 2 would result in increased energy usage and increased levels of GHG emissions, similar to any major development project. However, with the implementation of the required/proposed mitigation measures listed above, no significant unavoidable adverse air quality, energy or GHG-related impacts would be anticipated.

Land Use

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would address the potential land use impacts associated with the redevelopment of Port Gamble site under Alternatives 1 and 2.

Prior to and During Construction

- The proposed Development Agreement would be negotiated and approved between Kitsap County and the applicant, either as part of the Proposed Actions. It is currently anticipated that the Development Agreement would be adopted concurrently or soon after the issuance of land use approvals for the Port Gamble site redevelopment. The Development Agreement would identify implementing land use regulations for the project that would include regulations and design guidelines related to building height, bulk, and design, consistent with standards in the Kitsap County Code. Future development would be reviewed for conformance with those regulations and design guidelines to ensure that new land uses are compatible with existing uses in the site and in the vicinity.
- Redevelopment would be phased over time, consistent with market demand, as well as the Development Agreement and applicable regulations and standards.
- Approximately 75 to 77 percent of the site would be retained in some form of open space area.

  Additional mitigation measures related to construction, aesthetics, transportation, public services and utilities would be provided to minimize overall impacts from development of the site (see **Section 3.1**, **Earth**; **Section 3.9**, **Aesthetics**; **Section 3.13**, **Transportation**; **Section 3.12**, **Public Services;** and **Section 3.14**, **Utilities** for further details).

Significant Unavoidable Adverse Impacts

Development under Alternatives 1 and 2 would increase density on the Port Gamble site from its existing condition with new mixed-use development, resulting in an intensification of uses onsite and an associated increase in on-site activity levels. It is assumed that proposed redevelopment would occur consistent with adopted standards, design guidelines, and regulations for the site, including the Development Agreement between Kitsap County and the applicant. Therefore, with the implementation of the required/proposed mitigation measures listed above, and the Development Agreement, no significant unavoidable adverse land use impacts would be anticipated.

Aesthetics/Light and Glare

Required/Proposed Mitigation Measures

The following measures have been incorporated into the proposal and/or identified in the FEIS to minimize the potential for aesthetic/light and glare impacts.

- Consistent with Kitsap County Town Development Objectives, proposed new buildings would include the use of natural materials, architectural detailing and modulation within the RHTC and RHTR zones and would be intended to respect the historic character of the site. In conformance with Town Development Objective 5, within the RHTW zone, the proposal could provide greater massing and a more industrial style in keeping with the historic industrial use of the Mill Site. Adherence to the Town Development Objectives would result in a cohesive design theme throughout the site.
- A substantial portion of the site would be retained in open space, parks and landscaping to soften the aesthetic character of overall site redevelopment.

Other Possible Mitigation Measures

- Lighting standards and design guidelines could be developed and included in the Development Agreement, such as :
  - Lighting for building and circulation routes could be designed with sensitivity to surrounding areas and fixtures could be located in a manner to avoid glare into surrounding land uses.
  - Exterior lighting features and security lighting near the perimeter of the site could use appropriate shields and could be directed away from adjacent areas to reduce light spillage.
  - All streets would be well lit for safety and security purposes to meet the standards of Kitsap County.
  - Informal path and trail lighting could be designed to not exceed a certain maximum height.

Significant Unavoidable Adverse Impacts

Portions of the site contain various forms of existing development, including development in the Town Site (RHTR and RHTC zoned areas) and on the Mill Site (RHTW zoned area) – thus, these portions of the site do not reflect the aesthetic character of an undeveloped site. Redevelopment under Alternatives 1 and 2 would change the aesthetic character of the Town Site by continuing and expanding upon the existing development pattern as allowed by the Comprehensive Plan and current development regulations. On the Mill Site, redevelopment under Alternatives 1 and 2 would change the aesthetic character of this portion of the site from a developed but mostly vacant area to a more dense mixed-use development. Changes in visual character would occur incrementally over the 15-year buildout period. Under the No Action Alternative Scenario B, redevelopment on the Mill Site would reflect a change in visual character to a more densely developed industrial area.

As noted previously, this assessment of aesthetic conditions does not indicate if a particular change in visual character would be adverse. The determination as to whether a particular change could be adverse is often defined by the subjective reaction of an individual viewer.

Redevelopment of the site would result in an increase in light and glare on the site and in the surrounding area. With implementation of mitigation measures, no significant unavoidable adverse impacts would be anticipated for light and glare.

Parks and Recreation

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would address the potential parks and recreation impacts associated with redevelopment of the Port Gamble site under Alternatives 1 and 2.

Prior to and During Construction

- Potential increased demand for parks and recreation facilities would be mitigated, through the provision of new on-site parks, recreational facilities, trails and open space, and payment of park impact fees. Approximately 75 to 77 percent of the site would be retained in some form of open space area and 2.5 to 3 miles of trails would be provided.

Significant Unavoidable Adverse Impacts

Development under Alternatives 1 and 2 would result in increased demand for parks and recreational facilities from new uses and on-site population. With implementation of the required/proposed mitigation measures listed above, no significant unavoidable adverse impacts to parks and recreational facilities would be anticipated.

Public Services

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would address the potential public services impacts associated with development of the Port Gamble Redevelopment Plan under Alternatives 1 and 2.

- A portion of the tax revenues generated from development of the site (including construction sales tax, retail sales tax, business and occupation tax, property tax, utilities tax, and other fees, licenses and permits) would accrue to Kitsap County and would help to offset the increased demands for law enforcement, fire and EMS and public school services.
- All new buildings would be constructed in compliance with the International Building Code (as amended by Kitsap County) and the International Fire Code (as amended by Kitsap County).
- Adequate fire flow would be provided for all new development on the Port Gamble site in accordance with Kitsap County requirements.
- Automatic fire sprinkler systems would be provided in accordance with Kitsap County requirements for buildings greater than 10,000 sq. ft. or for certain types of building uses or occupants.
- Kitsap County has adopted impact fee requirements for new single family and multi-family residential development within the District in order to mitigate potential impacts on public schools from new residential uses within the North Kitsap School District. Payment of impact fees ($206.95 per single family residential unit and $108.29 per multi family unit) would provide additional revenue to help offset potential development-related impacts. Further, it is anticipated that incremental increases in on-site population, along with general growth in the area, would be planned for through the North Kitsap School District's capital facilities planning process to ensure that the District would have adequate capacity in the future.

Significant Unavoidable Adverse Impacts

Redevelopment of the Port Gamble site under Alternatives 1 and 2 would result in increased demand for law enforcement, fire and EMS and public school services from the Kitsap County Sheriff's Office, Poulsbo Fire Department and North Kitsap School District due to increased on-site population and employment. With implementation of the required/proposed mitigation measures listed above, no significant unavoidable adverse impacts to public services would be anticipated.

Transportation

Transportation improvements are proposed to mitigate impacts at the intersections of Puget Way/SR 104 and SR 104/SR 307 under full buildout under Alternatives 1 and 2.

Because development under Alternatives 1 and 2 would occur in phases, an evaluation was conducted to identify at what point mitigation measures would be triggered (see **Appendix K** for a listing of the mitigation trigger points).

- **Puget Way/SR 104** - A roundabout is proposed to provide traffic control at this intersection given operations are projected to degrade to LOS F under full build out conditions for both Alternative 1 and 2. A roundabout would improve operations to LOS A and provide safe and efficient vehicular, bicycle, and pedestrian traffic flow. In addition, it would calm traffic and provide a new gateway for the site. The intersection would degrade to LOS F after approximately 195-200 project trips are generated. The range is due to the slight differences in traffic distribution between the with and without the Carver Drive extension (see **Appendix K** for detail).

- **SR 104/SR 307** - At this intersection, the installation of a westbound right-turn lane with an overlap signal phase is proposed to improve operations from LOS F under Alternative 1 and LOS E under Alternative 2 to LOS C under Alternative 1 and Alternative 2 conditions. These improvements would provide additional capacity for the more heavily used westbound right turn movement. The intersection would degrade to LOS E early in Phase 1 under both Alternatives 1 and 2 after approximately 8 trips are generated (see **Appendix K** for detail)

No specific mitigation measures were identified for the No Action Alternative scenarios.

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would address the potential transportation impacts associated with development of the Port Gamble Redevelopment Plan under Alternatives 1 and 2.

Prior to and During Construction

- At the SR 307 / SR 104 intersection the installation of a westbound right-turn lane with an overlap signal phase would improve traffic operations to acceptable LOS standards and increase the available intersection capacity such that intersection overall traffic volumes would be less than the improved capacity.

Significant Unavoidable Adverse Impacts

With the implementation of the required/proposed mitigation measures listed above, no significant unavoidable adverse transportation-related impacts are anticipated with redevelopment of the Port Gamble site.

Utilities

Required/Proposed Mitigation Measures

The following required/proposed mitigation measures would address the potential utility impacts associated with redevelopment of the Port Gamble site under Alternatives 1 and 2.

During Construction

- Methods such as higher densities, common irrigation areas, and efficient plumbing and fixtures would be used to keep water usage in the range of 150 to 200 gallons per day per ERU.

- Monitoring would be performed to confirm that actual sewer flows fall within the 55,800 gpd limit of the proposed sewer system. After 150 building permits have been issued, additional building permits would be approved only after confirmation that sufficient capacity is available based on monitoring of actual flows.

Significant Unavoidable Adverse Impacts

Development of the Port Gamble site under Alternatives 1 and 2 would result in increased demand for utilities from proposed uses and on-site population. With implementation of the required/proposed mitigation measures listed above, no significant unavoidable adverse impacts to utilities are anticipated.

CHAPTER 2

Description of Proposed Action and Alternatives

CHAPTER 2
DESCRIPTION OF PROPOSED ACTION(S) AND ALTERNATIVES

This chapter of the Final Environmental Impact Statement (FEIS) describes the Proposed Action(s) and Alternatives for the Port Gamble Redevelopment Project. Background information and a summary of historic site activities are also presented. Please see **Chapter 1** of this document for a summary of the findings of this FEIS and **Chapter 3** for a detailed presentation of the affected environment and probable significant environmental impacts of the Proposed Action(s) and alternatives.

2.1 INTRODUCTION

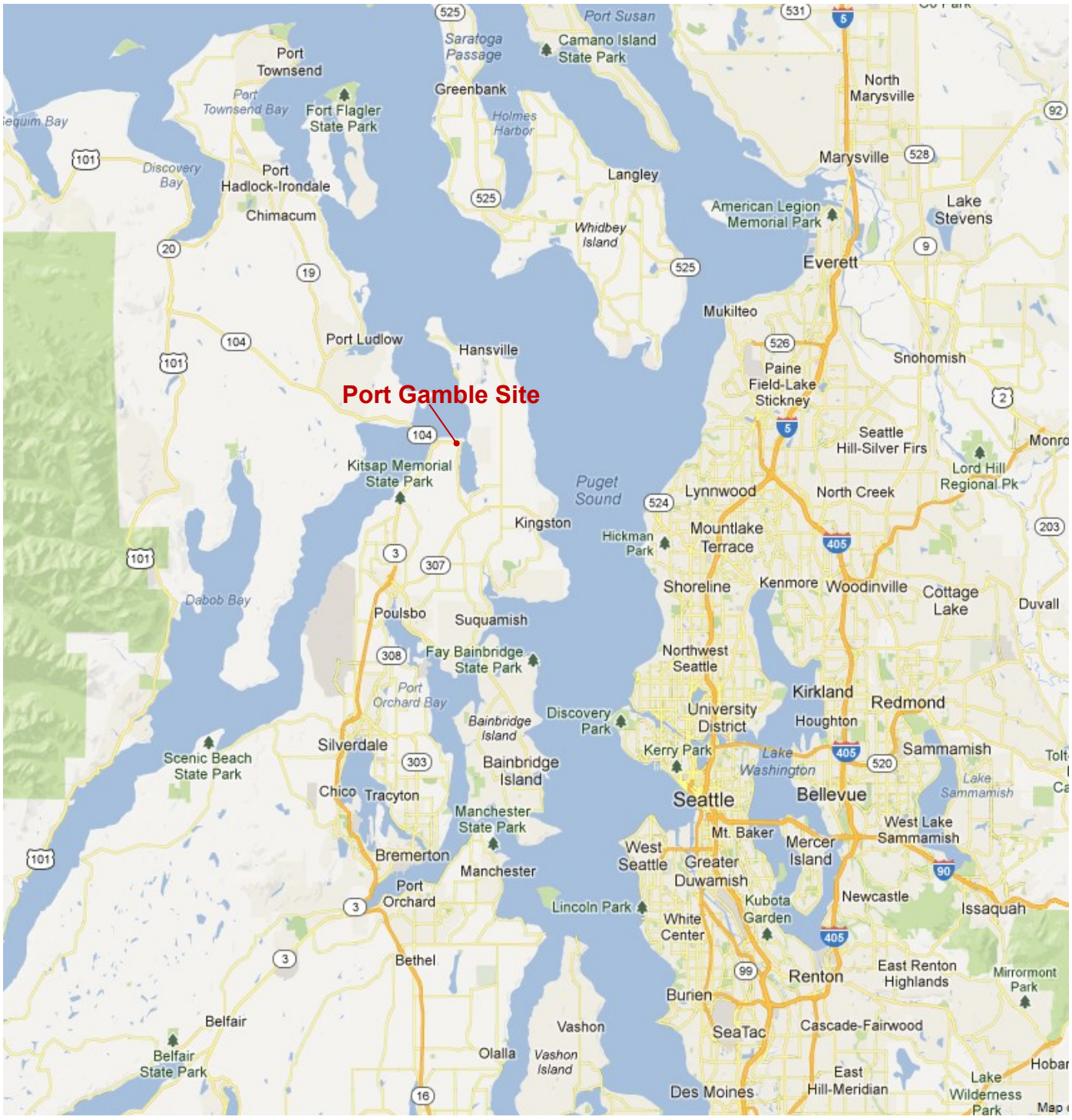
Olympic Property Group (OPG), the Applicant, is proposing redevelopment of the approximately 318.3-acre Port Gamble site (see **Figure 2-1**, Regional Map). For FEIS descriptive purposes, the site is comprised of four main areas including a Mill Site along the waterfront, a Town Site on the bluffs above the Mill Site, a residential area to the west and south of the Town Site, and an agricultural and wooded area which lies to the south (see **Figure 2-2**, Vicinity Map and **Figure 2-3**, Existing Site Conditions).

The Port Gamble site is owned by Pope Resources, as a successor to Pope and Talbot, who previously owned and operated the mill. The property is currently managed by OPG, a wholly owned subsidiary of Pope Resources. The existing commercial and residential buildings are leased from Pope Resources.

The proposal would redevelop the site with a mix of residential, commercial, agricultural and open space uses intended to complement the historic character of the site and create an economically sustainable community. Proposed redevelopment of the Port Gamble site could ultimately contain between 226 and 265 new residential units[1], a 100-room hotel/visitor accommodations, 50,000 to 171,000 sq. ft. of commercial space[2], and 239 to 245 acres of open space. Buildout of the proposed redevelopment is assumed to occur by 2028, although actual buildout would depend on market conditions.

The environmental impacts of three alternatives are analyzed in this FEIS, and include Alternative 1 (Full Buildout), Alternative 2 (Lesser Development) and the No Action Alternative.

[1] 28 existing residences would also be retained on the site for a total of 254 to 293 units.
[2] Includes up to 15,000 gsf of restaurant use.



Source: EA, Google Maps, 2018.

EA Engineering, Science, and Technology, Inc.

Figure 2-1
Regional Map

Source: EA, 2018.

EA Engineering, Science, and Technology, Inc.

Figure 2-2

Vicinity Map

Site Boundary

Note: This aerial photo includes some site features that have since been removed as part of the cleanup activities for the Port Gamble site such as the former wharf and dock.

North

Not to Scale

Source: David Evans and Associates, 2018.

EA Engineering, Science, and Technology, Inc.

Figure 2-3

Port Gamble - Existing Site Conditions

The No Action Alternative includes three scenarios: a) continuation of existing conditions, b) redevelopment under existing zoning, and c) redevelopment of the upland area under existing zoning and purchase of the entire Mill Site for conservation (assumes that purchase of any portion of the Mill Site for conservation and any funding for conservation activity would be accomplished by others).

Subsequent to the submittal of their application in 2013, several changes have occurred within and adjacent to the Port Gamble Redevelopment Project site area, including the following:

- In 2016-2017, OPG constructed a new lift station, Membrane Bio-Reactor (MBR) and drainfield, and waste water treatment system (MBR System) to provide sewer service for the site; the former sewage treatment plant and sewer outfall to Hood Canal were decommissioned. Kitsap Public Utility District KPUD) water mains were also connected to the existing the water reservoir and potable water system.
- In 2017, OPG completed the in-water cleanup within Port Gamble Bay in accordance with a Consent Decree with Ecology. As part of the cleanup, OPG removed 8,592 piling, 1.3 acres of over-water structures and docks, dredged 110,000 CY of wood waste and sediments, placed 200,000 tons of clean cap materials and in total cleaned up over 106 acres of Port Gamble Bay. As part of the cleanup, the area of the Mill site was reduced by approximately 0.4 acres and the overall area of the site was reduced to 318.3 acres.
- In 2018, the Kitsap Forest and Bay Partnership was completed with the establishment of Kitsap County's Port Gamble Forest Heritage Park (approximately 3,500 acres and 1.5 miles of shoreline) which is located immediately south of the Port Gamble site.

2.2 ENVIRONMENTAL REVIEW PROCESS AND PURPOSE

SEPA EIS and Lead Agency

For purposes of the Port Gamble Redevelopment Project, Kitsap County is responsible for performing the duties of a lead agency, as required by the State Environmental Policy Act (SEPA). The County's Department of Community Development, Planning and Environmental Programs Division, serves in the lead agency role, and the Community Development Director serves as the Responsible Official for the SEPA review. The Washington State Department of Ecology (Ecology) is the responsible entity for all cleanup/remediation plans and actions on the site.

Determination of Significance and EIS Scoping

On January 17, 2013, the Applicant submitted a Performance Based Development/ Preliminary Plat application for the Port Gamble Redevelopment Project. Kitsap County, as SEPA lead agency, determined that the project may have a significant impact on the

environment. As a result, an EIS is required, per WAC 43.21C.030(2)(c) and must be prepared consistent with WAC 197-11-400 through 460. On February 22, 2013, the County issued a Determination of Significance (DS) and Request for Comments on the Scope of the EIS. The DS indicated that a public meeting would be held to provide an opportunity for the public to learn more about the Proposed Actions and to provide input into the environmental review process, and that the EIS scoping period would end on March 20, 2013.

The EIS public scoping meeting was held on March 18, 2013, to provide the public with opportunities to comment on the range of environmental issues, alternatives and actions that should be considered in the EIS. During the EIS scoping meeting, the public was encouraged to provide both written and/or oral comments on the scope of the EIS. A total of 34 people signed in and a total of 8 people spoke about the EIS scope at the public meeting.

During the EIS scoping comment period, a total of 32 comment letters/emails were received, including: six comment letters from local agencies and organizations, two comment letters from tribes, one letter from a state agency, and 25 comment letters from individuals. All of the comment letters/emails are available for review at the Kitsap County Department of Community Development. See **Appendix A** for further information on the scoping process and a summary of the scoping comments.

Following EIS scoping, the County identified the following elements to be analyzed in this FEIS:

- Earth
- Water Resources
- Plants and Animals
- Environmental Health
- Historic and Cultural Resources
- Air Quality/Greenhouse Gas Emissions
- Land Use and Plans and Policies
- Aesthetics/Light and Glare
- Recreation
- Traffic
- Public Services
- Utilities

Purpose of EIS Analysis

Per WAC 197-11-400, an EIS is an objective, impartial evaluation of the environmental consequences of a proposed project. It is a tool that will be used by Kitsap County, other agencies, and the public in the decision-making process. An EIS does not recommend for or against a particular course of action.

The DEIS is the County's initial analysis of probable significant environmental impacts of the Proposed Actions and alternatives for a range of topics, such as: earth, water resources, land use, historic/cultural resources, transportation, etc. The DEIS was issued on September 17, 2019 and distributed to agencies, tribes, organizations, and the public for review as part of a public comment period. A public meeting was held on September 24, 2019, following the issuance of the DEIS to gather comments regarding the DEIS (see the **Fact Sheet** for date and location). Comments on the DEIS were able to be submitted to the County during the public comment period which ended on November 22, 2019.

This FEIS provides responses to comments received on the DEIS from agencies, organizations, and the public, and may contain clarifications to the analysis of environmental impacts. The DEIS and FEIS together will comprise the document that the County will use – along with other analyses and public input – regarding decisions on the proposed redevelopment project.

After the FEIS is issued, County staff will make recommendations to the decision-makers on the Port Gamble Redevelopment Project. A public hearing will be held as part of the decision-making process on the project. Ongoing opportunities for public input will occur as part of the process.

2.3 SITE DESCRIPTION

The Port Gamble Redevelopment site encompasses approximately 318.3 acres of land that includes waterfront property and is bordered by Port Gamble Bay to the east, Hood Canal to the north, and primarily forested land to the south and west (refer to **Figure 2-1** for a regional map and **Figure 2-2** for a vicinity map). The existing development on the site is a mix of residential and commercial uses. The north portion of the site includes the historic town of Port Gamble (a designated National Historic Landmark District) and consists of single family residences, open space, a cemetery, and a downtown area with shops, commercial businesses, and restaurants. Along the waterfront in the northeastern corner of the site is the location of the former lumber yard and several docks, referred to as the "Mill Site". The Mill Site is a flat, low-lying area of approximately 28 acres that was once used as a lumber mill and port. Pope Resources/Olympic Property Group completed the Cleanup of Port Gamble Bay in early 2017 and during the two-year project, removed 8,592 piling, 1.3 acres of over-water structures and docks, dredged 110,000 CY of wood waste and sediments, placed 200,000 tons of clean cap materials and in total cleaned up over 106 acres of Port Gamble Bay. Currently (post Cleanup), only an environmental lab, a kayak business, small utility buildings, and concrete slabs use for previous industrial buildings remain (see the discussion below under Site History for additional detail on the history of site development). The south portion of the project site is currently undeveloped and consists of a forested area with a stream, Machias Creek, running north to the Hood Canal, and an open grass field.

2.4 SITE HISTORY

The following provides a brief discussion on the history of the Port Gamble site. Because there are differing accounts regarding Native American history, statements from both the Port Gamble S'Klallam Tribe and the Suquamish Tribe are provided, followed by a summary of site history post-1853. These statements are solely authored by each individual tribe (for inclusion in the 2011 Trail Plan). Please refer to **Section 3.5**, **Cultural Resources** and **Section 3.6, Historic Resources**, for additional detail on site history.

Statement from the Port Gamble S'Klallam Tribe:

"Port Gamble S'Klallam oral history indicates that a settlement predated the development of the Port Gamble Mill in 1853. Ethnographic and linguistic evidence collected by John Peabody Harrington in the early 1940's also indicates that the historic S'Klallam name for the place was nəxʷqi̓yt̓ (place of midday sun). Following the establishment of the mill, the community re-established itself on Point Julia. The name nəxʷqi̓yt̓ (place of midday sun) was applied to this re-established community, which grew with the expansion of the mill. Ethnographic evidence indicates that the name nəxʷqi̓yt̓ was applied to the settlement on the west side of Port Gamble Bay below the contemporary town site preceding the development of Port Gamble Mill as well as to the S'Klallam settlement on Point Julia."

Statement from the Suquamish Tribe:

"Port Gamble is within the Adjudicated Usual and Accustomed Fishing Area of the Suquamish Tribe and within the Ancestral Territory of the Tribe. Suquamish Ancestors have occupied the Kitsap Peninsula and surrounding areas of Admiralty Inlet, Hood Canal, and Puget Sound since early post-glacial times, over the past 14,000 years. Ethnographic and historic data demonstrate the Suquamish People were at the north end of Hood Canal, including Port Gamble, until the early 1850s, when the Pope and Talbot lumber operations were established at Port Gamble in 1853.

Hudson's Bay Company records from the 1820s to the 1840s, United States Exploring Expedition records from 1841, and Catholic Archdiocese records from the 1830s through the 1870s refer to Suquamish villages at Ebey's Prairie on Whidbey Island, at Point No Point at the north end of the Kitsap Peninsula, at Port Ludlow northwest of the north end of Hood Canal, and at Quilcene Bay on the west side of Hood Canal, and seasonal Suquamish encampments at Hood Head, Termination Point, and Brown's Point on the west side of Hood Canal. U.S. Exploring Expedition personnel named Suquamish Harbor at the north end of Hood Canal based on the presence of Suquamish fishing and hunting parties and villages in the area. An 1841 map produced by the U.S. Exploring Expedition shows the Suquamish at the north end of the Kitsap Peninsula and the west side of Admiralty Inlet and Hood Canal, from north of Port Ludlow to south of Suquamish Harbor. An 1855 map by the U.S. Army also placed the Suquamish on both sides of the north end of Hood Canal.

Ethnographic data document pre-European contact Suquamish use of the north end of Hood Canal and indicate the S'Klallam families who settled in the Port Gamble vicinity came

from Dungeness Spit on the Strait of Juan de Fuca after the Pope and Talbot lumber mill was established in 1853. Place names recorded by ethnographers between 1910 and 1940 demonstrate Suquamish use of the Port Gamble vicinity.

Intensity of Suquamish use of the Port Gamble area decreased after 1853, as Tribal members focused on economic opportunities afforded by lumber mills on the east side of the Kitsap Peninsula and participated in trading, transportation, lumbering, shellfish gathering, fishing, and other commercial activities at Seattle on the east side of Admiralty Inlet. The large population and marketplace of the greater Seattle area that began in the early 1850s served as an economic magnet, continuing the pre-contact role of the Suquamish People as regional entrepreneurs who controlled trade and other economic commerce throughout Admiralty Inlet, Hood Canal, and Puget Sound."

General Site History

In 1853, the Port Gamble mill town was founded by Maine businessmen Andrew Pope and William Talbot. With the discovery of gold in California in 1848, the virgin timber stands of the Pacific Northwest served as the source of lumber to build San Francisco. Gold attracted lumbermen from the east coast, including Captain William C. Talbot of Maine and his partner Andrew Pope. In 1853, Talbot traveled to the Kitsap Peninsula in search of a mill site for his newly-formed Puget Mill Company. He settled on a sandy spit along a deep bay near the Native American village of Teekalet for the site of his new Pope & Talbot enterprise.

In September 1853, construction began with labor and materials from the East Coast. By 1860, over 50 percent of the population of Port Gamble hailed from Maine, and Port Gamble was one of the busiest ports on the Pacific Coast. The owners attracted workers and their families in part by re-creating a prototypical New England town, complete with Masonic Hall, library and a school. Forty-two houses were noted in the census that year, and by 1864, the company had acquired over 32,500 acres of timberland. In 1870, the number of houses at Port Gamble had increased to 93 with 246 residents. Five years later, the company was the largest timber land holder in the Washington Territory. In 1900, the site population totaled approximately 831.

Production soared at the mill until rail took over from shipping as the principal means of transport for wood products. Financial panics in the 1890s and early 1900s contributed to the mill's demise. Port Gamble's stature as a leading lumber producer then gradually declined through the early decades of the 20th century, and in 1924 it was sold to the Charles R. McCormick Lumber Company, which invested heavily in mill upgrades. By 1927, the company employed over 1,000 people at Port Gamble. The Great Depression caused the McCormick Company to go bankrupt in 1938, and Port Gamble was reacquired and operated under the Pope & Talbot name.

The sawmill was continuously operated in Port Gamble until 1995. Operations during that time included a succession of sawmill buildings, chip loading facilities, a log transfer facility

and log rafting and storage areas. Pope Resources was formed in 1985 when Pope & Talbot spun off its timberland, real estate, and development branch into a separate independent company, and transferred real estate and mortgages including Port Gamble, to Pope Resources.

Over the past two decades, Pope Resources has funded and performed a series of remedial actions at the site, including the excavation of approximately 26,310 tons of soil from the mill site. In December 2013, Pope Resources entered into a consent decree with the Washington Department of Ecology which required Pope Resources to implement a cleanup action in the Bay. From the fall of 2015 through January 2017, Pope Resources completed the in-water and intertidal cleanup of Port Gamble Bay.

The remaining 85 surviving historic buildings and structures at Port Gamble (including 28 residential homes) range in date of construction from 1859 to the 1940s. The mill buildings were dismantled and shipped away after its closure in 1995. As a company town, the Puget Mill Company and Pope & Talbot oversaw its complete development, from platting the land to erecting houses, stores, a church, hotels, a hospital, cottages, theater, and community buildings. This "company town" approach was not uncommon for the time, and was in many ways desirable as the town and mill were relatively isolated. The diversity found in the housing is a result of the company building some rentals, allowing employees to build their own homes and bringing in dwellings from Port Ludlow. The company also hired architects to design the prominent buildings, such as the Community Hall, Puget Hotel Stables and the Walker-Ames mansion.

Port Gamble is recognized as the longest continuing operation mill town in North America. However, throughout the 20th Century, town buildings experienced physical losses, including the school, hospital, the Puget Hotel, the Puget Hotel Annex (accommodating 150 men), the mill, the majority of homes, and all the cottages. Still, the company (Pope Resources with management provided by subsidiary OPG) continued to strive to maintain the existing structures, sought to sustain the town by investing in tourism activities and recognized its historic significance. In 1966, the town was designated a National Historic Landmark District (NHL) and placed on the National Register of Historic Places. See **Section 3.5**, **Historic and Cultural Resources**, for more information on the town's history and historic designation.

2.5 EXISTING SITE CONDITIONS

As indicated in Section 2.1, the Port Gamble site includes approximately 318.3 acres of contiguous waterfront and upland property. The site is located in the north end of Kitsap County in the community of Port Gamble, approximately one mile east of the Hood Canal Bridge adjacent to Hood Canal and Port Gamble Bay. The site is located within Sections 5, 6, 7 and 8 of Township 27 North and Range 02 East of the Willamette Meridian (refer to **Figure 2-1** for a Regional Map).

Information on existing site topography, vegetation, natural features, uses, vehicular/ pedestrian access and utilities is provided below.

Topography

The site's topography consists of flat to moderate slopes throughout the Town Site with steep slopes at the northern and eastern edge of the Town Site sloping down 40 ft. to the Mill Site and waterfront. There are also steep slopes along the banks of Machias Creek. The Mill Site portion of the site is relatively level and is partially within the 100 year floodplain (see **Figure 2-4**).

Vegetation

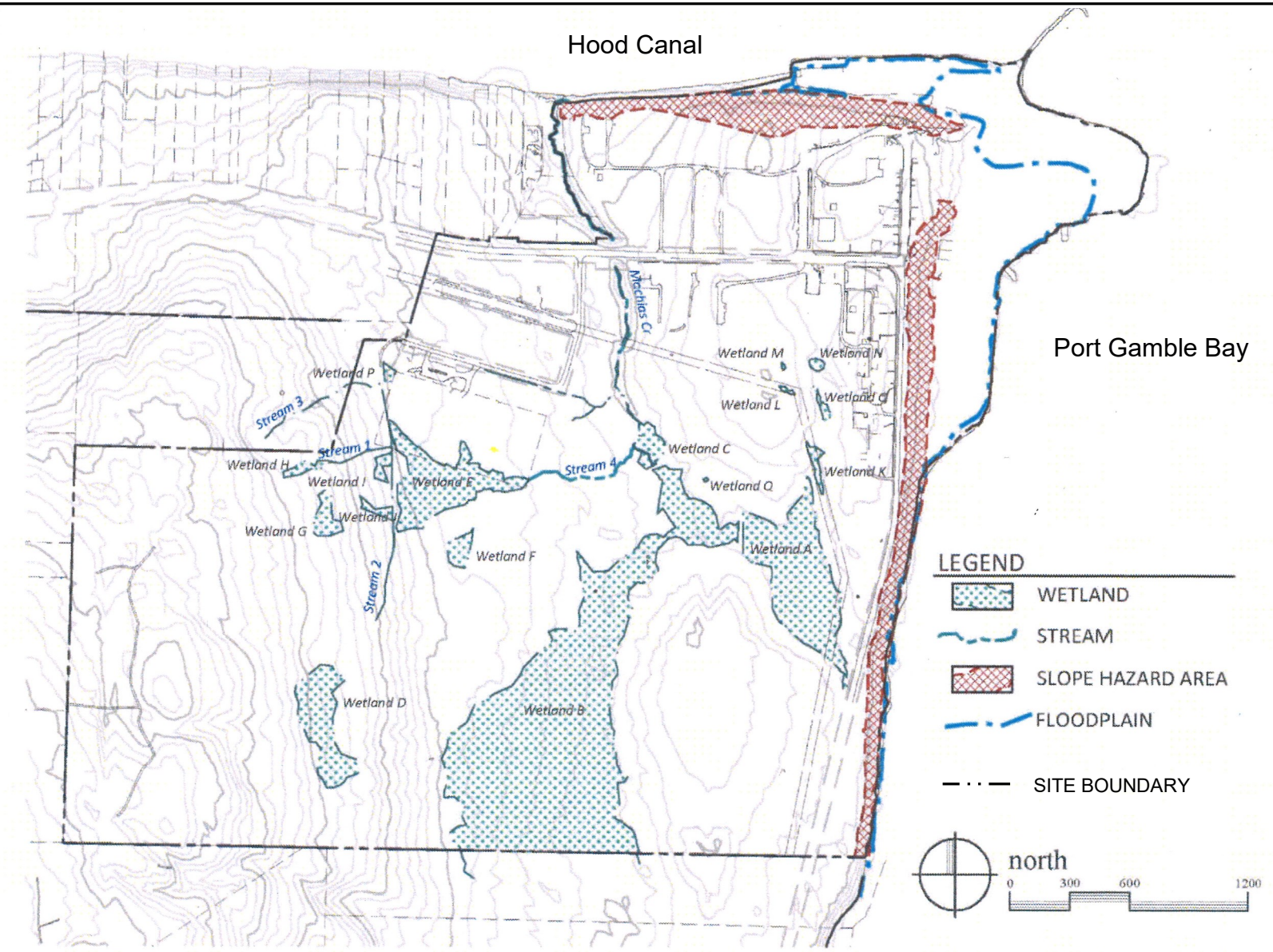
Existing vegetation on the site varies from large tracts of evergreen and deciduous trees and undergrowth, to large open grassy areas to landscaped developed areas. The Town Site includes large grassy areas interspersed with a few trees and landscaped gardens. The Mill Site has been heavily developed and is free of vegetation, and is comprised of firmly compacted bare earth or pavement. See **Section 3.3**, **Plants and Animals**, for additional information regarding plants and vegetation located on the Port Gamble site.

Natural Features (Wetlands and Streams)

A total of 17 wetlands (Wetlands A through Q) and five streams (Machias Creek, and Streams 1 through 4) are located on the Port Gamble site; the majority of these features are located in the southern and central portions of the site (see **Figure 2-4**). Wetlands range from Category II to Category IV; no Category I wetlands are present. Buffers for the wetlands vary from 25 ft. (Category IV) to 150 ft. (Category II and III). Machias Creek is a fish-bearing, Type F stream with a required buffer of 150 ft. Streams 1 and 2 are non-fish seasonal streams (type NS), and Streams 3 and 4 are non-fish perennial streams (type NP); these non-fish-bearing streams require a 50 ft. buffer. See **Section 3.2**, **Water Resources**, for additional information on existing wetlands and streams located on the Port Gamble site.

Existing Uses

As noted previously, the Port Gamble Redevelopment site includes approximately 318.3 acres of land. Of that area, approximately 113.4 acres lie within an area designated as a Type-1 Limited Area of More Intensive Rural Development (Type-1 LAMIRD) in the Kitsap County Comprehensive Plan. The remaining 204.9 acres outside the Type-1 LAMIRD area are zoned Rural Residential (RR) and Rural Wooded (RW). **Table 2-1**, below, presents a breakdown of the existing site conditions.



Note: This aerial photo includes some site features that have since been removed as part of the cleanup activities for the Port Gamble site such as the former wharf and dock.

Source: GeoEngineers, 2018.

EA Engineering, Science, and Technology, Inc.

Figure 2-4

Port Gamble - Critical Areas

Table 2-1
EXISTING SITE CONDITIONS – IMPERVIOUS AND PERVIOUS AREA

	Type-1 LAMIRD			RR Area (Acres)	RW Area (Acres)	Total Site (Acres)
	RHTR Area (Acres)	RHTC Area (Acres)	RHTW Area (Acres)			
Built Area (Impervious Area)						
Building Footprint	1.07	1.12	0.10	1.32	0	**3.64**
Paved Parking/ Roadway	7.20	1.77	24.3	0.06	1.29	**34.62**
Open Space Area (Pervious Area)						
Landscape/Lawn Area	39.94	10.35	0	2.03	1.11	**53.43**
Natural/Wooded Area	4.57	0.06	0	0	117.75	**122.38**
Critical Areas and Buffers[1]	14.30	0.44	7.00	3.58	77.80	**103.12**
Other Pervious Areas						
Cemetery	1.11	0	0	0	0	**1.11**
Total	**68.19**	**13.74**	**31.40**	**6.99**	**197.91**	**318.24**

Source: David Evans and Associates, 2018.
Note: Slight differences in sums due to rounding.
[1] Wetlands and buffers, streams and buffers, and steep slope areas

As indicated in **Table 2-1**, approximately 10 percent of the site is in built area such as buildings and paved area, and approximately 90 percent of the site is in natural area such as critical areas (steep slopes, wetlands/buffers, etc.) and vegetated area.

Existing land uses in each of the site's five zones are described more specifically below and are summarized in **Table 2-2** (see **Figure 2-5** for the boundaries of each zoning area).

Table 2-2
EXISTING SITE USES

	Residential Dwelling Units	General Commercial (sq. ft.)	Community/ Education (sq. ft.)	Other
RHTR	27 du	--	3,781 sq. ft.	--
RHTC	1 du	28,000 sq. ft.	3,000 sq. ft.	17,800 sq. ft.[1]
RHTW	--	--	4,000 sq. ft.	
RW	--	--	--	--
RR	--	57,449 sq. ft.[3]	--	--
Total	**28 du**	**85,449 sq. ft.**	**10,781 sq. ft.**	**17,800 sq. ft.**

Source: David Evans and Associates, 2018.
[1] 'Other' in the RHTC-zoned portion of the site includes land uses such as water tanks, storage buildings, garages, etc.
[2] 'Other' in the RHTW-zoned portion of the site includes sheds, storage buildings and former mill structures.
[3] Commercial uses in RR-zoned portion of the site include the Hood Canal Nursery and associated buildings.

Note: This aerial photo includes some site features that have since been removed as part of the cleanup activities for the Port Gamble site such as the former wharf and dock.

Not to Scale

Source: David Evans and Associates, 2018.

EA Engineering, Science, and Technology, Inc.

Figure 2-5

Port Gamble - Site Zoning

Rural Historic Town Residential (RHTR)

The approximately 68.2-acre RHTR zone includes 27 single family homes, the Buena Vista Cemetery on the north edge of the bluff overlooking the water, and St. Paul's Episcopal Church (which is also used as a wedding venue). This portion of the site also contains open space in the form of grassy fields and forested area. Several parcels of land surrounded by the RHTR zoned portion of the site, along Power Drive, are not owned by the Applicant and are not part of the proposal. These parcels contain five single family homes plus accessory structures.

Rural Historic Town Commercial (RHTC) Town Site

The RHTC area, also referred to as the Town Site, is approximately 13.8 acres and is primarily located to the north of SR 104, surrounding S. Rainer Avenue. Land uses within the RHTC zone include retail/commercial, office and residential uses. Other uses include the Port Gamble Historic Museum (originally the Pope and Talbot Office), the Walker-Ames House (which is currently vacant and in need of refurbishing), water tanks, community hall and garage, an event pavilion and accessory structures, and surface parking.

Rural Historic Town Waterfront (RHTW) Mill Site

The approximately 31.4-acre RHTW area, also referred to as the Mill Site, encompasses the land along the waterfront, including the small spit at the juncture between Gamble Bay and Hood Canal. This is a flat, low-lying area with an elevation 10 to 14 ft. above Hood Canal and Port Gamble Bay. The landward edges of the Mill Site slope steeply up approximately 40 ft. to the town of Port Gamble. The Mill Site is accessed by an asphalt road that runs down the bluff from the town site. Formerly used as a lumber mill and port with a lumber yard and docks, and after completion of the remediation, the Mill Site is currently used by a kayak business, with a large area of remaining concrete foundations and slabs from the mill. A number of older structures, such as docks and old lumber mill structures, were previously removed as described above. Newfield's Laboratory, an environmental lab that conducts advanced biological testing, is also located on this portion of the Port Gamble site in the northwestern corner of this zone.

Rural Residential (RR)

The approximately 7-acre RR-zoned area includes the Hood Canal Nursery greenhouses. The rest of this area is primarily in open space in the form of critical area buffers.

Rural Wooded (RW)

The approximately 197.9-acre RW area is primarily wooded natural area containing trails and second growth forest. This area also contains a former farm and its associated fields which are currently used to graze cattle, as well as several abandoned farm buildings to the south/southwest of the greenhouses in the RR zone. Additional fields/cleared area are located in the southeast corner of this area.

Existing Recreational Uses

Existing recreational uses on the site primarily consist of a network of formal and informal trails that are mostly located in the southern portion of the site, within the RW area. These trails are used for hiking, running, horseback riding and biking. The Port Gamble trails have surged in popularity and host events year-round (including the largest mountain bike race in Washington). Through the diverse Kitsap Forest and Bay Partnership, Pope Resources has teamed with the County, tribes, community and conservation organizations on a unique landscape scale land conservation partnership. The first phase of the Port Gamble Forest Heritage Park began in 2014 with a 534 acre acquisition, grew to 1,890 acres and became Kitsap County's largest park in 2016, and at the end of 2017 became approximately 3,400 acres of park. Most of the park will be managed as a unique partnership where Kitsap County owns the land, Pope Resources owns the timber for one last harvest, and slowly over the next 25 years Pope Resources will harvest the trees, replant and transfer the land to the County. An informal trailhead and fields are also located in the southeastern area of the site, and have been used by a model airplane flyer's club. Organized events occur in this portion of the site and continue into the trails and Town Site including bike races, distance runs, marathons and ironman events. Additional recreational uses on the site include:

- Large open space area that is often used for community fairs and exhibitions and informal recreational purposes; located in the center of the RHTC area.
- Children's play area with a play structure; located near existing commercial uses in the RHTC area.
- Children's play area; located in the RHTR zone area of the site, on Olympian Avenue.
- Passive-use plaza/deck containing benches and a picnic table with views of Hood Canal to the north and Port Gamble Bay to the east; located in the RHTC zone area at the northerly terminus of Rainier Avenue NE.
- Baseball diamond; located in the RHTR zone area of the site, north of SR 104 and south of the former sewer treatment plant.

Vehicular and Pedestrian Access

Primary access to Port Gamble is provided via SR 104, a two-lane State Route that passes through the site and provides regional access between Kingston and Hood Canal. SR 104 is classified by the Washington State Department of Transportation as a Class III principal rural arterial. From the south, SR 104 is aligned north/south along the eastern boundary of the site, then turns west in the middle of the site and continues on to the Hood Canal Bridge.

Circulation within the Type-1 LAMIRD portion of the site currently includes a network of mostly privately owned internal streets for vehicular traffic primarily consisting of two lane roads with intersections controlled with stop signs. Publicly owned streets are present in the southwest portion of the Type-1 LAMIRD and include Gamble Way, Power Drive, and Carver Drive. Alleys also provide access to residential structures.

Pedestrian Access

Existing pedestrian access within the site is through a combination of sidewalks and trails. Sidewalks are currently present along some of the improved roadways today. Other parts of the RHTR area are accessed via informal trails and gravel paths. Approximately 2 miles of trails extend from the RHTR/RHTC-zoned area of the site to the south into the RW-zoned area and are used primarily for recreational purposes.

Existing Utilities

The following provides a brief discussion on existing utilities serving the site. Refer to Section **3.14**, **Utilities**, for additional information.

Water

The existing water system service to the Port Gamble site consists of two components: a potable water system and a fire flow system. The potable water system has recently been connected to KPUD water, but the town still has access to groundwater from a well (Well 2) which pumps to an above ground reinforced concrete 46,000 gallon storage tank located to the west of the site (south of SR 104). The potable water system, now served by the new KPUD connection, serves approximately 51 equivalent residential units (ERUs); distribution lines throughout the town are generally six inches or smaller.

The separate fire flow system is served by surface water collected from springs located at the south end of the Town Site, and conveyed to a 400,000-gallon open reservoir, south of the Town Site and east of the Babcock Farm. Water from this reservoir is conveyed to an approximately 500,000-gallon fire pond, located to the east of the Port Gamble Museum and General Store in the northeastern portion of the site. Water is pumped through the fire distribution system by a pump station adjacent to the fire pond. The fire system consists of three to six-inch pipes with standpipe connections throughout the Town Site and fire hydrants on the Mill Site. The separate fire flow system is currently only used to provide fire flow to the General Store due to multiple leaks within the fire distribution system.

A newly constructed (2015) Kitsap Public Utility District (KPUD) 8-inch water main will provide potable water to the proposed project. The KPUD main stretches from south to north within the agrarian site to the southwest of the town site area.

Sewer

Prior to 2017, the sewer system serving Port Gamble consisted of a collection pipe system, two lift stations, an on-site sewage treatment plant located in the northwest area of the RHTR zone and an outfall to Hood Canal. The capacity of the existing collection pipe system and treatment facility was limited due to infiltration and inflow issues.

In 2016-17, Pope Resources built a new lift station, Membrane Bio-Reactor (MBR) and drainfield, waste water treatment system (Large Onsite Septic System [LOSS]). The new lift station, in the vicinity of the abandoned sewage treatment plant, pumps waste water to the new MBR via a newly constructed force main. Treated waste water from the MBR is then

pumped to a drainfield west of the Babcock farm. The Washington State Department of Ecology (DOE) identified the need for the prevention of continuing and future pollution to Port Gamble Bay, and provided a $2 million grant to fund the LOSS to reduce Port Gamble's community sewer discharge to the Bay. Those funds and an additional $3.2 million of Pope Resources funds, paid for the LOSS, which is owned and operated by KPUD.

The LOSS utilizes the existing collection pipe system to direct sewage to the MBR. New pipes are planned to gradually replace the current sewer collection pipe system with new pipes.

The LOSS is sized to treat 100,000 gallons per day and will accommodate and treat flows in addition to existing flows.

Stormwater

Stormwater runoff from the site flows into Port Gamble Bay or Hood Canal either directly via surface flow and an existing storm drainage system within the Mill Site, or indirectly through Machias Creek and Ladine-DeCoteau Creek (south of the RW area). A portion of the site's runoff flows to on-site wetlands prior to entering these creeks. The majority of the runoff currently generated by the developed portions of the site (i.e. the Town Site) flows directly into Hood Canal, Port Gamble Bay or Machias Creek without the aid of a stormwater drainage system. In the current condition, a system of ditches and culverts run along SR 104 that collect surface runoff from the state route and minor roads. The ditch flows into Machias Creek and eventually into Hood Canal. Runoff from the Town Site that does not flow into the ditch system flows along the road or overland to the Mill Site where it either sheetflows directly into salt water or is picked up by the Mill Site's stormwater system. The stormwater system in the Mill Site consists of catch basins and pipes that direct flow to five outfalls into Port Gamble Bay or Hood Canal. The stormwater system on the site does not include any water quality treatment facilities.

2.5.1 Comprehensive Plan, Zoning and Shoreline Designations

Comprehensive Plan Designation and Zoning

In 1998, Kitsap County designated Port Gamble as a Type-1 Limited Area of More Intensive Rural Development (Type-1 LAMIRD) in the Comprehensive Plan.[3] The intent of the Type-1 LAMIRD designation as it relates to the Port Gamble site is to provide for visually compatible infill development and redevelopment of the existing commercial, industrial and residential areas of Port Gamble, while also containing such development within logical, permanent town boundaries. In conjunction with the Type-1 LAMIRD designation in the Kitsap County Comprehensive Plan, the County adopted the Port Gamble Rural Historic Town (RHT) ordinance that seeks to protect the historic character of the community[4]. The RHT zoning

[3] The Kitsap County Code was last updated in June 2017, with Port Gamble continuing as a Type-1 LAMIRD.
[4] KCC 17.321B; Ordinance 236.

seeks to protect the existing historic character of Port Gamble. The ordinance divides Port Gamble into three district zones: Rural Historic Town Residential (RHTR), Rural Historic Town Commercial (RHTC) and Rural Historic Town Waterfront (RHTW). See **Section 2.5** above for a discussion on existing uses within these zones. The RHT zoning outlines compatible land uses in each zone and also has established Town Development Objectives to guide future development.

Of the total 318.3-acre Port Gamble site area, approximately 113.4 acres lie within the Type-1 LAMIRD area with the remaining 204.9 acres of the site outside the Type-1 LAMIRD area zoned Rural Residential (RR) and Rural Wooded (RW). The acreage of zoning designations on the Port Gamble site are shown in **Table 2-3**.

Table 2-3
AREAS COMPRISING THE PORT GAMBLE SITE – EXISTING CONDITIONS

Site Area (Zone)	Acreage
Rural Historic Town Residential (RHTR)	68.21
Rural Historic Town Commercial (RHTC)	13.75
Rural Historic Town Waterfront (RHTW)	31.39
Rural Residential (RR)	6.98
Rural Wooded (RW)	197.91
Total	**318.24**

Source: David Evans and Associates, 2018.

See **Section 3.9**, **Relationship to Plans, Policies and Regulations**, for additional information on the site's Comprehensive Plan designation and zoning.

Shoreline Designation

The Shoreline Management Act (SMA) of 1971 (RCW 90.58) is intended to protect the public interest associated with shorelines of the state while, at the same time, recognizing and protecting private property rights consistent with the public interest. The primary implementing tool of the SMA is the adoption by local jurisdictions of Shoreline Master Programs (SMP), which must also be approved by Ecology. The SMP applies to all shorelines of the state within unincorporated Kitsap County and those areas landward 200 ft. of such shorelines.

Although the updated SMP for Kitsap County was adopted in December 2014, the Port Gamble application is vested under the SMP adopted in 1999, with a shoreline environment of "Urban".

The SMA establishes two basic categories of shoreline: "Shoreline of State-wide Significance," which are identified in the SMA; and "shorelines," which includes all of the water areas of the state and their associated wetlands, together with the lands underlying them. The Port Gamble Redevelopment site includes waterfront property and is bordered by Port Gamble Bay to the east and Hood Canal to the north; Hood Canal is considered a

"Shoreline of State-wide Significance". See **Section 3.9 Relationship to Plans, Policies and Regulations** for additional information on shoreline regulations.

2.6 DESCRIPTION OF THE PROPOSAL

Over the past decade, OPG has undertaken an outreach process involving the public, county government and stakeholder groups such as the Suquamish and Port Gamble S'Klallam Tribes. The goal of this process was to gather input in order to develop an overall plan for Port Gamble that would create a public benefit and a lasting legacy of open space, trails and shorelines for the public to enjoy while still making economic sense for the company.

OPG hosted its first open house regarding the upcoming redevelopment of Port Gamble on May 24, 2006. Between 2006 and 2012, numerous meetings were held with a variety of constituents, and many ideas for the town of Port Gamble were developed. Numerous development plans were then generated of the Port Gamble Town Site and upland development and were shown and vetted at many community meetings. The plan choices were then narrowed down in accordance with the input OPG received.

The last open house for Port Gamble was held on June 27, 2012, showing the results of six years of input by the community. OPG considered this public input when finalizing site plans that were ultimately submitted to Kitsap County on January 17, 2013. OPG and Kitsap County have continued to engage the public, agencies and tribes, and in part, have adjusted the EIS Alternatives to reflect input received. Since 2014, OPG continued intense discussions with stakeholders the further defined the development alternatives. The purpose for these continued discussions was to formulate alternatives that would be supported by a number of interested groups. These alternatives are described below.

Applicant's Objectives

For the purposes of SEPA review (WAC 197-11-440), the following are the Applicant's objectives for site development:

- Implement an infill redevelopment plan that integrates residential, commercial, agricultural and open space uses and creates an economically sustainable community.
- Provide new/infill development that recognizes and respects the historic pattern of the community while providing flexibility to avoid potentially disturbing historic resources.
- Replace industrial uses with uses geared for a green economy focused on tourism based on outdoor recreation, agritourism, Port Gamble's unique history and promoting Kitsap County as the "Natural Side of Puget Sound".
- Comply with the regulations of the Type-1 LAMIRD.
- Develop the site to complement Port Gamble's designation as a National Historic Landmark District and placement on the National Register of Historic Places.

- Enhance the community's economic vitality by creating conditions that will be attractive to a range of employment opportunities and businesses, including commercial, tourism, recreational, and agricultural uses.
- Provide an improved and coordinated network of utility systems, including stormwater and sewage treatment.
- Protect naturally constrained areas on and immediately adjacent to the site, including Hood Canal, Port Gamble Bay, Machias Creek, wetlands, streams and critical recharge areas, to the extent feasible.
- To the best extent possible, preserve forested areas and trails as recreational and ecological amenities.
- Ensure that development is compatible with environmental remediation efforts associated with Port Gamble Bay.
- Continue to coordinate with federal, state, and local agencies, tribes, organizations, and the public and private sectors to facilitate redevelopment planning and implementation that will be successful and an asset to the Port Gamble community.
- Propose new development that is economically feasible for the market and reasonably achievable within a practical time period.

Description of the Proposed Actions

To implement the vision for the site, the Proposed Actions for the Port Gamble Redevelopment proposal include:

- Kitsap County Preliminary Plat approval;
- Performance Based Development approval;
- Conditional Use Permit approvals;
- Administrative Conditional Use Permit approvals;
- Road Standard Technical Deviation;
- Kitsap County Shoreline Substantial Development Permit approval;
- Kitsap County Critical Area Administrative reduction of the 15' building setback to 5';
- Legislative Amendments
- Development Agreement between Kitsap County and the applicant;
- Future local permits for construction (see **Fact Sheet**); and
- State permits and approvals including:
    - Department of Transportation for SR 104 improvements
    - Construction Stormwater General Permit
    - NPDES Stormwater Discharge Permit (if required)
    - Section 401 Water Quality Certification Approval (if required)

Development Concept

As indicated in the "Applicant's Objectives" listed above, objectives for the Port Gamble Redevelopment Project include "*implement an infill redevelopment plan that integrates residential, commercial, agricultural and open space uses that creates an economically sustainable community*" and "*provide new/infill development that recognizes and respects the historic pattern of the community*."

For purposes of environmental review, a full development alternative (Alternative 1), a lesser development alternative (Alternative 2), and a No Action Alternative have been proposed for consideration. These alternatives are intended to represent a reasonable range of land uses and densities to address the development objectives for the site, the existing regulatory framework, and economic and governmental funding factors. See **Table 2-4** for a summary and comparison of development under Alternatives 1 and 2. Refer to **Tables 2-9** and **2-11** later in this chapter for a summary of assumed redevelopment under the No Action Alternatives.

Under Alternatives 1 and 2, redevelopment on the Port Gamble site is intended to integrate residential, commercial, agricultural and open space uses that create an economically sustainable community. See **Figure 2-6** for the Alternative 1 conceptual site plan and **Figure 2-7** for the Alternative 2 conceptual site plan.

The following provides a general development concept within the Type-1 LAMIRD and RR/RW-zoned areas of the site.

Type-1 LAMIRD Area (Historic Town Site)

In general, within the approximately 113.4-acre Type-1 LAMIRD area (the historic Port Gamble Town Site), the intent is to generally retain the traditional layout of the town, with residential infill development occurring in the RHTR zone, commercial and residential development within the RHTC zone and new commercial, residential, education and waterfront uses developed in the RHTW zone (Mill Site), with recreational uses occurring throughout.

The redevelopment under Alternatives 1 and 2 is intended to strengthen the residential nature of Port Gamble by retaining historic residences and buildings by infilling vacant lots with new single family structures and buildings that are compatible with the size, materials and character of existing residences. In total, between 265 (Alternative 1) to 226 (Alternative 2) new dwelling units are assumed to be located throughout the entire Type-1 LAMIRD area, plus the retention of 28 existing residential units for a total of 293 (Alternative 1) to 254 (Alternative 2) units within the Type-1 LAMIRD. Existing commercial nodes within the RHTC zone would be retained at Rainier Avenue and Walker Street, and some new but compatible construction would occur there. New commercial infill is proposed for the area along Walker Street, between Rainier Avenue and Puget Way, near the existing event pavilion. Historic buildings would be integrated into this commercial node as adaptive reuses. The former automobile repair building along SR 104/Pope Street,

which is now a restaurant (Butcher and Baker), would also be retained. Commercial activity and residential uses are also proposed for the Mill Site, which is an appropriate historic use. Legislative amendments would include expanding allowed uses that will support agricultural, recreation, and tourism industries and the historic nature of Port Gamble.

On the Mill Site, the scale of redevelopment under Alternatives 1 and 2 would reflect that of structures that were traditionally located on this portion of the site, possibly including larger buildings housing a range of commercial, residential, educational and maritime-related uses. Larger, bulkier structures on the Mill Site are anticipated in Kitsap County Code 17.360C. Residential uses in this portion of the site would include single family homes, cottage housing, townhouses, and mixed use residential/commercial. Building heights would be capped at 35 ft. outside the Shoreline designation and only for the hotel/visitor accommodations within the Shoreline designation, and heights are capped at 30 ft. for all other uses within the 200 ft. Shoreline designation.

Rural Residential (RR) and Rural Wooded Area (RW)

The approximately 205 acres of the site adjacent to the southern boundary of the Type-1 LAMIRD area are proposed to be developed consistent with allowed densities under the corresponding zoning designations, with limited, clustered residential development proposed in the RW zone (10 units) and an array of agricultural and agritourism uses. A wildlife rehabilitation facility, to be owned and operated by West Sound Wildlife Shelter, is proposed within the RR and RW zones (a small amount of parking for the facility is located in the RHTR zone). Large amounts of open space would be retained for active agriculture associated with the residential and natural uses. The existing recreational uses which occur in the RW portion of the site are anticipated to expand and continue. Kitsap County is studying the location of the Sound to Olympics Trail (STO), a regional paved shared use path that will come through Port Gamble and is planned to connect Kitsap communities with the Olympic Discovery Trail and via the ferries, with the Burke Gilman Trail, Mountain to Sound Greenway and the Cross State trail.

Historic Concept

As indicated in the Applicant's Objectives, an intent of the Port Gamble Redevelopment Plan is to "provide new/infill development that recognizes and respects the historic pattern of the community" and "develop the site to complement Port Gamble's designation as a National Historic Landmark District and listing in the National Register of Historic Places". The proposal would be developed in accordance with the Town Development Objectives as set forth in the RHT zoning (KCC 17.321B.025). Nearly all existing buildings within the Type-1 LAMIRD area would be retained, and design guidelines would be used to ensure that new development maintains compatibility with existing historic structures. Flexibility would be provided to relocate development away from areas that are discovered to contain sensitive historic resources. This includes creating "reserve" lots in the southwest part of the Type-1 LAMIRD (RHTR zone only; lots 1R – 17R) that would be used in the event cultural resources are identified during construction. Refer to Section 3.5, Historic and Cultural Resources, for further information.

Open Space Concept

As indicated in the "Applicant's Objectives", the objectives for the Port Gamble Redevelopment Plan include "*implement an infill redevelopment plan that integrates residential, commercial, agricultural and open space uses that creates an economically sustainable community*" and "*to the best extent possible, preserve forested areas and trails as recreational and ecological amenities*."

In accordance with the objectives identified above, a large portion of the Port Gamble site (approximately 75 to 77 percent of the total site area) would be retained as open space, including natural/wooded area, critical areas and their buffers (wetlands, streams and steep slopes), the cemetery, area developed as parks and trails and agricultural area under Alternatives 1 and 2. In addition to the large contiguous areas of open space, the redevelopment alternatives would include small parks areas (pocket parks) distributed throughout the site.

As part of site development, approximately three miles of trails, including a new segment to support the Sound to Olympic trail route, would supplement the existing trail network, including a beach access, shoreline trail connecting to the County shoreline park, and waterfront trail system. The beach access and waterfront trail system is intended to provide residents and visitors with safe approaches to the saltwater, views over the water and to the Town Site, and potential interpretive opportunities along the Mill Site. A location on the mill site beach will be signed as a stop on the Kitsap Peninsula Water Trail, which has been designated by the National Park Service as a National Water Trail. Additional trails and/or sidewalks within the site would connect the Mill Site, commercial areas, residential areas, and agrarian areas (refer to the site plans for a conceptual illustration of the proposed trail system, **Figures 2-6** and **2-7**).

Agricultural uses would be located in the southwest portion (RW zone) and central west portion (RR zone) of the site to support and supplement the activities that would occur within the town. Such uses could include demonstration hops growing, animal grazing, greenhouses for agriculture or nursery activities, and agritourism destinations featuring locally produced food, wine and/or a brewery.

The RW zone would also house the remote portions of the West Sound Wildlife Shelter (Shelter). Relocated from the existing location on Bainbridge Island, the Shelter would be located on approximately 10 acres and would provide shelter and care for injured, orphaned and sick wildlife. The Shelter would also provide public outreach, education and involvement opportunities. Due to the need for injured wildlife to recover in quiet and widely spaced locations, the Shelter would include several animal housing and care structures, as well as fenced and caged recovery spaces within open space areas in the RW zone. The north portion would include the eagle flight cage and other larger structures and would not be included in the open space calculations. The most southern portion of the site would only house small, remote wildlife shelters that would be hidden within the forest and

would not require any road access. This portion would be included in open space calculations.

Landscaping Concept

The historic town of Port Gamble did not feature formal landscaping in its design. However, under the development alternatives, parking areas would be landscaped to soften their impact and individual landscaping around homes, community facilities and commercial buildings could be provided and subject to design guidelines. To the extent feasible, the existing, healthy mature trees on the site would be preserved, including all trees along Rainier Avenue and SR 104 (Pope Street), unless they were determined to be a hazard. A large number of additional trees would be planted, either as street trees or as landscape improvements, within open space tracts.

Infrastructure Concept

Streets

Under the redevelopment alternatives, the street grid of the historic town would be retained, anchored by Rainier Avenue – the north/south axis, and SR 104 – the east/west axis. Access to the Mill Site would be improved to reflect new roadway standards and provide emergency access. Streets would retain traditional widths and street trees would be extended into areas of new construction. Alleys would retain their historic use and function for vehicular access and limited or shared driveways would be provided where necessary, or where alley access is not practical due to site constraints.

A roundabout would be built at the intersection of SR 104 and Puget Way/Olympian Avenue in order to aid traffic turning onto SR 104 from the site, to improve pedestrian and non-motorized safety and connectivity, and to cross SR 104 in a north/south direction (refer to **Figure 2-6**). The roundabout would provide traffic control without requiring significant improvements to SR 104, which would help to preserve the town's historic character. It would also function as a traffic calming element to slow east bound traffic before approaching the 90 degree turn. Primary access to the Mill Site would be provided from NE View Drive, with secondary emergency access connecting back to Rainier Avenue NE. Access to the south portion of the site and the Large On-site Septic System (LOSS) would be provided either:

- Solely from SR 104 to Gamble Way and Carver Drive, or
- Extending Carver Drive from Gamble Way to intersect with the new roundabout of SR 104.

The applicant would retain, in their sole discretion, the option of whether or not to extend Carver Drive.

Utilities

The existing water, sewer[5] and stormwater systems would be replaced with new, improved systems providing potable water, fire flow, a stormwater conveyance system, water quality treatment facilities, detention facilities and outfalls. As indicated earlier in this chapter, Port Gamble's sewage discharge has been upgraded to a Membrane Bio Reactor treatment system discharging treated effluent to a Large Onsite Septic System (LOSS) and the existing sewer outfall has been removed as a way to reduce point sources of contamination to Port Gamble Bay. Further descriptions of the proposed utility systems are provided below in **Section 2.6.1**.

2.6.1 Description of EIS Redevelopment Alternatives

In order to conduct a comprehensive environmental review, a range of development alternatives are included in this FEIS that both fulfill the Applicant's objectives and provide a useful tool for the decision-making process. These alternatives create an envelope of potential development for the analysis of environmental impacts under Alternatives 1 and 2. See **Table 2-4** for a summary and comparison of development under these alternatives, and **Table 2-5** for a comparison of open space under these alternatives. Redevelopment is analyzed for the 2028 time period which is assumed to represent full buildout. The actual buildout period could vary depending on specific economic and market conditions. Likewise, during future permitting, the exact location and number of dwelling units or the specific size and types of commercial uses may vary and be approved so long as the impacts are within the overall project envelope analyzed in this FEIS. Consequently, the summary of proposed development for Alternatives 1 and 2 in **Table 2-4** through **Table 2-8** are representative of the potential development, but actual development may vary; refer to **Table 2-2** for a summary of existing site conditions.

Table 2-4
SUMMARY OF DEVELOPMENT – ALTERNATIVES 1 & 2

Land Use	Allowed Under Zoning	Alternative 1[1]	Alternative 2[1]
RESIDENTIAL USES – TOTAL	**294 du**.	**293 du**	**254 du**
RHTR	*171 du*	*144 du*	*144 du*
RHTC	*34 du*	*33 du*	*33 du*
RHTW	*78 du*	*78 du*	*39 du*
RR	*1 du*	*0 du*	*0 du*
RW	*10 du*	*10 du*	*10 du*
Existing Retained Residences		*28 du*	*28 du*
HOTEL		100 rooms	100 rooms
COMMERCIAL/RETAIL		**156,000 sq. ft.**[2]	**35,000 sq. ft.**[2]
RHTC		*35,000 sq. ft.*	*35,000 sq. ft.*
RHTW		*121,000 sq. ft.*	*0 sq. ft.*
RESTAURANT (RHTW)		**15,000 sq. ft.**	**15,000 sq. ft.**

[5] A large on-site septic system (LOSS) has been established on the site.

Table 2-4 Continued

Land Use	Allowed Under Zoning	Alternative 1[1]	Alternative 2[1]
EDUCATION/INDUSTRIAL (RHTW)		**0 sq. ft.**	**0 sq. ft.**
OTHER		**30,480 sq. ft.**	**30,480 sq. ft.**
RR (West Sound Wildlife Shelter)		*14,300 sq. ft.*	*14,300 sq. ft.*
RW		*16,180 sq. ft.*	*16,180 sq. ft.*

Source: David Evans and Associates, 2018.

Note: du = dwelling unit

[1] Only new development is reflected in this column – development under the Existing Conditions column is assumed to remain.

[2] Exclusive of 100 room hotel and associate meeting rooms and kitchen.

Table 2-5

SUMMARY OF OPEN SPACE – ALTERNATIVES 1 & 2

Open Space and Recreational Use	Existing Conditions	Alternative 1	Alternative 2
Parks		1.67 acres	1.67 acres
Agricultural		11.50 acres	11.50 acres
Natural/Wooded Area		37.96 acres	37.96 acres
Critical Areas and Buffers	122.38 acres	100.62 acres	100.62 acres
Landscape/Lawn Area	103.12 acres	72.04 acres	66.28 acres
Other Open Space Areas	53.43 acres	15.61 acres	27.44 acres
Total Open Space Area		**239.41 acres**	**245.47 acres**
Trails		~3 miles	~2.5 miles

Source: David Evans and Associates, 2018.

Alternative 1 (Full Buildout)

Alternative 1 assumes site redevelopment reflecting the full amount of development allowed under current zoning (see **Figure 2-6**). Alternative 1 reflects infill development on the entire site, including the Town Site and Mill Site including approximately 293 residential units (including 28 existing residences), approximately 156,000 sq. ft. of commercial uses, 15,000 sq. ft. of restaurant, 30,480 sq.ft. in education/industrial/other use, and a 100-room hotel/visitor accommodations. New parks would be provided throughout the site and open space would be provided to surround retained critical areas. The Mill Site would be developed with both commercial and residential uses in buildings up to 35 ft. in height. Alternative 1 is anticipated to generate approximately 676 residents[6] and approximately 505 employees.

In general, the majority of the single-family residential units would be located in and around the Town Site in the RHTC and RHTR-zoned portions of the site, but single family residential units may be located within all zones. Cottages are planned for the RHTW and RHTR zones, and are also allowed in the RHTC zone. Condo and mixed use units would also be located in the RHTW and RHTC zones. The majority of the proposed commercial (including

[6] Based on 2.55 residents per Kitsap County household (2016 American Community Survey).

hotel/visitor accommodations) and multifamily residential uses (townhomes and cottages) would be located on the Mill Site in the RHTW-zoned portion of the site. Rural residential, agritourism, and agricultural uses would generally be located in the RR and RW-zoned portions of the site.

Proposed Development

The specific development that is proposed in each of the site's five zoning areas is described further below and summarized in **Table 2-6**. See **Figure 2-6** for the site plan. **Table 2-7** portrays the site conditions subsequent to buildout of Alternative 1.

Table 2-6
PROPOSED NEW SITE USES UNDER ALTERNATIVE 1[1]

Zoning Area	Residential Dwelling Units[1]	General Commercial	Restaurant	Community/ Education/ Industrial/Other
RHTR	144 (104 SF, 40 MF)			
RHTC	33 MF	35,000 sq. ft.		
RHTW	78 MF	121,000 sq. ft.[2]	15,000 sq. ft.	
RR	0 SF			14,300 sq. ft.
RW	10 SF			16,180 sq. ft.
Total	**265 DU[3] (114 SF, 151 MF)**	**156,000 sq. ft.[2]**	**15,000 sq. ft.**	**30,480 sq. ft.**

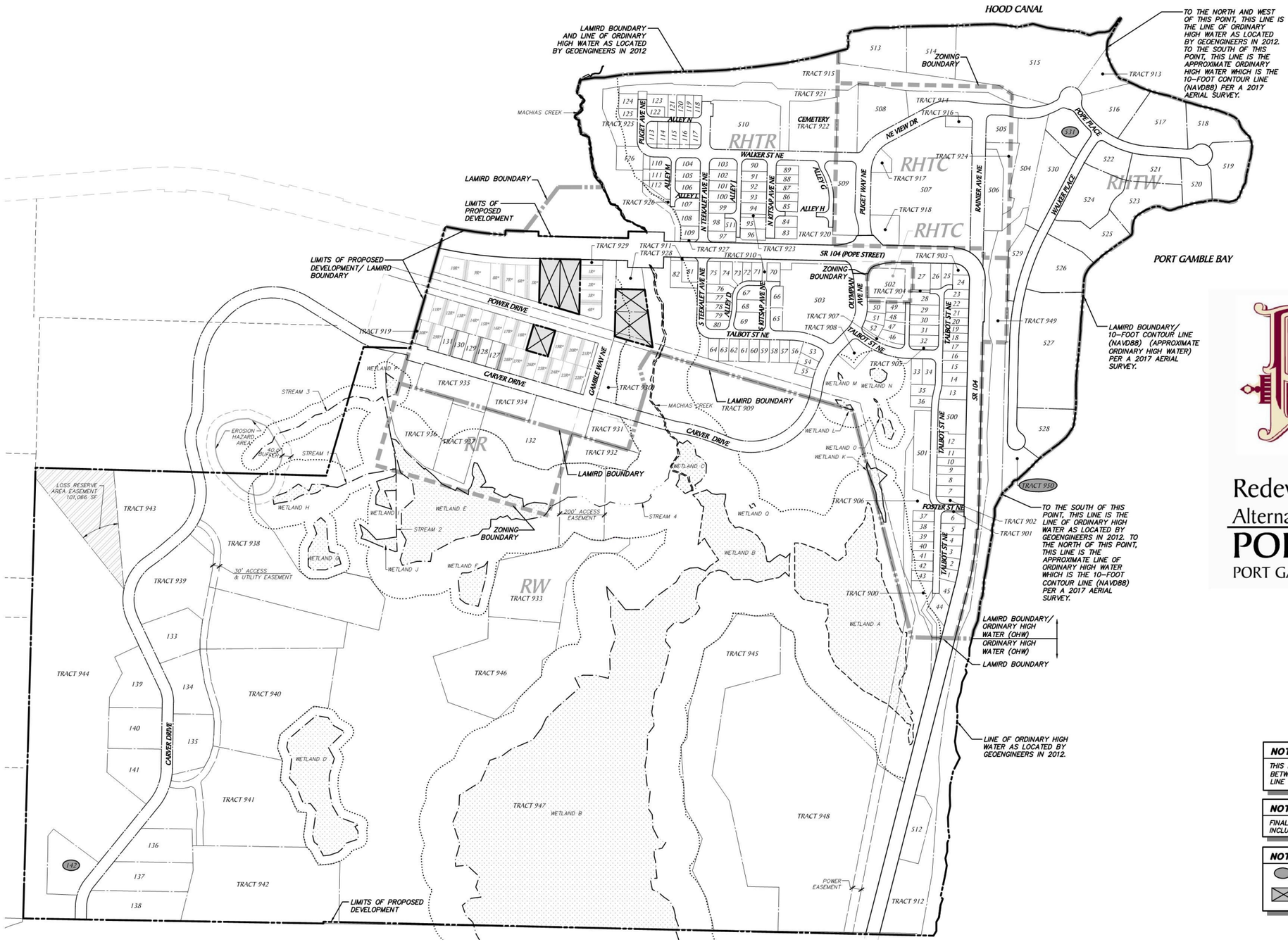
Source: David Evans and Associates, 2018.

[1] DU – Dwelling Unit; SF – Single Family; MF – Multifamily (cottages, condos, townhomes)

[2] Does not include 100-room hotel

[3] 28 existing residences would also be retained on the site for a total of 293 dwelling units.

Note: Uses reflected in this table include only new development. See **Table 2-2** for existing conditions land uses, all of which would remain onsite.



Source: David Evans and Associates, 2020.

EA Engineering, Science, and Technology, Inc.

Figure 2-6
Alternative 1 - Site Plan

Table 2-7
PROPOSED SITE CONDITIONS UNDER ALTERNATIVE 1

	RHTR Area (Acres)	RHTC Area (Acres)	RHTW Area (Acres)	RR Area (Acres)	RW Area (Acres)	Total Site (Acres)
Built Area (Impervious Area)[1]						
Building Footprint	8.35	2.28	4.81	1.66	1.68	18.79
Paved Parking/ Roadway	14.54	4.99	7.63	0.26	13.87	41.28
Open Space Area (Pervious Area)						
Landscape/Lawn Area	27.05	5.19	10.71	0	29.09	72.04
Park Area	1.01	0.66	0	0	0	1.67
Agricultural Area	0.69	0	0	1.48	9.34	11.50
Natural/Wooded Area	3.41	0	0	0	34.56	37.96
Critical Areas and Buffers[2]	11.53	0.63	7.63	3.58	77.26	100.62
Other Open Space Area[3]	0	0	0.63	0	15.00	15.61
Other Pervious Areas						
LOSS Area	0	0	0	0	16.27	16.27
Stormwater Ponds	0.24	0	0	0	0.85	1.40
Cemetery	1.09	0	0	0	0	1.09
Total	**68.21**	**13.75**	**31.39**	**6.98**	**197.91**	**318.24**

Source: David Evans and Associates, 2018.

[1]Impervious area includes new development and existing development to remain.

[2] Includes wetlands, streams, and their associated buffers.

[3] Includes waterfront park (RHTW) and airplane field (RW).

RHTR Area

The Rural Historic Town Residential (RHTR) area includes approximately 68 acres of land. The existing 27 homes, church (and accessory structure used for weddings and other uses) and the cemetery would be retained and would be intended to define the character of the area.

Redevelopment in this area of the site would include 144 new dwelling units, with 40 units in multifamily housing (cottages) and 104 new single family homes. The form and layout of single family residences would draw on historic and, to some extent, existing development patterns. Small lots with minimal setbacks are generally proposed. Cottage housing, generally two stories in height, would be contained within two cottage-style housing parcels, including a 24-unit parcel and a 16-unit parcel.

Approximately 14.5 acres of the RHTR area (portions of Tracts 909, 915, and 947)) would be preserved for streams, wetland and steep slopes and their buffers including wetlands, Machias Creek and its buffer and slopes. Several small parks would be provided within the RHTR zone, as well as a larger park that would accommodate a playground. An additional trail link to the RHTW area would be provided in the northwest corner of the RHTR area.

Up to thirty (30) reserve lots would be provided in this area to allow for the relocation of residential units if cultural resources are unexpectedly encountered. If the reserve lots are

not required to be developed to avoid cultural resources, the lots would be left undeveloped as natural/wooded area, or converted to open space.

RHTC Area

The Rural Historic Town Commercial (RHTC) area is approximately 13.8 acres of land. Existing structures within this area would be retained, 21 buildings in total (not including accessory structures such as sheds, etc.), including one existing residential unit.

Consistent with the variety of uses permitted in the RHTC zone, a range of new residential and commercial uses are proposed, including up to approximately 35,000 sq. ft. of new commercial development within proposed commercial buildings, single family residences, and mixed-use buildings with residential units on the top floor and commercial uses at the street level. New infill residential and commercial development proposed in the context of the retained existing buildings would be concentrated in the large lot to the west of Rainer Avenue, to the rear of the existing commercial uses, and new single family residential may be nestled adjacent to some of the existing commercial buildings that are within historic homes. A surface parking lot is also proposed in this area in the center of the block, encircled by commercial and other uses. A market square for farmer's market activities or other seasonal events would be provided at the corner of Pope Street and Puget Way NE. Steep slopes within this area would be maintained as natural areas, and existing trails that link the town area to the Mill Site would be improved for safety and accessibility.

RHTW Area

The Rural Historic Town Waterfront (RHTW) area is approximately 31.4 acres of land and is also referred to as the Mill Site. The existing buildings in this area have been demolished, removed or relocated, with the exception of the Newfield's Laboratory in the northwestern corner of the Mill Site.

The Mill Site would be built out with commercial, mixed use and residential uses including: 78 multifamily residential units with 38 units of cottage housing and 40 townhomes; 121,000 sq. ft. of commercial uses, including office, light industrial, restaurants and retail; 15,000 sq. ft. of restaurant use; a 100-room hotel; surface parking; and, park, trail and open space uses. Buildings on the Mill Site would have a maximum height of 35 feet for buildings outside the shoreline designation and only for the hotel/visitor accommodations within the shoreline designation. All other buildings within the shoreline designation would have a maximum height of 30 feet. Open space could include two waterfront parks that would provide public access to the shoreline, and a shoreline trail or boardwalk in the shoreline buffer area. In addition, the shoreline buffer setback would be administratively reduced from fifteen feet (15') to five feet (5').

RR Area

Development of a new West Sound Wildlife Shelter is proposed in the RR zone portion of the site (with extensions into the RW and RHTR zones) and existing greenhouses (Hood Canal Nursery) would be retained and used for commercial purposes or possibly as pea

patches for residents. The new development would consist of a series of buildings totaling approximately 14,300 sq. ft. in size, along with open-air sheds and enclosures for rehabilitation. Active open space uses are also proposed in this area, including agricultural activities and associated structures such as additional greenhouses.

RW Area

Ten dwelling units are proposed in the RW zone area, to be clustered along a new loop road providing access to this area. Larger agricultural uses associated with residential uses would be developed on several of the bigger lots within the RW area; these uses would support and supplement activities occurring in the town and could include a vineyard, demonstration hops growing, beer brewery, vineyard, barns & equine facilities, outdoor recreation, agricultural uses and open space. Much of the proposed open space area contains some of the oldest second growth forest in the region. Several trails through the area would be retained or improved, connecting the RW zone area and the Port Gamble Town Site (RHTR and RHTC zone areas) to the north, and a section of the Sound to Olympics trail will pass through the area. A portion of the site adjacent to the RR zone would also contain passive uses associate with the West Sound Wildlife Shelter described earlier in this chapter.

Utilities

Water

The existing water system would be replaced and upgraded with a new system providing both potable water and fire flow. The new water source is provided by connecting to the Kitsap Public Utility District (PUD) water main that was extended to the site in 2013/2014. The new distribution system would consist of main lines ranging in size from 8 to 16 inches. From the connection to the Kitsap PUD main at the southwest corner of the site to the proposed intersection of Carver Drive and Talbot Street NE, the proposed main would be 16 inches. Storage for fire flow would be provided in a new 20-ft. tall, 364,000-gallon reservoir adjacent to the existing 46,000-gallon reservoir.

Sewer

In 2012, as part of the Puget Sound Initiative, Ecology identified the need to prevent continuing and future pollution to Port Gamble Bay and Hood Canal by shifting Port Gamble's community sewage discharge from Hood Canal to an on-site disposal system. Accordingly, a new Large Onsite Septic System (LOSS) has been established in the RW zone adjacent to the site. The LOSS includes a collection system, two lift stations, a force main, a membrane bioreactor (MBR) and drainfield, and abandonment of the previous sewage outfall to the Bay. The LOSS utilizes the existing collection pipe system to direct sewage to the MBR. New pipes are planned to gradually replace the current sewer collection pipe system with a combination of new 8-inch gravity main, 6-inch side sewers and 2 to 4-inch low pressure sewer lines. The LOSS system has been permitted to receive a peak flow of a maximum of 55,800 gpd. It is also proposed that after 150 building permits have been issued, additional building permits would be approved only after confirmation that

sufficient capacity is available based on monitoring of actual flows. In addition, the 55,800 gallon per day limit could be increased if additional studies validate drainfield capacity or if expanded facilities are provided in the future under separate approvals, if needed. Reserve areas provided within the RW zone would be utilized to serve the fully developed town.

Stormwater

Stormwater would be managed with a new conveyance system, water quality treatment facilities, detention facilities and outfalls designed in accordance with the 2010 Kitsap County Stormwater Design Manual. Water quality treatment would be achieved through the use of water quality detention ponds, stormfilters located in manholes or vaults and several rain gardens. As under existing conditions, the majority of the site's stormwater would be discharged to Hood Canal or Port Gamble Bay using new or existing stormwater outfalls. The remainder of the site's stormwater would be discharged to Machias Creek, a ditch system at the Education/Recreation tract or to on-site wetlands. Portions of the site, such as open spaces, forested tracts and the existing cemetery, would have no stormwater drainage features, except as required to maintain wetland hydrology.

Access/Parking

Primary access to the Port Gamble site would continue to be provided via SR 104. In general, the existing street grid system would be retained and expanded to reflect the town's historic character, with some streets improved to new standards. One potential major road improvement, if implemented by the applicant, would be the extension of Carver Drive, primarily to the south, to provide access to the proposed residences and open space in the RW zone and the LOSS drainfield. A number of new alleys are also proposed as part of the residential development in the RHTR zone.

A roundabout would be built at the intersection of SR 104 and Puget Way/Olympian Avenue in order to aid traffic turning onto SR 104 from the site, and to cross SR 104 in a north/south direction (refer to **Figure 2-6**). The roundabout would provide traffic control without requiring significant improvements to SR 104, which would help to preserve the town's historic character and improve pedestrian and non-motorized safety. Primary access to the Mill Site would be provided from NE View Drive, with secondary emergency access connecting back to Rainier Avenue NE.

The character of parking would reflect the type of proposed development in different parts of the site. For example, parking in the RHTR zone portion of the site would principally be associated with new residences and would be provided within individual detached or attached garages with alley access. In limited instances where alley access would not be practical, garages may be accessed via shared driveways. Garages would primarily be oriented to the rear of residential lots and front loaded garages would be limited on a case by case basis. Parking for cottage housing would be accommodated either with detached garages accessed by separate drives or uncovered parking areas. Some street parking would also be provided in the RHTR zone. Parking areas for the RHTC zone area would be provided on surface streets in the Town Site at the north end of Rainier Avenue and to the

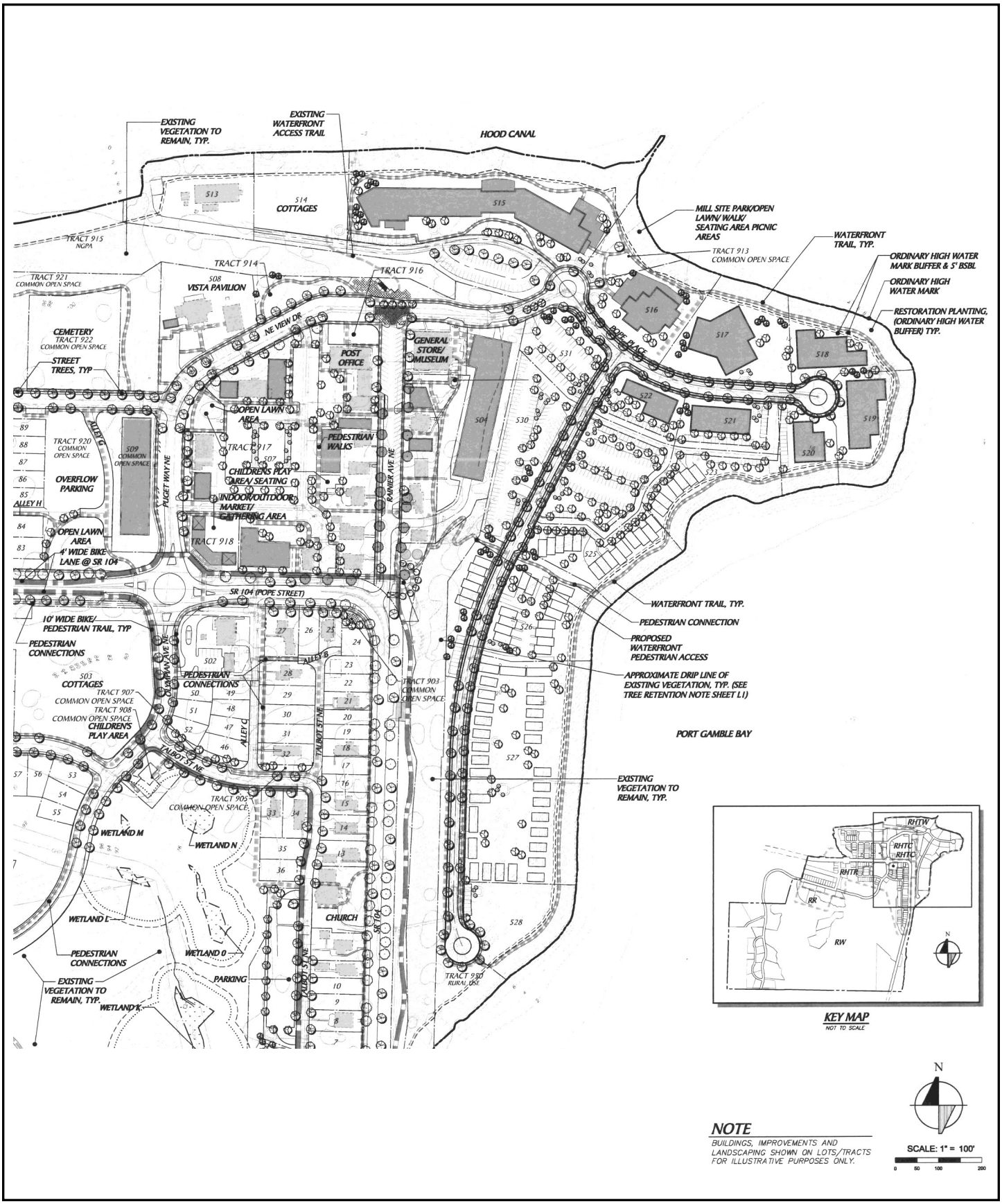
west, along Walker Street, areas which have long been used for parking. An additional lot would be located behind the historic buildings to the west of Rainier Avenue (see **Figure 2-7**). The surface lots in the RHTC zone area are proposed to be located behind existing and proposed buildings to minimize views to the lots from primary streets and would be screened and landscaped consistent with County code. Surface parking would also be provided within the RHTW zone for the residential units, commercial uses and for public accessing the shoreline parks and trails consistent with the conceptual layout within the submitted application. A surface parking lot is proposed south of the Town Site in the RW zone along SR 104 (Lot 512) in an area with existing asphalt to provide formal parking for recreational uses in the area. Recreational parking will also be accommodated on Tract 948 (formerly the Model Airplane Field), as well as on Tract 930 on Gamble Way. Actual parking provided would be determined with applications for specific uses.

Building Design

As a National Historic Landmark (NHL) District, Port Gamble is recognized as having exceptional national historic significance. Buildings listed as contributing to the NHL are planned to be retained, as would the existing street pattern. New buildings in the Type-1 LAMIRD area would be constructed in compliance with the Town Development Objectives (TDO) as specified in the Rural Historic Town zoning ordinance (KCC 17.321B025). Design guidance would be used to help implement each of the TDOs, and specific Port Gamble design guidelines would be applied to all new construction.

Guidelines would provide direction for individual projects, and assure that the overall development would retain its defining character. The TDO's would allow for:

- New construction that is sympathetic, but does not mimic the existing historic buildings;
- Site design that reflects the evolution of the town over time, but that retains the "sense of historic time and place";
- The Secretary of the Interior's Standards for Historic Preservation Projects and the Historic American Engineering Record (HAER) report as the guides for evaluating development proposals; and,
- Review and comment on proposed development by an architectural review committee or a qualified consultant as determined by Kitsap County.



Source: David Evans and Associates, 2018

EA Engineering, Science, and Technology, Inc.

Figure 2-7
Conceptual Parking Plan

Grading

Under Alternative 1, approximately 175,000 cubic yards of fill would be provided on the Mill Site (within the RHTW portion of the site) to raise the elevation by at least five ft., bringing the ground elevation above the floodplain. It is anticipated that the fill material would be imported onto the site. In addition, up to approximately 10,000 cubic yards of cut could occur, primarily to remove debris not suitable for construction. It is assumed that this material would not be suitable for structural fill and would be exported from the site. See **Section 3.1**, **Earth**, for additional grading information.

Grading activities in the RHTR and RHTC-zoned portions of the site are anticipated to be less than those anticipated for the Mill Site and would primarily relate to utility trenching, building foundations and road construction. Approximately 15,000 cubic yards of cut and 30,000 cubic yards of fill could be required.

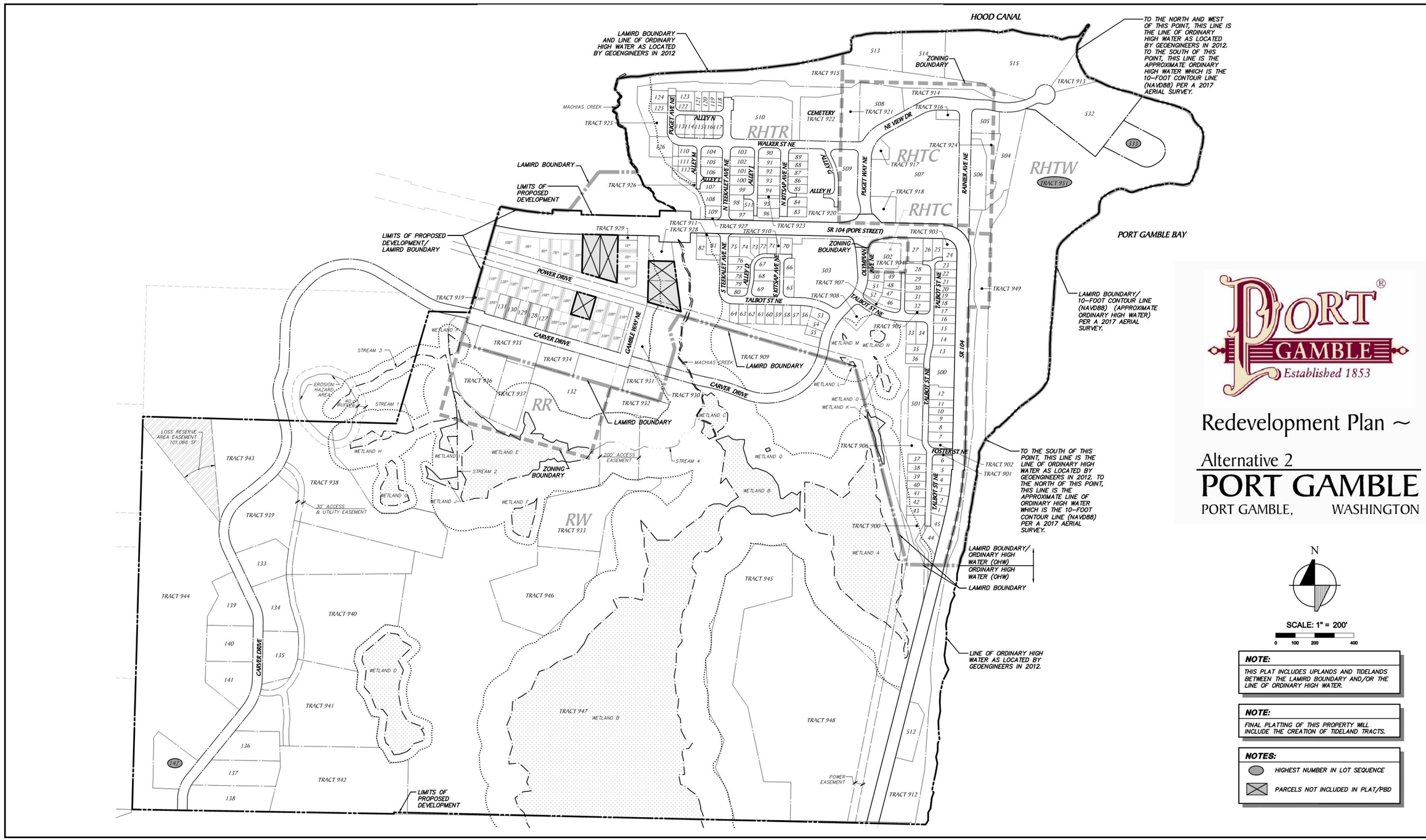
In the RR and RW-zoned portions of the site, grading activities would be primarily limited to roadway construction, and utility trenching. Approximately 35,000 cubic yards of cut and 45,000 cubic yards of fill could be required.

Alternative 2 (Lesser Development)

Alternative 2 assumes site redevelopment reflecting a lesser amount of development than the total allowed under site zoning; development consistent with this alternative would be dependent on others purchasing development rights or a portion of the Mill Site area for open space uses (see **Figure 2-8**). In general, development under Alternative 2 would be similar to that under Alternative 1 for the RHTR, RHTC, RR and RW-zoned portions of the site, with the primary difference relating to development in the RHTW-zoned portion of the site (Mill Site).

Retention of a portion of the Mill Site area for conservation or open space would result in certain differences in site development compared to Alternative 1, including 39 fewer residential units, approximately 121,000 fewer sq. ft. of commercial/retail use, approximately 41,000 less sq. ft. in education/industrial use, and approximately 16 additional acres in open space (primarily Tract 951). Refer to **Table 2-4 and Table 2-5** for a comparison of the development assumptions under Alternatives 1 and 2. Alternative 2 is anticipated to generate approximately 574 residents[7] and approximately 263 employees.

[7] Based on 2.55 residents per Kitsap County household (2016 American Community Survey).



Source: David Evans and Associates, 2020.

EA Engineering, Science, and Technology, Inc.

Figure 2-8
Alternative 2 - Site Plan

Development in the upland portion of the site (RHTR, RHTC, RR and RW-zoned areas) would be generally similar to Alternative 1. The number of residential units in the upland portion of the site would be the same as under Alternative 1.

As under Alternative 1, Alternative 2 assumes retention of existing structures, retention and use of the LOSS, construction of the SR 104 roundabout, and improved stormwater facilities.

This alternative assumes that purchase of any portion of the Mill Site for open space would be accomplished by others. To meet the Applicant's objectives under this alternative, purchase of portions of the Mill Site by public agencies, tribes, or other parties would be necessary.

Proposed Development

Development assumed under Alternative 2 for each of the site's five zoning areas is described further below and summarized in **Table 2-8**. See **Figure 2-8** for a visual representation of this scenario under Alternative 2. **Table 2-9** portrays the site conditions subsequent to buildout of Alternative 2.

Table 2-8
PROPOSED NEW SITE USES UNDER ALTERNATIVE 2

	Residential Dwelling Units[1]	General Commercial[2]	Restaurant	Educational/Industrial /Other
RHTR	144 (104 SF, 40 MF)			
RHTC	33 MF	35,000 sq. ft.		
RHTW	39 MF		15,000 sq. ft.	
RR	0 SF			14,300 sq. ft.
RW	10 SF			16,180 sq. ft.
Total	**226 DU[3] (114 SF, 112 MF)**	**35,000 sq. ft.[2]**	**15,000 sq. ft.**	**30,480 sq. ft.**

Source: David Evans and Associates, 2018.

[1] DU – Dwelling Units; SF – Single Family; MF – Multi-family (cottages, condos, townhomes)

[2] Does not include 100-room hotel

[3] 28 existing residences would also be retained on the site for a total of 253 dwelling units.

Note: Uses reflected in this table include only new development. See **Table 2-2** for existing conditions land uses, all of which would remain onsite.

Table 2-9
PROPOSED SITE CONDITIONS UNDER ALTERNATIVE 2

	RHTR Area (Acres)	RHTC Area (Acres)	RHTW Area (Acres)	RR Area (Acres)	RW Area (Acres)	Total Site (Acres)
Built Area (Impervious Area)[1]						
Building Footprint	8.35	2.28	2.17	1.66	1.68	16.16
Paved Parking/ Roadway	14.54	4.99	4.20	0.26	37.86	37.86
Open Space Area (Pervious Area)						
Landscape/Lawn Area	27.05	5.19	4.95	0	66.28	66.28
Park Area	1.01	0.66	0	0	0	1.67
Agricultural Area	0.69	0	0	1.48	9.34	11.50
Natural/Wooded Area	3.41	0	0	0	34.56	37.96
Critical Areas and Buffers[2]	11.53	0.63	7.63	3.58	77.26	100.62
Other Open Space Area[3]	0	0	12.44	0	15.00	27.44
Other Pervious Areas						
LOSS Area	0	0	0	0	16.27	16.27
Stormwater Ponds	0.54	0	0	0	0.85	1.40
Cemetery	1.09	0	0	0	0	1.09
Total	**68.21**	**13.75**	**31.39**	**6.98**	**197.91**	**318.24**

Source: David Evans and Associates, 2018.

[1]Impervious area includes new development and existing development to remain.

[2] Critical areas and buffers includes wetlands, streams, and their associated buffers.

[3] Includes restoration area outside of buffers (RHTW) and airplane field (RW).

RHTR Area

Under Alternative 2, uses in the RHTR area would be generally as described for Alternative 1.

RHTC Area

Under Alternative 2, uses in the RHTC area would be generally as described for Alternative 1.

RHTW Area

Under Alternative 2, it is assumed that a portion of the Mill Site or its development rights would be purchased by others for conservation. This area would include approximately 16 acres with the preserved land being used primarily for a combination of conservation, park and/or open space with public access. The uses and development of open space in the RHTW Area would still be subject to Covenants, Conditions and Restrictions (CC&Rs) to preserve the open space, conservation and science uses and to ensure that any structures would meet the Kitsap County Town Development Objectives (TDOs) and be designed consistent with the architectural historic character of the overall Port Gamble redevelopment project.

New development on the Mill Site could include up to 39 residential units , a 100-room hotel; surface parking; and, park, trail and open space uses. Buildings on the Mill Site

outside the shoreline designation and only the hotel/visitor accommodations within the shoreline designation would have a maximum height of 35 feet. All other buildings within the shoreline designation would have a maximum height of 30 feet. Alternative 2 would include a 50-ft. buffer and 5-ft. building setback (administratively reduced) in the shoreline area.

Trails, parking, and limited access to the shoreline would be provided throughout the Mill Site. A large park for public access to the waterfront (in addition to the 16-acre open space area) would also be provided, similar to Alternative 1.

RR Area

Under Alternative 2, uses in the RR area would be as described for Alternative 1.

RW Area

Under Alternative 2, uses in the RW area would be as described for Alternative 1.

Utilities

Under Alternative 2, utilities would be provided as described for Alternative 1.

Access/Parking

The access and parking concept under Alternative 2 would generally be as described for Alternative 1. In addition, a planned parking area is proposed on the 16 acre open space area on the Mill Site, and other informal parking may occur from time to time within the large open space tract (Tract 951) located on the Mill Site.

Building Design

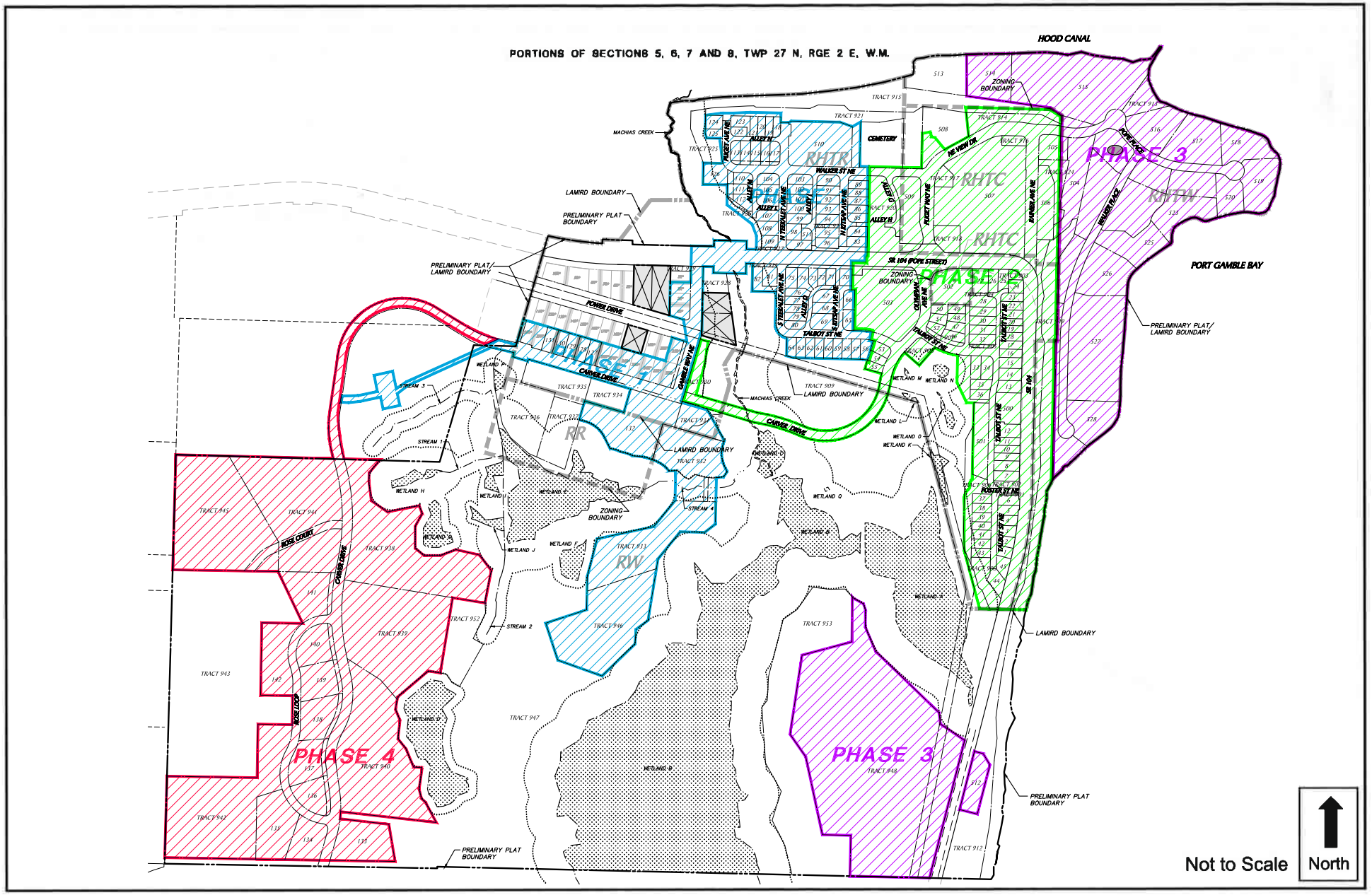
The building design concept under Alternative 2 would generally be as described for Alternative 1.

Grading

Grading under Alternative 2 would generally occur as described for Alternative 1. However, overall cut and fill within the RHTW area would decrease due to less area being filled to bring development pads above the flood elevations.

2.6.2 Development Phasing under Alternatives 1 and 2

The phasing set forth is representative of potential development, but the specific timing, sequence and configuration of the phasing of the development and improvements could vary depending on specific economic and market conditions. The development phasing would be similar under Alternatives 1 and 2, with the exception of the Mill Site being a smaller phase in Alternative 2's Phase 3 (see **Figures 2-9** and **2-10** for the phasing maps for Alternative 1 and 2, respectively).

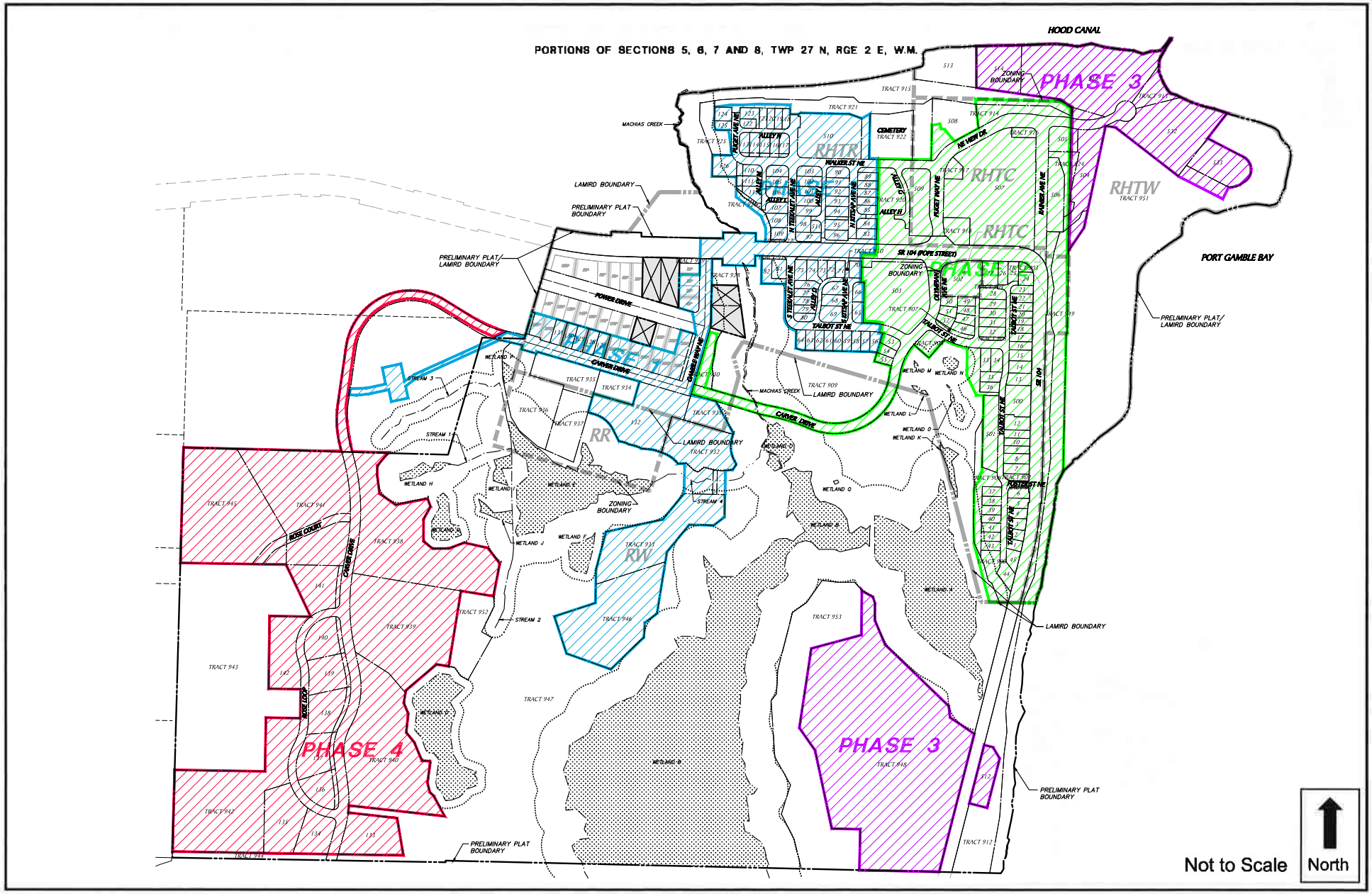


Source: David Evans and Associates, 2018.

EA Engineering, Science, and Technology, Inc.

Figure 2-9

Alternative 1 - Phasing



Source: David Evans and Associates, 2018.

EA Engineering, Science, and Technology, Inc.

Figure 2-10

Alternative 2 - Phasing

Phase 1 (conceptual)

Phase 1 of the Port Gamble project is anticipated to include construction of several "global" infrastructure components including the following:

- Widening to SR 104 by one ft. on either side of the roadway from Gamble Way to the intersection at Teekalet Avenue NE to provide an adequate bicycle lane;
- A new 364,000-gallon reservoir;
- A 16-inch water main from the reservoirs to the intersection of Teekalet and SR 104 (Pope Street – if Carver Drive is not extended), or to the intersection of Carver Drive and Gamble Way NE (if Carver Drive is extended);
- Construction of a new stormwater outfall to Hood Canal near Machias Creek; and,
- A water quality pond located near the intersection of Carver Drive and Gamble Way NE, several StormFilter vaults and rain gardens, and conveyance systems (one for clean or treated stormwater and one for stormwater yet to be treated).

Roadway improvements would include construction of new or replaced private roads to serve the development areas within the phase. Water mains and gravity and low pressure sewer systems to serve the development areas within the phase would also be constructed. Temporary sewer connections to existing uses would be required to provide uninterrupted service.

Phase 1 of the redevelopment is identical for both Alternatives.

Phase 2 (conceptual)

Phase 2 of the Port Gamble project would include the following:

- Construction of a roundabout at the intersection of Olympian NE/Puget Way NE and SR 104 (Pope Street);
- New or replaced private roads where necessary and completion of a bike lane pass-through to North/South SR 104;
- 12 and 8-inch water mains;
- New gravity and low pressure sewer systems to serve the development areas of the project;
- Stormwater improvements include several StormFilter vaults, rain gardens, and conveyance systems. Rooftop runoff from select parcels would be directed to the on-site wetlands to maintain wetland hydrology,
- Upsizing of an existing stormwater outfall to Hood Canal from the Mill Site would also occur, OR a temporary pond in Phase 2 until construction of the outfall, and;

- Permanent sewer connections would be provided to all existing services that were previously connected to the LOSS.

Phase 2 of the redevelopment is identical for both Alternatives.

Phase 3 (conceptual)

Phase 3 is development of the Mill Site. Infrastructure for Phase 3 includes the following:

- New on-site roads;
- Stormwater improvements including several rain gardens and a conveyance system, including improvement of an existing outfall in Port Gamble Bay (not included in Alt. 2) and an improvement of an existing outfall to Hood Canal (both Alternatives 1 and 2);
- Sewer improvements include extension of lot pressure sewer
- A 12 inch water main from Phase 2 would be extended to the south of the Mill Site development area, west to SR 104 and back to a 12 inch main in Phase 2 for completion of the water line loop. The completion of this loop would provide fire flow to the proposed development in both Phase 1 and 2, allowing redevelopment of the existing fire pond.

Phase 3 consists of the entire Mill Site as proposed in Alternative 1 or 2 and development of the rural tract adjoining SR 104 at the south boundary of the site.

Phase 4 (conceptual)

Phase 4 of the Port Gamble project would include construction of infrastructure to serve 10 residential units, plus associated agricultural uses, in the RW zone. This represents the remainder of the built environment of the project.

Infrastructure to support the development of Phase 4 includes:

- New private roads to serve the development areas within the phase;
- Water improvements would include 8-inch water mains within Rose Loop and Rose Court and connections to the existing 16-inch main within Carver Drive;
- Sewer improvements would include construction of gravity or low pressure sewer systems that would connect to the LOSS system at the dosing chamber;
- Stormwater improvements in the RW zone would include roadside conveyance channels to convey runoff to the stormwater treatment pond constructed in Phase 1.

2.6.3 No Action Alternative

The No Action Alternative includes three different scenarios:

A. Continuation of existing conditions (see **Figure 2-3**).

B. Redevelopment by others under existing zoning. This scenario assumes that OPG would sell the property and redevelopment would occur in piecemeal fashion by others, including industrial development on the Mill Site (see **Figure 2-11**).

C. Redevelopment of upland area under existing zoning and purchase of the entire Mill Site for conservation. This scenario would assume that purchase of any portion of the Mill Site for conservation, and any funding of conservation activities, would be accomplished by others (see **Figure 2-12**).

Scenario A - Continuation of Existing Conditions

Under Scenario A, no redevelopment would occur. The existing buildings and infrastructure would continue to age and degrade over time. The uses and site coverage would remain the same as existing conditions. This scenario does not meet the applicant's objectives.

Scenario B - Redevelopment by Others Under Existing Zoning

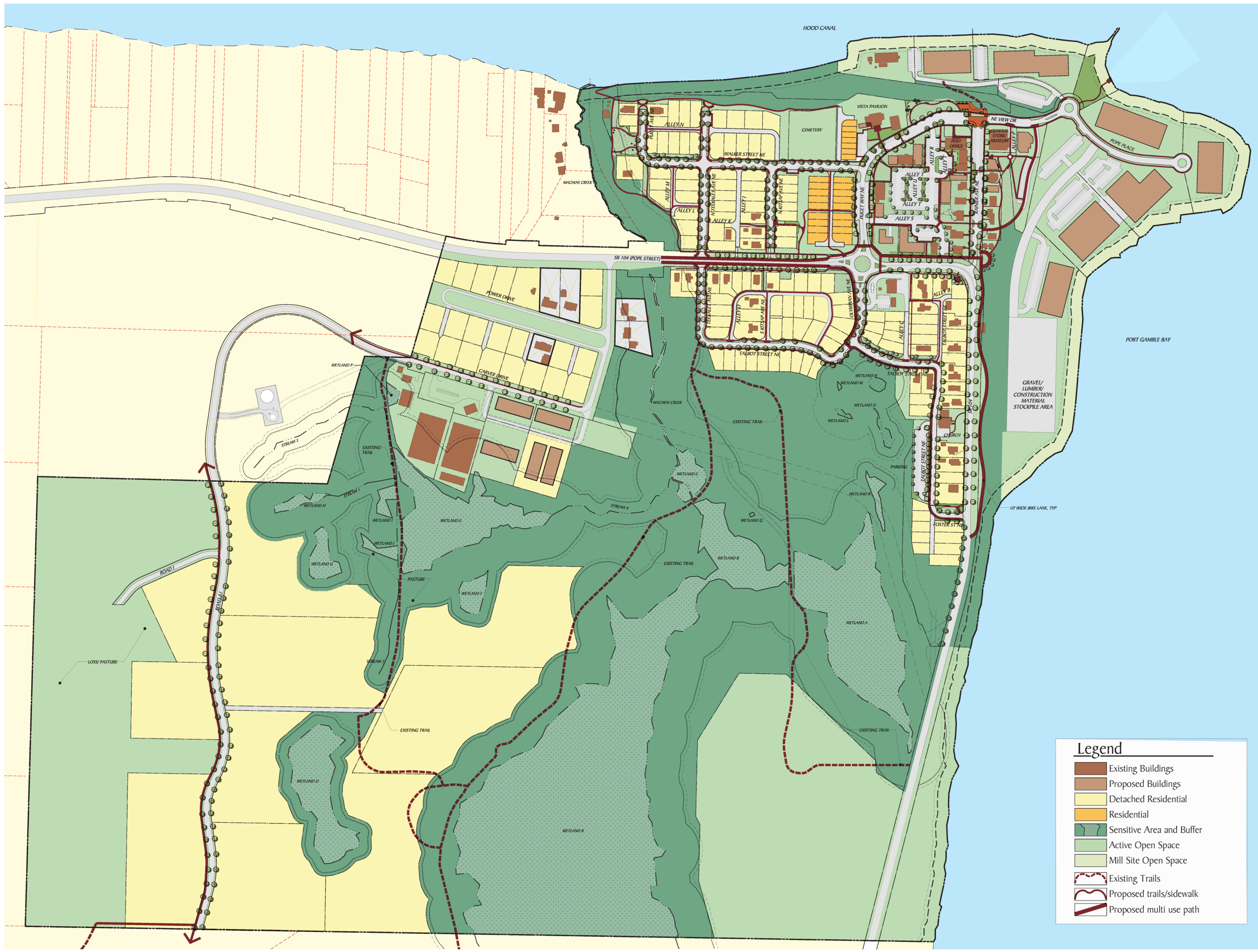
This scenario would not be built by OPG, but would be developed by others over time. Due to staggered development and potentially several different property owners/developers, this scenario could include a lack of coordination for residential construction, less control over architectural standards and less continuity through the town compared to development by a single owner as under Alternatives 1 and 2. Development standards associated with applicable local and state regulations would be met. Subdivision would occur in a piecemeal fashion over time (i.e. numerous plats/short plats).

Under this scenario, residential development within the RHTR zone would occur within slightly larger lots, and full buildout could occur at a slower rate. The upland RW zone would be platted out with 20-acre lots per code. The Mill Site would be industrialized, including large buildings for manufacturing, boat building and/or shellfish/fish processing facilities, plus open storage yards (as allowed per current code). Limited or no open space would be included, resulting in a loss of existing public access and trails, and no resource/educational facilities would be provided except for what exists currently (i.e. Newfields Laboratory).

Assumed Development

The specific development that is assumed in each of the site's five zoning areas is described further below and summarized in **Table 2-10**. See **Figure 2-11** for a site plan of Scenario B under the No Action Alternative. **Table 2-11** portrays the site conditions subsequent to buildout of this scenario.

Port Gamble Redevelopment Plan
Final EIS



Not to Scale

North

Source: David Evans and Associates, 2018.

EA Engineering, Science, and Technology, Inc.

Figure 2-11

No Action Alternative, Scenario B, Redevelopment Under Existing Zoning - Site Plan

Table 2-10
ASSUMED NEW SITE USES UNDER NO ACTION ALTERNATIVE, SCENARIO B – EXISTING ZONING

	Residential Dwelling Units[1]	General Commercial	Industrial/ Manufacturing
RHTR	137 (10 MF/127 SF)	0	0
RHTC	21 MF	34,490 sq. ft.	0
RHTW	0	0	200,000 sq. ft.
RR	1 SF	0	0
RW	10 SF	0	0
Total	**169 DU (138 SF, 31 MF)**	**34,490 sq. ft.**	**200,000 sq. ft.**

Source: David Evans and Associates, 2018

[1] DU – Dwelling Units; SF – Single Family; MF – Multi-family (cottages, condos, townhomes)

Note: Uses reflected in this table include only new development. See **Table 2-4** for existing conditions land uses, all of which would remain onsite.

Table 2-11
ASSUMED SITE CONDITIONS UNDER NO ACTION ALTERNATIVE, SCENARIO B – EXISTING ZONING

	RHTR Area (Acres)	RHTC Area (Acres)	RHTW Area (Acres)	RR Area (Acres)	RW Area (Acres)	Total Site (Acres)
Built Area (Impervious Area)[1]						
Building Footprint	10.86	1.87	5.88	1.32	1.68	21.61
Paved Parking/ Roadway	21.59	4.29	5.45	0.15	8	39.48
Other Built Area	0	0	2.29	0	0	2.29
Open Space Area (Pervious Area)						
Landscape/Lawn Area	17.3	7.15	10.15	0	59.03	93.63
Park Area	0	0	0	0	0	0
Agricultural Area	1.78	0	0	1.93	0	3.71
Natural/Wooded Area	0.75	0	0	0	25	25.75
Critical Areas and Buffers[2]	14.49	0.44	7.65	3.58	77.17	103.33
Other Open Space Area[3]	0	0	0	0	9.02	9.02
Other Pervious Areas						
LOSS Area	0	0	0	0	16.28	16.28
Stormwater Ponds	0.32	0	0	0	1.77	2.09
Cemetery	1.11	0	0	0	0	1.11
Total	**68.20**	**13.75**	**31.42**	**6.98**	**197.95**	**318.24**

Source: David Evans and Associates, 2018.

[1] Impervious area includes new development and existing development to remain.

[2] Critical areas and buffers includes wetlands, streams and associated buffers.

[3] Includes airplane field.

The overall number of new residential units under Scenario B of the No Action Alternative would be 96 units less than Alternative 1 and 56 units less than Alternative 2, primarily due to no residential development on the Mill Site under this scenario. Approximately 200,000 sq. ft. of new industrial development is assumed in Scenario B, as allowed under existing zoning on the Mill Site.

Below is a description of assumed development in each of the five zoning areas under development Scenario B.

RHTR Area

Under Scenario B, residential development would occur in the RHTR area with slightly larger lots than under Alternatives 1 and 2, resulting in seven fewer units in the RHTR area than Alternatives 1 and 2.

RHTC Area

Under Scenario B, commercial uses in the RHTC area would generally be as described for Alternatives 1 and 2. Seventeen townhomes would be located west of Puget Way NE within the RHTC-zoned area under this scenario, as compared to commercial uses assumed in this area under Alternatives 1 and 2. Four additional condominium units would be located above ground floor commercial uses in a mixed-use building.

RHTW Area

Under Scenario B, it is assumed that the Mill Site would be developed with industrial uses permitted under existing zoning, such as manufacturing, boat building, and/or shellfish/fish processing facilities. These industrial uses would be located within large buildings and would include open storage yards (as allowed per current code). Limited or no open space would be included. No resource/educational facilities would be provided except for the existing Newfields Laboratory building.

RR Area

Under Scenario B, this area would likely be developed with residential uses under this scenario, and likely with no agricultural uses as assumed under Alternatives 1 and 2.

RW Area

Under Scenario B, the upland RW zone would be platted out with ten 20-acre lots per code. This scenario would not include clustering or a new loop road, as assumed under Alternatives 1 and 2, and access to new lots would be via private gravel roads. Carver Drive would likely not be extended southward under this scenario due to the cost of this extension.

Utilities

Water

The water system under Scenario B of the No Action Alternative would be generally as described for Alternatives 1 and 2, which would include a new system providing both potable water and fire flow.

Sewer

Similar to Alternatives 1 and 2, under Scenario B it is assumed that the existing collection system connecting to the MBR/LOSS would be replaced with a combination of new 8-inch gravity main, 6-inch side sewers and 2 to 4-inch low pressure sewer lines.

Stormwater

Stormwater would be addressed using the existing code in effect at the time of application for development, and would be provided by others. Where detention would be necessary, use of stormwater ponds and/or vaults would be required. Treatment could also occur in ponds, vaults or through other means described for Alternatives 1 and 2. The resulting piecemeal development could result in more of these facilities located throughout the site, rather than fewer consolidated facilities strategically located with less visual impact, as would occur under Alternatives 1 and 2.

Access/Parking

The access concept under Scenario B would generally be as described for Alternatives 1 and 2. Parking would be dealt with on a case-by-case basis. Efforts to consolidate parking behind commercial buildings in the RHTC area could be achieved, but would require coordination between many owners/proposals. Additional parking and access to accommodate recreational users of County park facilities is unlikely to be achieved.

Building Design

While building design would still be required to conform to various aspects of the County's code, the lack of coordination and privately initiated Design Guidelines (that would be provided with one property owner) would result in inconsistent quality building design under Scenario B. Buildings would be designed and built over time by many different owners/entities with little continuity from one project to the next. A lack of CCR's could also result in a lack of maintenance of buildings over time.

Grading

Grading under Scenario B would generally occur as described for Alternatives 1 and 2.

Scenario C - Redevelopment of Upland Area by Others Under Existing Zoning and Purchase of Mill Site by Others for Conservation

Scenario C of the No Action Alternative would include the same assumptions for the upland area as under Scenario B (development by others under existing zoning), including slightly larger lots in the RHTR zone and 20-acre lots in the RW zone. This scenario differs from

Scenario B in relation to the Mill Site. This scenario assumes the Mill Site would be restored to a natural condition and no new development would occur in this area. Purchase of any portion of the Mill Site for conservation, and any funding of conservation activities, would be accomplished by others. The existing Newfield Laboratory would remain.

For purposes of this FEIS, it is assumed for this scenario that the Mill Site would be left as open space, however it is possible that a future purchaser of the Mill Site could establish a complementary use such as picnic shelters, a visitor center or cultural center which would be subject to separate environmental review.

The specific development that is assumed in each of the site's five zoning areas is further described below and summarized in **Table 2-12**. See **Figure 2-12** for a site plan of Scenario C of the No Action Alternative. **Table 2-13** portrays the site conditions subsequent to buildout of this scenario.

The number of residential units under Scenario C would be the same as Scenario B (Existing Zoning). No new industrial development is assumed in Scenario C, as the Mill Site would be retained as open space.

Table 2-12
ASSUMED NEW SITE USES UNDER NO ACTION ALTERNATIVE, SCENARIO C – UPLAND EXISTING ZONING, MILL SITE CONSERVATION

	Residential Dwelling Units[1]	General Commercial
RHTR	137 (10 MF/127 SF)	0
RHTC	21 MF	34,490 sq. ft.
RHTW	0	0
RR	1 SF	0
RW	10 SF	0
Total	**169 DU (138 SF, 31 MF)**	**34,490 sq. ft.**

Source: David Evans and Associates, 2018.
[1] DU – Dwelling Units; SF – Single Family; MF – Multi-family (cottages, condos, townhomes)
Note: Uses reflected in this table include only new development. See **Table 2-4** for existing conditions land uses, all of which would remain onsite.

Table 2-13
ASSUMED SITE CONDITIONS UNDER NO ACTION ALTERNATIVE, SCENARIO C – UPLAND EXISTING ZONING, MILL SITE CONSERVATION

	RHTR Area (Acres)	RHTC Area (Acres)	RHTW Area (Acres)	RR Area (Acres)	RW Area (Acres)	Total Site (Acres)
Built Area (Impervious Area)[1]						
Building Footprint	10.86	1.87	0.13	1.32	1.68	15.86
Paved Parking/ Roadway	21.59	4.29	0.61	0.15	8	34.64
Open Space Area (Pervious Area)						
Landscape/Lawn Area	17.3	7.15	23.03	0	59.03	106.51
Park Area	0	0	0	0	0	0
Agricultural Area	1.78	0	0	1.93	0	3.71
Natural/Wooded Area	0.75	0	0	0	25	25.75
Critical Areas and Buffers[2]	14.49	0.44	7.65	3.58	77.17	103.33
Other Open Space Area[3]	0	0	0	0	9.02	9.02
Other Pervious Areas						
LOSS Area	0	0	0	0	16.28	16.28
Stormwater Ponds	0.32	0	0	0	1.77	2.09
Cemetery	1.11	0	0	0	0	1.11
Total	**68.20**	**13.75**	**31.42**	**6.98**	**197.95**	**318.24**

Source: David Evans and Associates, 2018.

[1] Impervious area includes new development and existing development to remain.

[2] Critical areas and buffers includes wetlands, streams, and their associated buffers.

[3] Includes airplane field.

RHTR Area

Under this scenario, uses in the RHTR area would be as described under Scenario B (Existing Zoning).

RHTC Area

Under this scenario, uses in the RHTC area would be as described under Scenario B.

RHTW Area

Under this scenario, it is assumed that a portion of the Mill Site would be purchased by others and restored as open space. The Mill Site would be completely left as open space, except that the existing Newfields Laboratory would remain.

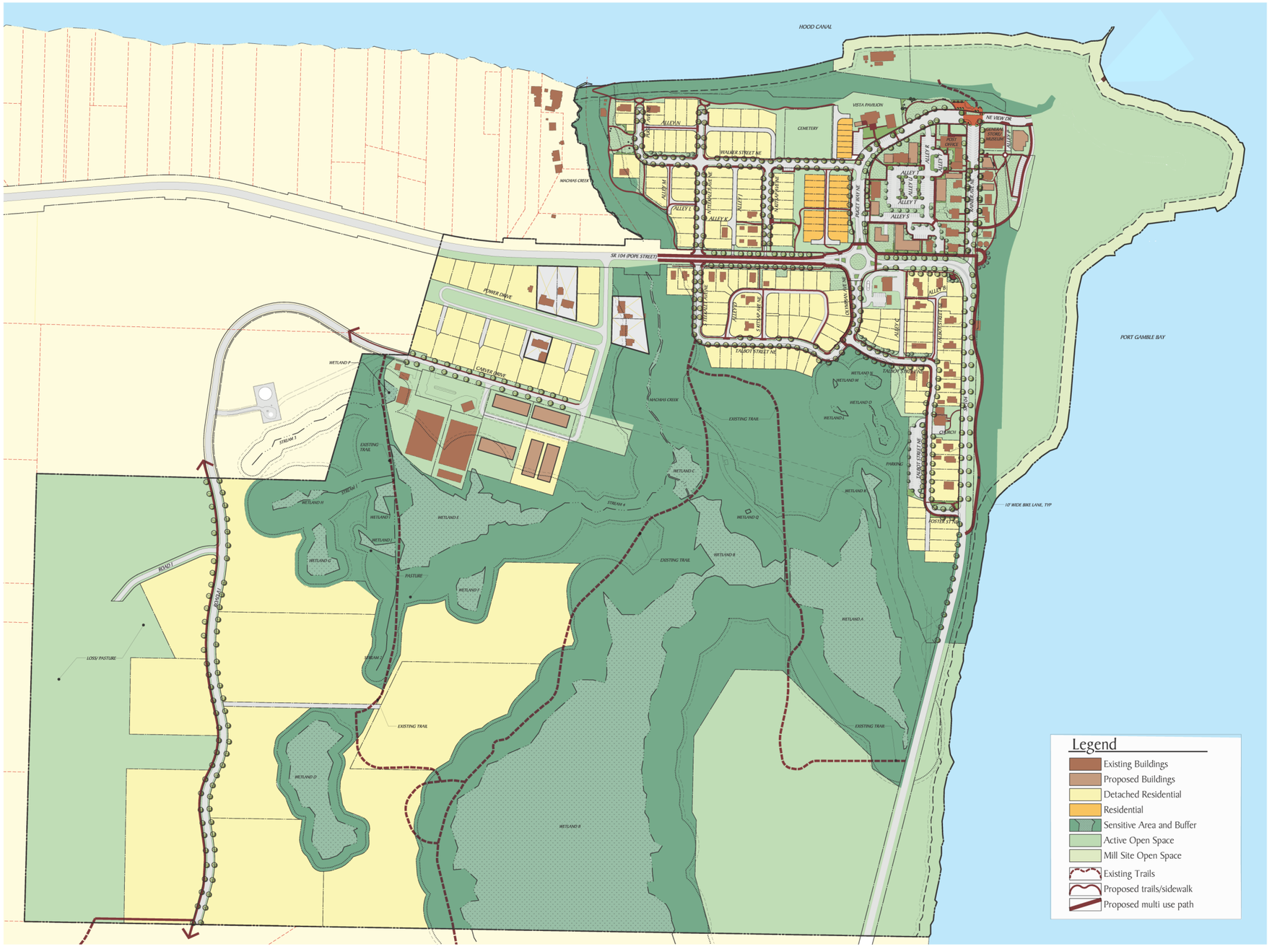
RR Area

Under this scenario, uses in the RR area would be as described under Scenario B.

RW Area

Under this scenario, uses in the RW area would be as described under Scenario B.

Port Gamble Redevelopment Plan
Final EIS



Source: David Evans and Associates, 2018.

EA Engineering, Science, and Technology, Inc.

Figure 2-12

No Action Alternative, Scenario C, Mill Site Conservation - Site Plan

Utilities

Water

The water system under this scenario would generally be as described for Alternatives 1 and 2, which includes a new system providing both potable water and fire flow. Under this scenario, however, no new water lines would be extended to the Mill Site.

Sewer

Similar to Alternatives 1 and 2, under Scenario C of the No Action Alternative it is proposed that the existing collection system connecting to the LOSS would be replaced with a combination of new 8-inch gravity main, 6-inch side sewers and 2 to 4-inch low pressure sewer lines. Under this scenario, however, no new sewer lines would be extended to the Mill Site.

Stormwater

The stormwater system under this scenario would generally be as described for the Scenario B No Action Alternative.

Access/Parking

The access and parking concept under Scenario C would generally be as described for the Scenario B No Action Alternative. Additional parking and access to accommodate recreational users of County park facilities, as well as parking on the Mill Site, is unlikely to be achieved.

Building Design

The building design concept under this scenario would generally be as described for the Scenario B No Action Alternative.

Grading

Grading under this scenario would generally occur as described for Alternatives 1 and 2 for the upland area. No grading would be performed in the Mill Site area.

2.7 SEPARATE ACTIONS/BACKGROUND PROJECTS

Separate projects known to be planned on the site and in the site area are analyzed in this FEIS on a cumulative basis together with the EIS Alternatives. These separate projects are independent of the Proposed Actions, and would be subject to agency decisions regarding environmental review under SEPA prior to any applicable permits and approvals.

Separate projects known to be planned or proposed in the Port Gamble site area include:

- Dock Project

Dock Improvements

A separate application was made by the applicant in 2009 for a new dock to be built in Hood Canal. The proposed dock would be located near where a previous dock/pier structure was immediately south of the rock jetty, which was removed as part of the environmental cleanup (part of the 1.3 acres of over water structures that Pope Resources/OPG removed). Approximately 365 ft. in length, the dock would include a pier and truss about 135 ft. in length, an 80 ft. gangway, with the remaining approximately 150 ft. in length for a floating dock. The dock would also include a kayak launching float that would be attached to the floating dock. The dock is proposed to allow use by a variety of commercial and personal boats, as well as kayaks. As a separate and independent action, the dock will be reviewed by Kitsap County and the appropriate agencies with expertise involved in the Joint Aquatic Resource Permit Application (JARPA) process (including Department of Ecology [DOE], U.S. Army Corps of Engineers [Corps], Department of Fish and Wildlife [DFW]) and will undergo separate environmental review as well. While the dock if approved would be available to users on the upland development covered by this FEIS, the dock application is not dependent on the upland redevelopment proposal being analyzed in this FEIS. Likewise, the upland redevelopment proposal is not dependent on the dock. Under the operative SEPA rules, the dock and the upland redevelopment proposal are not required to be analyzed in the same EIS. Proposals must be discussed in the same environmental document only if they (i) cannot or will not proceed unless the other proposals (or parts of proposals) are implemented simultaneous with them; or (ii) are independent parts of a large proposal and depend on the large proposal as their justification or for their implementation. The Port Gamble upland redevelopment Plan will proceed whether or not docks are present. While the dock would potentially serve uses of the upland area, the upland development would proceed whether or not a dock exists. Conversely, the dock application would proceed whether or not the upland redevelopment plan proceeds (the property has always had a dock).

2.8 BENEFITS AND DISADVANTAGES OF DEFERRING PROJECT IMPLEMENTATION

The benefits of deferring approval of the Proposed Actions and implementation of redevelopment of the Port Gamble site include deferral of:

- Potential impacts of the redevelopment on the natural environment (i.e. critical areas) [although there would be impacts from development under Scenarios B and C of the No Action Alternatives]; and,
- Potential impacts of the redevelopment on the manmade environment (i.e. traffic operations, aesthetics/views, historic and cultural resources and public services) [although there would be impacts from development under Scenarios B and C of the No Action Alternatives].

The disadvantages of deferring approval of the Proposed Actions and implementation of redevelopment include deferral of:

- The opportunity to improve stormwater management and treatment on the site;
- The opportunity to improve sewer service collection on the site;
- Tax revenues and other fees (i.e. permit, inspection and utility connection fees) that would accrue to Kitsap County; and
- Lost opportunity for a master plan, to coordinate and develop with a single owner on an historic site.
- Potential lost opportunity for connectivity of trail access, access and parking to support the public's access to the Port Gamble Forest Heritage Park just south of the property and improved recreational facilities available to the public.

CHAPTER 3

Errata

CHAPTER 3

ERRATA

This Chapter describes updates to the EIS Alternatives site plans and/or environmental analysis occurring subsequent to issuance of the Draft EIS.

CHAPTER 2 – DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

1. Subsequent to the issuance of the Draft EIS, progress has been made by Kitsap County on the County's proposed mountain bike ride park project, which made it necessary to further evaluate the best access route to reach the ride park site. An updated alignment of Carver Drive was evaluated and determined to be the best route to access the ride park, while still maintaining access to proposed Port Gamble site uses and shifting the road away from newly identified erosion hazard areas (see discussion below regarding the erosion hazard areas and **Appendix D** of this Final EIS). The updated alignment of Carver Drive does not change the proposed residential unit count, planned development density, traffic counts, or impervious area. Updated site plans for Alternative 1 and Alternative 2 have been included in this Final EIS as **Figure 2-6** and **Figure 2-8**, respectively.

SECTION 3.1 - EARTH

2. In late 2019, some soil slumping was observed during a site visit within the lower portion of the historic Babcock Farm property. In response to this observation, a landslide hazard assessment was completed for this area of the site and vicinity (see **Appendix D** for the landslide hazard assessment). A desktop review of existing information, including light detection and ranging (LIDAR) data/images, was completed as part of the assessment. Field investigations were also completed on the site, including three test pit explorations to identify the depth and types of materials within the landslide areas.

   The recent and dormant landslides on the site were determined to occur within fine grained glaciolacustrine deposits where overlaying recessional outwash sands are absent but are present further upslope. Based on Kitsap County's critical areas ordinance, these areas would be considered high landslide hazard areas. Preliminary setbacks for the high landslide hazard areas were established based on the existing landslide morphology. Upslope setback distances range from 35 to 100 feet based on the estimated contact between the lower glaciolacustrine and upper outwash deposits. Typically, downslope setbacks and lateral setbacks would be 50 feet from the extent of

the landslide area; however, the downslope building setback adjacent to the active slide, has been extended to 100 feet based on the recent active nature of that landslide.

In addition, the reservoir amphitheater area within the site represents a potential erosion hazard area as defined by the Kitsap County critical areas ordinance. A building setback buffer of 40 feet would be applied to this erosion hazard area, which would be consistent with Kitsap County Code.

The landslide hazard area setback and erosion hazard area setback are incorporated into the updated plans for the site that are reflected in **Figure 2-6** and **Figure 2-8**. See **Appendix D** to this Final EIS for further details on the landslide hazard assessment.

The complete Section 3.1 (Earth) reflecting the discussion above is included in **Appendix A** to this Final EIS.

SECTION 3.3 – PLANTS and ANIMALS

3. In response to public comments that were received on the Draft EIS, a site meeting and field investigation was conducted on February 7, 2020 to confirm stream typing of Stream 4 and Stream 2 within the Port Gamble Master Plan. In attendance at the meeting were representatives from the Port Gamble S'Klallam Tribe, the Suquamish Tribe, Washington State Department of Fish and Wildlife, Washington State Department of Natural Resources, Kitsap County DCD, West Sound Wildlife Shelter, Olympic Property Group, GeoEngineers and David Evans and Associates.

   As a result of the observations and measurements obtained in the field, the typing of Stream 4 was changed from its original Type NP designation to Type F (fish bearing) and Stream 2 was determined to be shorter than indicated previously. The results of this field investigation were documented in a supplemental memo from GeoEngineers which was submitted to Kitsap County and is included as **Appendix E** of this Final EIS. **Table 3.3-1** is hereby updated to reflect the new designation for Stream 4 which should now be listed as follows:

Wetland / Stream Name	Wetland Category / Stream Type	Buffer Width (feet)
Stream 4	~~Type NP~~ Type F	~~50~~ 150

   In addition, based on the field investigation and results identified in **Appendix E**, the extent of Stream 2 has also been updated and is identified as shorter than previously indicated to reflect its origination at the first contribution of natural surface waters (see **Figure 3.3-1** for an illustration of the updated stream review and typing).

Section 3.3 (Plants and Animals) has been updated to reflect the changes referenced above. The complete Section 3.3 is included in **Appendix B** of this Final EIS.

4. Subsequent to the issuance of the Draft EIS, a Floodplain Habitat Assessment was also completed by GeoEngineers (see **Appendix F** of this Final EIS). The purpose of the assessment was to identify the effects to floodplain habitat and species listed under the Endangered Species Act (ESA) from the EIS Alternatives along the shoreline of Hood Canal and Port Gamble Bay.

   ESA-listed fish species within the site vicinity include: Puget Sound Chinook salmon, Hood Canal summer chum, Coastal-Puget Sound bull trout, Puget Sound steelhead, bocaccio rockfish, and yelloweye rockfish. Other ESA-listed animals may be present in the site vicinity, including the marbled murrelet and the Southern Resident killer whale. The site area and vicinity contain designated critical habitat for Puget Sound Chinook salmon, Hood Canal summer chum, bocaccio rockfish, yelloweye rockfish, and Southern Resident killer whale. There are no other listed terrestrial species and no known listed plant species identified in the site area or vicinity.

   The effect determination of the EIS Alternatives is that development "may affect, not likely to adversely affect" listed Chinook, summer chum, steelhead, bull trout, bocaccio rockfish, yelloweye rockfish, Southern Resident killer whale, and marbled murrelet that may be present in the site area. The effect determination for critical habitat within the area of the project is that it "may affect, not likely to adversely affect".

   Over the long term, the project would result in the following:

   - No change in noise levels as the site would change from industrial uses to residential and commercial uses.
   - Increased water functions along the shorelines as impervious surfaces would be reduced and stormwater would be treated before being discharged into Port Gamble Bay and Hood Canal.
   - Increase habitat functions since vegetation would be planted in areas that currently have no vegetation cover.
   - The project will utilized BMPs and there would be no impacts to water quantity or water quality from development.

   See **Appendix F** of this Final EIS for further details on the Floodplain Habitat Assessment.

   The complete Section 3.3 (Plants and Animals) reflecting the discussion above is included in **Appendix B** to this Final EIS.

SECTION 3.5 – CULTURAL RESOURCES

5. The Suquamish Tribe requested that all of the text except the last paragraph under "Ethnographic Period" on pages 3.5-4 and 3.5-5 of the Draft EIS (Cultural Resources) be removed and replaced with text provided under "Tribal Views".

As requested, Section 3.5 (Cultural Resources) has been updated as shown below in 'track changes". The complete Section 3.5 reflecting the below edit is included in **Appendix C** to this Final EIS.

Ethnographic Period

~~At the time of European contact, numerous small autonomous groups of Lushootseed-, Clallam-, Twana-, and Chemakum-speaking people inhabited the lowlands of western Washington. These aboriginal people generally made their homes along marine waterways or major rivers that served as convenient transportation corridors as well as rich resource procurement areas. Primary residences usually consisted of substantial split-plan buildings at permanent village sites, while temporary camps provided shelter during seasonal fishing, hunting, and gathering trips. Villages in the region retained political autonomy, but trade, marriage, and mutual ceremonies created bonds between neighboring groups.~~

~~The Port Gamble site lies at the juncture of traditional Clallam, Chemakum, Skokomish (Twana) and Suquamish (Lushootseed) lands and was jointly used by these groups as well as by S'Klallam (Clallam) people. Native peoples of the region viewed the land in terms of its resources rather than as property, and members of any friendly group, particularly those with marriage ties to an area, were generally welcome to share the available resources. S'Klallam, Suquamish, and Chemakum groups traveled regularly to Hood Canal for fishing, shrimp and shellfish harvest, berry picking, collection of basketry materials, visits with relatives, religious devotions and trade.~~

~~The S'Klallam usually stayed at Hood Canal from August through late November or early December, the prime fishing season, and the S'Klallam families occasionally remained in their Hood Canal campsites through the winter. Port Gamble Bay was known for its fishery, and Suquamish and other Native American people camped there during the summer. A number of well-used trails connected traditional Suquamish territory with Hood Canal, including one from the village at Suquamish to the south end of Port Gamble Bay.~~

~~The first documented contact between Native American residents of the region and Europeans occurred in May 1792 as British sea captain George Vancouver led a small exploratory party south through Hood Canal.~~

~~Declining Native American populations in the Hood Canal and Puget Sound regions during the early historical period allowed S'Klallam people to expand into areas outside their traditional territory. All Native peoples were affected by exotic disease, new weaponry, changes in diet, and other factors during the contact period, but certain Native American groups were more affected than others. The Chemakum were represented at the Point No Point Treaty negotiations, although by that time their numbers had already seriously declined. The Chemakum population continued to dwindle in subsequent years and, by 1870, the Chemakum reportedly numbered only 27. Twenty years later only three native Chemakum speakers could be found.~~

~~The S'Klallam, whose seasonal rounds had long included locations in and adjacent to traditional Chemakum territory, moved into the newly-vacated lands and established permanent communities, particularly in areas where sawmills or other industries provided work and opportunities to sell fish and additional products. In 1957, a court decision acknowledged the S'Klallam as rightful successors to the Chemakum and, in 1977, the Indian Claims Commission compensated the S'Klallam for surrender of Chemakum lands as well as their own.~~

~~The Little Boston S'Klallam community was established on the Point Julia sand spit, across the bay from the Port Gamble mill (to the east of the Mill Site). According to company and tribal histories, Native Americans performed much of the labor at the Port Gamble mill in the early days of the operation. A number went to Hood Canal for the fishing season and simply stayed on as mill workers after the season ended.~~

~~As the Native American work force at the mill grew, the Puget Mill Company offered some of its land across the bay from Port Gamble for a village site. The S'Klallam evidently used lumber supplied by the mill to build small houses along the higher southern edge of the spit. The date that Little Boston was founded went unrecorded, but U.S. Coast Survey maps show that the village was in place by at least 1855. By the 1870s the population of Little Boston had reached 100, a figure that remained relatively constant for decades. Most of the men living in Little Boston worked at the mill, canoeing or boating across the bay every day.~~

~~During the late nineteenth and early twentieth centuries, Port Gamble S'Klallam people attempted to acquire a land base in the Port Gamble Bay area. Tribal members and others acting on their behalf investigated allotments, Indian homesteads, and direct land purchase. By this time, however, most of the land around the bay was owned by the Puget Mill Company, and the firm did not wish to sell. Tribal members successfully acquired several parcels during this period, particularly in the uplands east of Port Gamble Bay.~~

~~Under the Indian Reorganization Act of 1934, the Secretary of the Interior was authorized to acquire property for landless Native American tribes. Using this authority, the federal government purchased 1,234 acres of land in the Point Julia area from the Puget Mill Company's successor, the Charles McCormick Lumber Company. In 1938 this property was designated as the Port Gamble S'Klallam Indian Reservation. Once the reservation was established, new homes were built on the bluff overlooking Point Julia and the old houses on the spit were burned by the government.~~

~~The Port Gamble site is within the adjudicated Usual and Accustomed Fishing Area of the Port Gamble S'Klallam Tribe, the Suquamish Tribe, and the Skokomish Tribe, and the bay and surrounding tidelands are regularly used by tribal members for fishing and shellfish harvest.~~

Tribal Views

The Port Gamble S'Klallam Tribe and the Suquamish Tribe both provided their perspectives on early Native American use of Port Gamble Bay to Kitsap County during discussions related to the 2011 String of Pearls Trail project. Because of their relevance to the current project, these tribal statements are included here.

Statement from the Port Gamble S'Klallam Tribe:

"Port Gamble S'Klallam oral history indicates that a settlement predated the development of the Port Gamble Mill in 1853. Ethnographic and linguistic evidence collected by John Peabody Harrington in the early 1940s also indicates that the historic S'Klallam name for the place was nəxʷqi̓yt̓ (place of midday sun). Following the establishment of the mill, the community re-established itself on Point Julia. The name nəxʷqi̓yt̓ (place of midday sun) was applied to this re-established community, which grew with the expansion of the mill. Ethnographic evidence indicates that the name nəxʷqi̓yt̓ applied historic settlements on both sides of the bay and to Port Gamble Bay itself."

Statement from the Suquamish Tribe:

"Port Gamble is within the Ancestral Territory of the Suquamish People. Hudson's Bay traders met Suquamish Chief Challicum in 1833, near Port Gamble. A United States Exploring Expedition survey party described the presence of the Suquamish throughout the north end of Hood Canal. The survey party camped at the mouth of Port Gamble in the summer of 1841 and did not report any evidence of Indian camps or villages. United States Exploring Expedition maps published in 1845 show the area was part of Suquamish Territory."

CHAPTER 4

Public Comment Letters and Responses

CHAPTER 4
COMMENT LETTERS AND RESPONSES

This chapter of the Final Environmental Impact Statement (FEIS) for the Port Gamble Redevelopment Plan contains comments received on the Draft Environmental Impact Statement (DEIS), and provides responses to the comments.

18 letters with comments on the DEIS and the analysis of environmental impacts were received during the public comment period. Each letter is included in this section of the FEIS. Comment letters/numbers appear in the margins of the comment letters and are cross-referenced to the corresponding responses. Responses are provided directly after each comment letter.

The following comment letters on the DEIS were received:

Agencies
Washington State Department of Archaeology and Historic Preservation

Tribes
The Port Gamble S'Klallam Tribe
The Suquamish Tribe

Individuals
Brittany Bailey
Bruce McCain
John Willett
Amy Swenson
Catherine Freudenberg
Keith Beebe
Robert Smaus
Lily Doton
James Gillick
Kay DuPont
Mark Schorn
Bert Jackson
Tom Vessella
Mark Morgan
Onida Shapiro

Allyson Brooks Ph.D., Director
State Historic Preservation Officer

November 22, 2019

Mr. Jeff Smith, Senior Planner
Kitsap County
619 Division St
Port Orchard, WA 98366

In future correspondence please refer to:
Project Tracking Code: 040313-09-KP
Property: Port Gamble National Historic Landmark (NHL) District
Re: Redevelopment Plan Draft Environmental Impact State (DEIS)

Dear Mr. Smith:

Thank you for contacting the Washington State Department of Archaeology and Historic Preservation (DAHP). The above referenced Port Gamble Redevelopment Plan DEIS has been reviewed on behalf of the State Historic Preservation Officer (SHPO) under the auspices of the State Environmental Policy Act (SEPA). Our review is based upon the DEIS dated September 2019 and accessed from the Kitsap County website. As a result of our review we are providing the following comments/recommendations for your consideration:

1) In general, we recommend Alternative 2 (Lesser Development) together with No Action Alternative Scenario C. Our recommendation is based on our understanding that Alternative 2 allows a more appropriate level of in-fill/new construction in the District boundaries. We also view this alternative as providing for a higher level of consistency and oversight as the town changes in both the short and long-terms. Given Port Gamble's designation as an NHL, the townsite merits an exceptional level of planning, design, review, and proactive management that will preserve historic character while sensitively accommodating new residents and uses. 1

2) We also recommend linking Alternative 2 with No Action Alternative Scenario C as this scenario provides for an appropriate and sensitive approach to redevelopment of the former Mill Site. The Mill Site contains an extensive pre-contact period shell midden site. Any work that would alter this site would require a DAHP Site Alteration & Excavation Permit, as well as daylight exposures, through removal of fill, to allow for extensive testing and data recovery of the site. There is also a very high risk that this midden, including disturbed midden found in the fill layers above the site, will contain human burials. 2

3) In general, DAHP supports the Town Development Objectives (TDO) as being sensitive to Port Gamble's historic and architectural character while accommodating in-fill and new development where appropriate. We also note and support references to using the Secretary of the Interior's Standards for Rehabilitation as the basis for treatment of the existing historic properties and design of new construction. 3

4) We also strongly recommend design guidelines for all aspects of preservation and new construction in the town be developed by qualified historic preservation professionals meeting National Park Service (NPS) Professional Qualifications Standards (https://www.nps.gov/history/local-law/arch_stnds_9.htm) in the appropriate area of expertise. Further, draft guidelines should be circulated to DAHP, the NPS, Tribes, and other interested parties for review and comment. Projecting that much of the new construction will be in-fill amongst historic buildings, it is strongly recommended that the design guidelines address not only architectural styles but also address other design aspects such as materials, massing, densities, site orientation, landscaping/landscape features, views, etc. that are important to seamlessly and successfully integrating new construction while maintaining the town's historic character and cultural resources. 4

5) We recommend that the DEIS be specific in describing and implementing oversight bodies and procedures for reviewing, approving, and administering rehabilitation, alterations/demolition, and new construction in the District on a permanent basis. Again, oversight and project review bodies and staff should meet the professional qualifications cited in (3) above. We also recommend that the redevelopment plan include a role for DAHP in crafting applicable standards and guidelines and participating in project planning with review and comments. Given potential for using historic rehabilitation tax incentives plus review for archaeological resource impacts (see comment 7), early and on-going consultation with DAHP will serve to streamline the permitting process. 5

6) In more specific areas, we recommend that the redevelopment plan strive to limit expansive surface parking lots, widened streets, and traffic generating uses and places with potential to draw large volumes of automobiles into and through the town. 6

7) The DAHP concurs with the recommendation in the DEIS and the archaeology technical report that an Archaeological Resource Management Plan (ARMP) be developed for the Port Gamble area. As stated in the DEIS, an ARMP is the best way to guide identification, evaluation, and treatment of archaeological properties through the course of future development at Port Gamble. The ARMP should be developed by a professional archaeologist in consultation with Kitsap County, OPG, DAHP, and affected tribes at a minimum and should provide a parcel by parcel guide to developers. The ARMP should also include the opportunity for review by the DAHP and Tribes of all development permits to assure that the archaeology is treated appropriately during development. 7

The above comments are based on the information available at the time of this review. Also, we appreciate receiving copies of any correspondence or comments from concerned tribes and other parties that you receive in response to the DEIS comment period. Should additional information become available, our assessment may be revised. 8

Finally, please note that in order to streamline our responses, DAHP requires that Resource documentation (HPI, Archaeology sites, TCP) and reports be submitted electronically. Correspondence must be emailed in PDF format to the appropriate compliance email address. For more information about how to submit documents to DAHP please visit: https://dahp.wa.gov/project-review. To assist you in conducting a cultural resource survey and inventory effort, DAHP has developed Guidelines for Cultural Resources Reporting. You can view or download a copy from our website. 9

Thank you for the opportunity to review and comment. Please ensure that the DAHP Project Number (a.k.a. Project Tracking Code) is shared with any hired cultural resource consultants and is attached to any communications or submitted reports. If you have any questions, please feel free to contact me at 360-586-3073 or greg.griffith@dahp.wa.gov.

Sincerely,

Gregory Griffith
Deputy State Historic Preservation Officer

C: David Brownell, Jamestown S'Klallam, Cultural Resources
Dennis Lewarch, Suquamish Tribe, THPO
David Louter, National Park Service
Stormy Purser, Port Gamble S'Klallam, THPO
Mary Thompson, Artifacts Consulting

Response to Washington State Department of Archaeology and Historic Preservation

Comment 1

The comment recommending Alternative 2 (Lesser Development) is noted.

Comment 2

The comment regarding the pre-contact period shell midden site is noted. Alternatives 1 and 2 would avoid impacts to the shell midden site.

Comment 3

The comments related to support of the Town Development Objectives and Secretary of the Interior's Standards for Rehabilitation as the basis for the treatment of the existing historic properties are noted.

Comment 4

The comment regarding design guidelines is noted. It is proposed that the Design Guidelines for the project (within the RHT historic district) would comply with Title 17.360C.020 (Town Development Objectives) of the Kitsap County Municipal Code. The Town Development Objectives require the use of the Secretary of the Interior's Standards for Historic Preservation Projects (36 CFR 68) be utilized (within the RHT historic district) as a guideline for evaluating future development of the project.

Comment 5

The comment regarding oversight, standards, guidelines and involvement is noted. It is anticipated that the Design Guidelines for the project (within the RHT historic district) would comply with Title 17.360C.020 (Town Development Objectives) of the Kitsap County Municipal Code. The Town Development Objectives require the use of the Secretary of the Interior's Standards for Historic Preservation Projects (36 CFR 68) be utilized (within the RHT historic district) as a guideline for evaluating future development of the project.

The comment regarding DAHP involvement is noted.

Comment 6

The comment related to limiting the amount of area in surface parking lots, widened streets, and traffic generating uses is noted. As indicated in Section 3.6 of the Draft EIS (Historic Resources), "development would generally reinforce historic development patterns on the Port Gamble site and provide for contemporary interpretations in new construction within the parameters of the proposed design guidelines for the redevelopment area." Private road standards and alleys have also be utilized to avoid widened streets.

Comment 7

The comment regarding the Archaeological Resource Management Plan (ARMP) is noted. An ARMP would be developed by a professional archeologist in consultation with Kitsap County, OPG, DAHP and affected tribes. The ARMP will be developed in phases corresponding to planned construction.

Comment 8

The comment regarding future correspondence is noted.

Comment 9

The comment related to DAHP guidelines for submitting materials is noted.

PORT GAMBLE S'KLALLAM TRIBE
31912 Little Boston Rd. NE – Kingston, WA 98346

Date: November 22, 2019

To: Kitsap County Department of Community Development
614 Division Street – MS36, Port Orchard, WA

From: Port Gamble S'Klallam Tribe
31912 Little Boston Road NE, Kingston, WA 98346

Subject: Port Gamble Redevelopment Plan Comments

The Port Gamble S'Klallam Tribe provides this comment letter in response to the Port Gamble Redevelopment Plan Permit application now under review by Kitsap County Department of Community Development. After years working with Pope Resources to develop solutions that meet our mutual interests, the Tribe does not oppose the "lesser build out" Alternative 2 in the permit application, which includes the conservation of 16 shoreline acres, 2.4 bluff acres and adjacent tidelands in perpetuity. Of the Alternatives proposed, Alternative 2 provides the best path forward for achieving the Tribe's highest values for protection and restoration of Port Gamble Bay, building on the Port Gamble Bay cleanup work already done. 1

The conservation of these shoreline acres will prohibit development on this important shoreline and will enable future restoration and public water access. By protecting the shoreline, Alternative 2 will contribute to maintaining water quality and restoring essential habitat for a healthy Port Gamble Bay that supports salmon, herring, shellfish and many other resources. The conservation of these lands will restore opportunities for tribal fishing and shellfish harvesting. It will provide public beach and water access for passive recreation and non-motorized boating. Alternative 2 will focus growth within the town boundary while protecting surrounding open space and rural lands to improve the environmental and economic viability of Port Gamble. 2

The Tribe has a vision for the future of Port Gamble, with neighboring communities continuing to work together and future generations thriving on sustainable resources that a restored Port Gamble Bay will provide. 3

Response to The Port Gamble S'Klallam Tribe

Comment 1

The comment indicating that Alternative 2 is the Tribe's preferred alternative is noted.

Comment 2

The comment indicating that Alternative 2 best protects the site's shoreline and natural resources, and best focuses growth within the town boundary is noted.

Comment 3

The comment regarding the Tribe's vision for Port Gamble is noted.

PHONE (360) 598-3311
Fax (360) 598-6295
http://www.suquamish.nsn.us

THE SUQUAMISH TRIBE
PO Box 498 Suquamish, WA 98392-0498

November 22, 2019

Jeff Smith, Senior Planner-Project Lead
Kitsap County Department of Community Development
614 Division Street, MS-36
Port Orchard, WA 98366

Re: Draft Environmental Impact Statement (DEIS) for the Port Gamble Redevelopment Project

Dear Mr. Smith:

The Suquamish Tribe (Tribe) is a signatory to the 1855 Treaty of Point Elliott. 12 Stat. 927. Article 5 of the Point Elliott Treaty secures the Tribe's "right of taking fish at usual and accustomed fishing grounds and stations." Article VI, cl. 2 of the United States Constitution provides that all treaties made under the authority of the United States "shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby...." *United States v. Washington* (Boldt I), 384 F.Supp. 312, 330 (W.D. Wash. 1974); *Washington v. Washington State Commercial Passenger Fishing Vessel Ass'n*, 443 U.S. 658, 674-76 (1979).

The Suquamish people lived, gathered food, ceremonial and spiritual items, and hunted and fished for thousands of years in western Washington. Treaty-reserved resources situated on and off the Port Madison Indian Reservation include, but are not limited to, fishery and other natural resources situated within the Tribe's adjudicated usual and accustomed (U&A) fishing area. The Suquamish Tribe's U&A extends well beyond Reservation boundaries and includes marine waters of Puget Sound from the northern tip of Vashon Island to the Fraser River in Canada, including Haro and Rosario Straits, the streams draining into the western side of Puget Sound and also Hood Canal. The Port Gamble Redevelopment Project is located within the Tribe's U&A. 1

General Comments

Stormwater

The Tribe is concerned about storm water impacts. The loss of permeable surfaces due to increased impervious surfaces and urbanization in the watershed results in a loss of riparian integrity while worsening storm water impacts. Storm water runoff is known to increase the frequency and magnitude of peak stream flows, reduce base flows, as well as increasing erosion, fine sedimentation, bank instability, and channel incision and scour. Riparian areas are critical to the ecological integrity of all upstream and downstream habitat areas and the use of extensive buffers and limitations in adjacent development areas helps to protect these habitats. 2

To ensure protection of water quality the Tribe suggested in its scoping comments (dated March 22, 2013) that low impact development should be encouraged, with limits placed on land clearing, forest removal, and construction of impervious surfaces. Although the project mentions the use of rain gardens, there are many other Low Impact Development (LID) measures that can be implemented to remove and reduce pollution from runoff to wetlands, streams and receiving waters. LID measures provide more assurance that treated storm water runoff is not harmful and reduces impacts on watershed hydrology and aquatic resources.

LID options to consider include but are not limited to: minimization of total impervious area, rooftop runoff collection, retention of native vegetation (minimizing clearing and grading and replanting of native vegetation in areas that have been previously cleared), maintaining natural drainages, use of permeable pavers/asphalt, and maximizing available open space/greenbelt areas. In addition, stormwater facilities should be designed in accordance with the latest Department of Ecology Storm water Management Guidelines, and sited outside of critical areas and their buffers. Projects that vest under old regulations can also potentially add to the financial and planning burdens of local governments if problems arise that are caused by development built to outdated standards. 3

Floodplain

In the Tribe's previous scoping comments, we noted that the Kitsap County FEMA Flood Hazard Zone and Floodways Map indicates that the Port Gamble shoreline is within the 100 year floodplain. Kitsap County has selected to review floodplain development projects on a project-by-project review. The Tribe would strongly encourage both the County and the applicant to consult with either FEMA or the National Flood Insurance Program for guidance regarding development opportunities in floodplains. Marine floodplains are not approached the same as freshwater and it is our understanding that on marine shorelines, a property cannot be removed from the floodplain with the addition of fill. Nor can fill be used for structural support. The Tribe requests a response as to whether there has been any discussion with FEMA on this issue. Also, additional fill and development should not preclude future restoration opportunities. 4

Shorelines and Critical Areas

It is understood that the project is vested under Kitsap County's 1999 code. However, it is recommended that the protections for shorelines and critical areas utilize best available science and follow the most current regulations. By utilizing the most current information it helps to preserve the natural environment, maintain fish and wildlife habitat, and protect drinking water. Protecting critical areas also helps reduce risks, such as landslides or flooding. It is costly or impossible to replace critical area functions and values once they are lost (https://www.commerce.wa.gov/serving-communities/growth-management/growth-management-topics/critical-areas/). 5

Treaty Rights

The Tribe's scoping comments identified the addition of an undetermined number of docks, mooring buoys and/or marinas (commercial or residential) associated with the redevelopment as a concern for the Tribe because of the interference from these structures with the Tribe's treaty right to harvest fishery resources.

The addition of an undetermined number of docks, mooring buoys and/or marinas can be a significant source of fecal coliform, pathogens, and pollutants in water and sediment via boat discharges and spills. The Puget Sound Water Quality Management Plan (2000) states, "marine life can also be threatened by the discharge of sewage from recreational boats even when all the boats have approved and functional treatment systems." Any 6

further degradation of water quality attributed to an increase in the number of vessels in the area may ultimately result in the closure of shellfish growing and harvesting areas. 6

Additional boat traffic increases the potential for conflicts with tribal treaty fishery activities by impeding Tribal fishers' ability to maneuver and safely manage fishing gear and increases the risk of damage to fishing gear. The impacts associated with potential increases in boat traffic in the area may impact treaty fishing and needs to be fully evaluated and discussed with the Tribe. The Tribe requests that the effects of the proposed project (including but not limited to vessel traffic, water quality and stormwater outfalls) on the commercial shellfish growing area classifications in Port Gamble Bay be evaluated in coordination with the Washington Department of Health and the Suquamish Tribe. 7

Specific Comments

Page 1-13 states that the project and construction was designed with protection of the capped areas in mind yet there is no text that discusses specifically how that will happen. 8

Page 1-27 How many feet of additional fill would be required on the mill site for development to meet FEMA requirements? Since the Mill Site is below flood elevation how would stormwater for any development on the Mill Site be addressed? See also Floodplain General Comment above. 9

Page 3.5-4 and 3.5-5 All of the text except the last paragraph under "Ethnographic Period" needs to be deleted and replaced with the text under "Tribal Views". The Tribe requests an opportunity to review and concur with any language prior to it being finalized. 10

Appendix D – Wetlands and Streams

The Wetland and Stream Delineation report included was completed in January 2013, nearly seven years ago and is, therefore, considered outdated. In addition, the Tribe and WDFW have not verified the fish vs. non-fish determinations included in the report. Prior to any development activities wetland and stream information will need to be updated and/or verified and the Tribe requests notification of those activities. 11

Appendix I – Historic Resources Report

The second paragraph discussing presence prior to mill development and the second sentence under 1859-1889 on Page 8 and the first full paragraph on Page 12 needs to be removed. This language is not consistent with the language agreed upon in the main body of the EIS as there are differing accounts regarding history between the Port Gamble S'Klallam Tribe and the Suquamish Tribe. The Tribe requests an opportunity to review and concur with any language prior to it being finalized. 12

The Tribe is requesting that Kitsap County address the issues identified in our comments to allow for further evaluation via the EIS process. Thank you for the opportunity to comment on the above referenced proposal. Please keep us informed of project status and any relevant project related actions. We will be providing additional comments as more information becomes available. If you have questions or concerns please don't hesitate to call 360-394-8447. 13

Sincerely,
Alison O'Sullivan, Senior Biologist

Response to The Suquamish Tribe

Comment 1

The comment related to the Suquamish Tribe being a signatory to the 1855 Treaty of Point Elliott, and the Port Gamble site being within the Tribe's U & A are noted.

Comment 2

The comments regarding the importance of stormwater system design is noted. As indicated in Section 3.2 of the Draft EIS (Water Resources), to minimize the potential for impacts associated with increased surface water runoff, the overall concept of the proposed system is to match existing flows to Machias Creek, with all excess flows (i.e. flows above that matching existing flows to Machias Creek) directed away from bluffs/slopes to outfalls to Hood Canal and Port Gamble Bay.

The stormwater management plan for the project has been designed to comply with the Kitsap County Stormwater Design Manual (KCSDM) dated February 16, 2010. Low Impact Development Best Management Practices (LID BMPs) incorporated into the Port Gamble Redevelopment Plan include narrowed streets, clustered development on small lots to reduce impervious area, preservation of large areas of the site in permanent open space (160.85 acres), and a separate rooftop runoff collection system and bioretention areas throughout the site. Please note that the project site geology provides limited opportunity for infiltration.

Comment 3

The comments related to Low Impact Development are noted. The stormwater management plan for the project has been designed to comply with the Kitsap County Stormwater Design Manual (KCSDM) dated February 16, 2010. Low Impact Development Best Management Practices (LID BMPs) include narrowed streets, clustered development on small lots to reduce impervious area, preservation of large areas of the site in permanent open space (160.85 acres), a separate rooftop runoff collection system and bioretention areas throughout the site. The project site geology provides limited opportunity for infiltration. See response to comment 2 of this letter for additional discussion on Low Impact Development.

Comment 4

The comment related to the floodplain is noted. As indicated in Chapter 2 of the Draft EIS (Proposed Action and Alternatives) approximately 175,000 cubic yards of fill would be provided on the Mill Site to raise the elevation by five-feet (a conservative assumption), bringing the

ground level above the floodplain and minimizing the potential for floodplain hazard. The applicant will secure all necessary local and federal permits associated with the proposed fill. The Draft EIS analyzes conditions with this fill assumed and identifies appropriate mitigation.

The comments regarding FEMA requirements related to fill within the marine floodplain are noted. Please note that while there are circumstances where fill placement is restricted (such as High Risk – Coastal Area Zones), that constraint is not present at the site. All project-related permits associated with the shoreline area and floodplain would be reviewed for compliance with applicable local, state and federal requirements, including FEMA.

Comment 5

As indicated in Section 3.9 of the Draft EIS (Relationship to Plans and Policies), the Port Gamble application was submitted to Kitsap County prior to adoption of the 2014 Shoreline Master Program (SMP) and the Port Gamble Redevelopment Plan is subject to the 1999 SMP in effect at the time of application. Development under Alternatives 1 and 2 would be consistent with applicable regulations; refer to Section 3.9 of the Draft EIS for detail.

As indicated in Section 3.3 of the Draft EIS (Plants & Animals), with implementation of the required/proposed mitigation measures, no significant impacts to plant and animal habitat would be anticipated. A detailed list of mitigation measures during construction is provided in Section 3.3 of the Draft EIS (Plants & Animals) and includes preparation of a detailed Habitat management Plan, and instillation of native vegetation in the shoreline environment.

Comment 6

As indicated in Chapter 2 of the Draft EIS (Proposed Action and Alternatives), no dock or marina improvements are proposed under the Port Gamble Redevelopment Plan, and no additional boat traffic would occur under the proposal. As also indicated in Chapter 2 of the Draft EIS, a separate dock application was made in 2009; this application is not dependent on the proposed Port Gamble Redevelopment and is subject to separate SEPA environmental review.

Comment 7

As indicated in response to Comment 6 of this letter, no dock or marina improvements are proposed under the Port Gamble Redevelopment Plan, and no additional boat traffic would occur under the proposal.

Currently there is no stormwater water quality treatment for the historic town of Port Gamble. The stormwater management plan for the project has been designed to comply with the Kitsap County Stormwater Design Manual (KCSDM) dated February 16, 2010. Per the KCSDM,

stormwater runoff from the Port Gamble project is required to meet basic water quality treatment (as defined by Chapter 6 of the KCSDM), and is proposed to be provided by three methods for the site; water quality wetponds, Contech Stormfilter Vaults (containing filter cartridges) and bioretention cells (i.e. rain gardens).

Comment 8

Comment noted. The cited statement relates to "Cumulative or Indirect Impacts" and specifically relates to in-water work associated with separate projects including a new dock on Hood canal. The dock application is not associated with or dependent on the Port Gamble Redevelopment Plan and is not analyzed in this EIS. The dock application is subject to the SEPA and permitting requirements applicable to this separate project.

Comment 9

As indicated in Chapter 2 of the Draft EIS (Proposed Action and Alternatives) approximately 175,000 cubic yards of fill would be provided on the Mill Site to raise the elevation by five feet, bringing the ground elevation above the floodplain. The new stormwater conveyance system on the Mill Site would be designed per the Kitsap County Stormwater Drainage Manual. A new stormwater outfall on west side will provide habitat enhancement with a pocket beach as well as water quality and quantity improvements. A single new stormwater outfall is proposed to replace the two existing stormwater outfall pipes that are currently on the Hood Canal shoreline between the Marine lab and jetty.

Comment 10

The requested revisions to Section 3.5 (Cultural Resources) have been made and are provided in Chapter 3 - ERRATA of this Final EIS. Also, see Appendix A to this Final EIS for the complete Section 3.5 reflecting the requested edits.

Comment 11

The comment regarding stream typing is noted

Comment 12

Comment noted.

Comment 13

Comments noted.

Ding, Jeff

From: Jeff N. Smith <JNsmith@co.kitsap.wa.us>
Sent: Friday, February 7, 2020 2:19 PM
To: Ding, Jeff
Cc: Schipanski, Rich
Subject: FW: Redevelopment Plan for Port Gamble

FYI

From: Brittany Bailey <bbailey@windermere.com>
Sent: Friday, October 25, 2019 9:32 AM
To: Jeff N. Smith <JNsmith@co.kitsap.wa.us>
Subject: Redevelopment Plan for Port Gamble

Good Morning Mr. Smith

Thank you for taking the time to read my email, I hope you have had a wonderful week so far. My father and I are keeping our eyes and ears open for the proposed new residential developments in Port Gamble. We see this a great business opportunity and are eager to see the historical city of Port Gamble to grow and flourish and become a even more uniquely place for new homeowners to call their place of residence.

1

That being said, I am reaching out to you to see if you have any details or updates on the developers that are planning to be a part of this project? It would be a dream come true to be a part of this movement and growth process in Port Gamble, it has been one of my favorite places to go since I was a child. Thank you for your time, I look forward to hearing from you.

Thank you,

Brittany Bailey
Broker- Windermere Gig Harbor
5801 Soundview Drive, Ste. 101
Gig Harbor, WA 98335

M: 253.576.5236
O: 253.851.7374
bbailey@windermere.com
brittanybailey.withre.com

Response to Brittany Bailey

Comment 1

The comment supporting the Port Gamble Redevelopment Plan is noted.

6622 NE Middle St.
Suquamish, WA 98032
October 14, 2019

Mr. Jeff N. Smith,
Senior Planner
Kitsap County
Department of Community Development

RE: Comments on the Draft Environmental Impact Statement for the Port Gamble Redevelopment Plan

Dear Mr. Smith:

I am a retired Program Manager for NOAA's NW Fisheries Science Center in Seattle. I was a member of a team that did extensive research on the effects of contaminants in surface water runoff on marine fish and invertebrates.

Of the two alternatives proposed by OPG, I prefer Alternative 2; however, this alternative has serious limitations that are related to the roads and extensive parking areas in the proposed development located in the northern part of the mill site (MS). Roads and parking areas are major sources of surface water runoff (SWR) containing chemicals toxic to marine life. Some of these chemicals include combustion products of petroleum hydrocarbons (i.e., polycyclic aromatic hydrocarbons, PAHs). Examples of toxic and carcinogenic effects of PAHs include mortalities in herring embryos and cancers in humans from consumption of contaminated shellfish, respectively. I use these examples because OPG, Washington State Department of Ecology and others have gone to great lengths to enhance the herring habitat and shellfish beds in Port Gamble Bay as part of the extensive cleanup of the bay and MS. 1

The two main potential causes of SWR entering the bay from the proposed roads and parking areas are flooding due to sea level rise and to heavy rainfall, as the result of climate change and the fact that the MS is in a flood plain. Regarding sea level rise, OPG anticipates that the sea level will rise "up to approximately 50 inches over current levels". To address this rise, they plan on "Raising site grades on the MS by at least five feet above existing grades". According to the "Special Report on the Ocean and Cryosphere in a Changing Climate" recently released by the UN's Intergovernmental Panel on Climate Change, sea levels have risen dramatically in recent years and these levels will rise even more rapidly in the near future. Thus, I am concerned that increasing the grades by 5 feet will not be enough to deal with a 4 foot-plus sea level rise. 2

With respect to the MS being in a flood plain, OPG plans to "raise the elevation above the 100-year floodplain". The above-mentioned report states that the West Coast of the U.S. will experience 100-year floods on an annual basis. So, I am not sure that OPG's plan to raise the elevation of the MS above "the 100-year floodplain" will be sufficient to prevent serious flooding. 3

On a positive note, OPG states that there will be a state-of-the-art tertiary sewage treatment facility on the upland portion of Port Gamble. They also state that this facility will treat SWR. The treated SWR will be combined with the "clean water conveyance system" which will be discharged via outfalls into Port Gamble Bay and Hood Canal. I am assuming that OPG will be pumping sewage and SWR from the north developed area on the MS up to the treatment facility. My concern is that during major flooding events, the amount of SWR will overwhelm the conveyance, treatment and discharge systems and allow contaminated SWR to flow into Port Gamble Bay. 4

Because herring spawn in the winter rainy season, especially February, their embryos will be vulnerable to the discharge of contaminated SWR into Port Gamble Bay. Studies have shown that exposure of herring embryos to PAHs found in SWR causes abnormalities and death.

In conclusion, the plan for the redevelopment of the MS needs to address the "new normal" resulting from climate change. Other areas of the U.S., such as Houston, have had to face these new realities. Standard flood control and treatment technologies are often not able to deal with environment effects caused by climate change. I am concerned that the plan will not adequately scale up to meet the possibility of discharging contaminated SWR into Port Gamble Bay. If so, OPG should move the hotel, businesses, and residential units to somewhere else in Port Gamble. 5

Federal and Washington State agencies are making major efforts to restore salmon and orca populations in Puget Sound. Improving herring and forage fish populations is critical to this effort. Building potentially harmful developments next to Puget Sound's bays and waterways, such as the one proposed for Gardner Bay, could be detrimental to these efforts. 6

Sincerely,

Bruce B. McCain, PhD, member of Kitsap Livable Environment Action Network, other members include Mary Gleysteen, Mark Barabasz, Bert Jackson, Margaret Tufft, Craig Jacobrown, Alice McCain, and Baker Stocking

Response to Bruce McCain

Comment 1

The comment regarding surface water runoff is noted. All runoff from roads and parking areas would be collected and treated. The water quality stormwater management plan for the project has been designed to comply with the Kitsap County Stormwater Design Manual (KCSDM) dated February 16, 2010. Per the KCSDM, stormwater runoff from the Port Gamble project is required to meet basic water quality treatment (as defined by Chapter 6 of the KCSDM), and is proposed to be provided by three methods for the site; water quality wetponds, Contech Stormfilter Vaults (containing filter cartridges) and bioretention cells (i.e. rain gardens).

Comment 2

The comment related to climate change and sea level rise is noted. It is acknowledged that the science regarding climate change is continually evolving and the applicant may make future modifications to the mitigation as appropriate. Please refer to Response to the Suquamish Tribe, comment 4, for additional discussion on Mill Site fill.

Comment 3

The comment regarding the 100-year floodplain is noted. As indicated in Section 3.2 of the Draft EIS, approximately 175,000 cubic yards of fill would be placed on the Mill Site in order to raise the ground elevation by five to eight feet on average and bring the elevation of the Mill Site above the 100-year floodplain. Please refer to response to comment 2 of this letter and Response to the Suquamish Tribe, comment 4, for additional discussion on Mill Site floodplain.

Comment 4

The comment regarding sewage treatment is noted. Alternatives 1 and 2 do not propose to combine sewer and stormwater for treatment at any time. The storm water and sewer systems are proposed to remain separate, so that at peak stormwater events, the possibility for sewage surface discharges is eliminated. In 2017, a community sewer system was commissioned and replaced the existing treatment facilities. The current system consists of two lift stations, forcemain, a membrane bioreactor (MBR) and drainfield. Kitsap Public Utility District now owns and operates the facility. This system will not and currently does not treat surface water runoff. Future stormwater treatment systems will be provided with the future development.

Comment 5

The comment related to climate change is noted. It is acknowledged that the science regarding climate change is continually evolving and the applicant may make future modifications to the mitigation as appropriate.

Comment 6

The comment regarding salmon and orca populations is noted.

Jeff Smith 10/16/19
Senior Planner
Kitsap County DCD

Ref: Draft EIS for Port Gamble Redevelopment Comments:

After reviewing OPG's Redevelopment Plans for Port Gamble and having been involved for 12 years in that process, I have concerns and comments as: the Founder of ; Kitsap Forest and Bay Coalition, North Kitsap Trails, Kitsap County Non Motorized Facilities CAC, North Kitsap Heritage Park Stewardship Comm, Kitsap County Parks Forest Management Board and serving on ; Port Gamble Park Open Space/Trails Planning CAC, Washington State Cross State Trail Coalition, Co-Founder of the Methow Valley Community Trail, Vice President of Methow Valley Lodging Association, President of Okanogan County Citizens Planning Commission for Early Winters Resort, President of Sports Safety and Education Association and ; owner of John Willett and Associates Building/Planning/Developing/Design Company.

I was approached in 2007 by Jon Rose of OPG to help him make his pipe dream of redeveloping Port Gamble into a tourist/local destination surrounded by sustainable recreation opportunities and a forest and bay that would support the PG town and it's development into a environmentally sensitive developed community. There have been many good sound environmental pre-town redevelopment projects that have happened and that course should be maintained. 1

My concern with this current draft redevelopment plan is that it is 19th century ideas in the 21st century, a 21st century that must respond to the changing needs of our citizens and the environment.

Here are some of my first takes on what will help this redevelopment come up to 21st Century ideas:

1) Maximize green spaces with clustering of the individual houses. 2

2) More public (not just residents) non motorized trails/paths and connections and parking, accesses to the water for non motorized vessels and parking, access to the water for the public and parking, 3

3) A transit station and parking for commuters 4

4) Volunteer Fire Station (we are talking about 300 homes and 100's of multi units with possibly well over 1000 visitors on a good day). Local response from Kingston or Poulsbo will not meet good time lines, especially on weekends or commuter times with very heavy traffic that is already on 104/3/Bond. 5

5) The EIS says that there will not be more accidents with the increase of 1000's of visitors and inhabitants? Inconceivable. 6

6) Only a 200- increase in car trips on a weekend with all the new amenities and living units? Inconceivable. 7

7) What storm water system and treatment will be used to handle this huge increase in impervious surfaces. 8

8) There is an existing Water and Sports Business that needs a rental/sales/repair shop on the water. 9

9) Seeing as the 3500 acre park will be an amenity to PG Town there should be a increase in local town and business taxes to support the Park and it's infrastructure. The redevelopment of PG Town will have a huge impact on Kitsap County Parks budget and will need monetary help. Added Lodging fees. 10

10) The EIS says that the Parks will not be impacted? Inconceivable. And only that unavoidable impacts will happen? What are these unavoidables? 11

11) the increases in development fees will not be enough to help the County with the impacts of this redevelopment. The Planners here projected just a $300 impact fee that will only raise approx $ 60,000 'once' to offset the impacts of 1000's of visitors and permanent residents? Inconceivable. 12

12) Hwy 104 and 307 interchange will need a new right turn lane going South, only? That interchange will need a major overhaul with the increase in traffic going north and south into and out of PG Town and along with bike lanes and expanded parking for commuters, that is currently there now. 13

13) The EIS says that OPG has the OPTION to build Carver St access to the new Kitsap County Non Motorized Ride Park and a bike lane to the Ride Park being built at the top of the hill above the Peacock Farm? There is no other way to get to the Ride Park that we looked at when we did the study on the PG Park Trails Plan and without the access the Ride Park would not be the Planned amenity for PG Town and it's visitor and residents . The access must be done, IT CAN"T BE AN OPTION. 14

14) The roundabout at the intersection of 104 and Puget Way/Olympia is a must for safety and congestion with either Alternative 1 or 2. 15

15) The rural Tract/Event Area South of PG Town should maintain a sufficient area and acreage to hold Recreation Events and Parking for access to the trails and for horse trailers as the trails are a huge amenity for the Town and citizens from across the state that use this site for events and access today. 16

In conclusion: After my review of Alternative 1 or 2 for the redevelopment of Port Gamble, I would not support either Plan and I would ask that the Planners go back to the Planning table and re-imagine a Port Gamble that will embrace it's Heritage and also embrace the 21st Century. The LMRID can be maintained and it's numbers can be supported, but only if sustainability is the key that the plan is developed around. OPG has spent millions already going down this sustainable path, now is not the time to turn away from that direction and all the good work done by them and also, the Tribes, the State, the County, the Federal Government, the Navy, Non Profits and all the work done by those and the hugely involved citizens of the County and State leading up to this point in the redevelopment of Port Gamble Town. It could be a real thoughtful project that embraces all our citizens and our environment and still make lots of money for the Developers. This can be a legacy project for OPG (which at one time it was called) that shows we have learned from the past and we are now going to be better at being focused on our children's children's future. 17

John Willett/Poulsbo WA.

Response to John Willett

Comment 1

The comment regarding previous work in the project area, involvement in local organizations and the design of the redevelopment plan is noted.

Comment 2

The comment regarding clustering housing to maximize green spaces is noted. As indicated in Section 3.11 of the Draft EIS, redevelopment under Alternatives 1 and 2 would include approximately 239 to 245 acres of open space area, respectively. These areas would include parks, trails, agricultural areas, natural/wooded areas, critical areas and buffers, landscape/lawn areas, and other open space.

Redevelopment under Alternatives 1 and 2 would provide surplus recreational resources (i.e., more than sufficient to meet LOS goal) in the areas of open space, playgrounds, shoreline access and trails. Site development under Alternatives 1 and 2 would contribute to the deficit in community parks.

Comment 3

The comment regarding non-motorized trails and access to the shoreline is noted. As indicated in Section 3.11 of the Draft EIS, redevelopment under Alternatives 1 and 2 would provide approximately 3.0 to 2.5 miles of new public trails on the site, which would be more than sufficient to meet the LOS goal. In addition, the future Sound to Olympic Trail could be accommodated to allow for further public access to trails on site and in the site vicinity.

The redevelopment alternatives would also provide increased public passive recreation opportunities on the site in the form of a new publicly accessible shoreline trail, open space acreage along the shoreline where a trail would be located and the potential for improved connections from the proposed shoreline trail to the upland area. Improved access for residents and visitors includes sidewalks and plazas and other visually accessible open space in the development.

Comment 4

The comment regarding a transit station is noted. As stated in Section 3.13 of the Draft EIS (Transportation), new resident and employment populations on the site would provide the

potential for increased transit ridership. However, Alternative 1 and 2 are not anticipated to noticeably impact transit operations or performance within the study area. Future Kitsap Transit stops are envisioned as part of the proposal to best facilitate future transit operations and use.

Comment 5

The comment regarding a volunteer fire station is noted. As indicated in Section 3.12 of the Draft EIS (Public Services), the primary response station to the Port Gamble site (Station 72) is currently staffed approximately 80 percent of the time. In order to effectively handle the increased number of calls that could result from the Port Gamble redevelopment, the Poulsbo Fire Department would need to ensure full time staffing of Station 72. It is anticipated that tax revenues generated from redevelopment of the site (including construction sales tax, retail sales tax, business and occupation tax, property tax, utilities tax, and other fees, licenses and permits) would accrue to Kitsap County and would help to offset the increased demands for fire services and increased staffing that could be required.

Comment 6

The comment regarding vehicle accidents is noted. No existing safety issues were identified based on collision data from 2011 to 2016. An Average of 3 or less collisions per year is noted in Table 3.13-1 of the Draft EIS. As indicated in Section 3.13 of the Draft EIS (Transportation), traffic generated under the Alternatives would be anticipated to result in a proportionate increase in the probability of collisions. However, it is not anticipated that the additional traffic generated under Alternative 1 would create a safety hazard or significantly increase the number of reported collisions.

Comment 7

The comment regarding vehicle trips is noted. Consistent with professional transportation analysis methodologies to focus on peak traffic hours and previously completed studies, the EIS focused on the weekday PM peak hour. Trip generation estimates were not provided for the weekend. Alternative 1 is anticipated to generate approximately 675 weekday PM peak hour trips, Alternative 2 is anticipated to generate approximately 449 weekday PM peak hour trips.

Comment 8

As stated in Section 3.2 of the Draft EIS (Water Resources), the proposed project would include a permanent stormwater control system, installed per the 2010 Kitsap County Stormwater Design Manual. This system would replace and improve the majority of the existing drainage system onsite. The permanent stormwater system would include a conveyance system, water quality

treatment, detention facilities and new and existing outfalls to Hood Canal, Machias Creek, and to onsite wetlands. Basic water quality treatment would be achieved through the use of water quality ponds, water quality media filters located in manholes or vaults, and rain gardens.

Two stormwater ponds are proposed within the Port Gamble site. The proposed water quality pond for the west portion of the site would serve approximately 35.4 acres of development and 25.9 acres of undisturbed forest. A detention pond in the southeast corner of the site would also serve as a water quality pond for the recreation tract. They would have a water quality storage volume that is in addition to their respective detention volumes.

Comment 9

The comment regarding the existing water and sports business operations is noted. Opportunity for shoreline access for both alternatives is provided; however, the operation of existing businesses have not been determined or evaluated for the EIS.

Comment 10

The comment regarding increased local town and business taxes is noted.

Comment 11

The comment regarding impacts to parks is noted. As indicated in Section 3.11 of the Draft EIS (Parks & Recreation), redevelopment under Alternatives 1 and 2 would provide surplus recreational resources (i.e., more than sufficient to meet LOS goal) in the areas of open space, playgrounds, shoreline access and trails. Site redevelopment under Alternatives 1 and 2 would contribute to the deficit in community parks.

The increases in on-site population due to new residents and employees would result in increased demand on area parks and recreational facilities on an incremental basis over the buildout of the Port Gamble site. However, proposed open space and recreational facilities provided with Alternatives 1 and 2 would help to fulfill the increased demand.

Comment 12

The comment regarding development fees and impacts fees is noted. As indicated in Section 3.12 of the Draft EIS (Public Services), in addition to development fees and impact fees, a portion of the tax revenues generated from development of the site (including construction sales tax, retail sales tax, business and occupation tax, property tax, utilities tax, and other fees, licenses and permits) would accrue to Kitsap County and would help to offset the increased demands for law enforcement, fire and EMS and public school services.

Comment 13

The comment regarding roadway improvements is noted. The improvements identified in Section 3.13 of the Draft EIS (Transportation) address issues identified under peak conditions. The parking supply within the proposed redeveloped are subject to County code requirements (Kitsap Municipal Code Title 17) to ensure that adequate parking supply is provided to meet parking demands. A parking study has been submitted to Kitsap County and no adverse parking impacts are anticipated.

Comment 14

The comment regarding Carver Street access and the ride park is noted. While the Port Gamble Master Plan identifies a portion of Carver Drive as optional, full access to Carver Drive exists today via Gamble Way NE, the entry off SR 104 currently serving the westerly portion of the existing community. Therefore, even if the Carver Drive extension option is not selected, access to the ride park can still be accomplished through the roadways planned on the west side of the master plan that are not optional.

Comment 15

A roundabout is proposed at the SR 104/Puget Way intersection under Alternatives 1 and 2. It is anticipated some level of development could occur before construction of the roundabout is required.

Comment 16

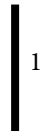
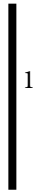
The comment regarding areas for recreation events and parking is noted. The Port Gamble Master Plan includes parking for the planned uses within the town. Regarding off project needs, Kitsap County recently received grant funding for creating a Master Plan for the 3,500-acre Port Gamble Heritage Park which should be completed by 2023. The grant includes funds for design and construction of additional trailhead parking at the south end of the County Park (including horse trailer parking). The Port Gamble Heritage Park Master Plan will address planning for events and tourism. The Port Gamble Master Plan also allows for some continued permanent trailhead parking south of Port Gamble (former model airplane field), as well as having set aside locations where the County may construct additional trailhead parking in the future.

Comment 17

The comment regarding not supporting Alternative 1 or 2 is noted.

2019 -Port Gamble Redevelopment Plan EIS (Public)

	Comment ID	Name	Comment	Comment Period	Created
1	2019TH-001	DCD	Comment TEST	SEPA	09/10/19 12:38 PM
2	2019TH-002	amy swenson	I hope you go with Option 2, with fewer buildings and more space for walking. I would love for the public to be able to enjoy that beach area and for there to be a walking trail or area to walk the beach.	SEPA	09/17/19 3:41 PM 1
3	2019TH-003	Catherine Freudenberg	Not a lot of difference between the two development options, other than the reduced commercial space. Both of the development options add significant housing and burden to the existing road capacity, which already struggles to carry the tourism traffic. Capacity needs to be increased if this area is going to be developed. Besides Port Gamble's historical significance, it's a scenic destination. Housing should not be placed along the waterfront, to do so will most certainly negatively affect the historical port town feel of the area. Housing should be distributed so as not to overburden the natural elements, whether it be beachfront or forest; and, building structures should fit the feel of the area. Overly dense developments, most certainly change the feel and character of an area. The 3rd option, to do nothing but let the buildings age, is basically positioned to manipulate and force a decision to develop - development doesn't have to be negative but cramming it into a small area. creating a highly dense area, can certainly produce a negative outcome.	SEPA	09/19/19 9:11 PM 1
4	2019TH-004	keith a beebe	I oppose any development on the old Mill site. There are substanital uplands available for applicants needs for hotels, condos and commercial development. It is disingenuous to state in the materials referenced by OPG that OPG is "giving up" it industrial zoning... such development is a chimera. I believe the County should require a third option that eliminates any development of the Mill site and begins a restoration process to its original pre-industrial natural habitat.Or, if OPG fails to submit such a proposal, for scoping and environmental review, then the entire process should be subject to denial. Thank you.	SEPA	09/22/19 8:35 AM 1 2 3
5	2019TH-005	Robert Smaus	I think both alternative plans are excellent, well thought out, timely and the kind of development the county has been suggesting - clustered and with lots of open space. I am curious what those cottage would look like and the access to them. I might actually be ready to move from our 10 acres to one of those by the time they are done! I look forward to the presentation on the 24th. My only concern has nothing to do with OPG but with the state and the ferry and highways which have become a bottleneck effecting the town of Kingston. This would only acerbate the situation but the timing and rerouting might coincide with Port Gamble's development. Are there any plans for the increased traffic in North Kitsap?	SEPA	09/22/19 8:47 AM 1 2
6	2019TH-006	Lily Doton	Is there a no option for all these new homes?	SEPA	09/26/19 4:16 AM 1
7	2019TH-007	James Gillick	I hope there will be possibility of some condominiums being built.	SEPA	09/28/19 2:39 PM 1
8	2019TH-008	Kay DuPont	I would hope that someone is looking at the traffic pattern and options. as someone that lives south of the bridge we many times have to go home via bond and port gamble to even get to our residences. unless we fix the traffic issues we are going to compound an already messy situation. With the added influx of tourists in the summer it is a parking lot from Poulsbo to port gamble. Before we add more housing we need the infrastructure in place. It is easy to tell when the bridge has been opened and or a ferry to Kingston has arrived.	SEPA	09/29/19 8:07 AM 1
9	2019TH-009	mark Schorn	I am excited about the redevelopment plans for Port Gamble overall. I am especially excited about the idea of a working farm/agricultural zone at the old Babcock Farm. I think Port Gamble has the potential to be a fun, vibrant community. I do have concerns about increasing traffic though. We live on Hwy 104 about 3 miles southeast of the town. It is already becoming increasingly difficult to exit or driveway onto Hwy 104. With the expected increase in traffic created by the town's development, I envision it getting much more difficult to enter/exit our driveway. Adding a rt turn lane at Bond/104 jcn will not solve our problem and may in fact make it worse because we won't have a break in the traffic created by the traffic light. I would like to see creative solutions like requiring transit from ferries to Port Gamble to mitigate traffic. Thanks Mark Schorn	SEPA	09/29/19 10:44 AM 1 2

	Comment ID	Name	Comment	Comment Period	Created
10	2019TH-010	Bert Jackson	Jeff Smith, Department of Community Development Does the grandfather clause awarded by Kitsap County over ride the environmental concerns? Whether it is hotels or industrial usage, OPR says they are entitled to put them on the mill site. OPR will violate many set back regulations and other regulations that have been put in place to protect the environment. The permits were applied for several years ago. If any construction is allowed which building laws will OPR have to follow? The current laws were passed to protect the environment. How will EIS protect the the environment and protect the new clean up in Gamble Bay? Also, is there such a thing as view pollution? These developments on the mill site will obscure the natural view. The natural view adds value to all of Port Gamble and its development. Will the EIS please protect the rare natural environmental view in Port Gamble for us all? Thank you, Bert Jackson	SEPA	10/08/19 10:19 AM  
11	2019TH-011	Bruce McCain	Please see attached comments below.	SEPA	10/14/19 11:35 AM
12	2019TH-012	john willett	Port Gamble EIS Comments and Cocerns.	SEPA	10/21/19 12:19 PM
13	2019TH-013	John Willett		SEPA	10/21/19 2:05 PM
14	2019TH-014	Brittany Bailey		SEPA	10/25/19 9:59 AM
15	2019TH-015	Tom Vessella	We are located about 0.5 miles from Port Gamble and will be neighbors to some of the proposed development. We have worked with Pope on easements and well-water quality mitigation in recent years. We are highly supportive of both proposed designs, and believe it is a major step forward for North Kitsap. We recognize the challenge in pleasing all constituents with a project this ambitious, and believe that Pope has taken measures to socialize reasonable designs that should be approved. To turn Port Gamble into a proper and self-sustaining community is a major improvement over the current operating model as primarily an event venue, and we think that families like ours will enjoy being part of the new community. As recommendations, I'd like to see thoughtful design reviews to preserve the historical nature of the town, and extra consideration into walking/biking paths throughout the greater area to enable residents and visitors to enjoy the area.	SEPA	11/01/19 4:58 PM 
16	2019TH-016	Mark Morgan,	RE:KPUD's Water Reuse Plan for Port Gamble Community for Water Conservation As discussed, we are in a permit discussion with the Washington Department of Health about using the reclaimed water. One items brought up was that the 2015 SEPA(Draft EIS) did not consider water reuse. I spoke with one of the project engineers and here are the proposed uses for the reclaimed water: - Landscape irrigation (this will include the grounds around the treatment plant, potentially watering the drainfield area; potentially irrigating some of the "upland" properties, curb-strips and green spaces in the townsite); - Irrigation inside Pope's existing greenhouse; and - Road washing and dust control. Mark Morgan Water Resources Manager 360.626.7721 (Comments from an email from Mark Morgan to Steve Heacock, dated August 21, 2019)	SEPA	11/08/19 8:44 AM 
17	2019TH-017	Ondia Shapiro	This is amazing, thank you! We're so excited to see everything. We'd like to help out any way we can to back either proposed plan (#1 or the small of the two #2)	SEPA	11/15/19 10:53 PM 

Response to Amy Swenson

Comment 1

The comment regarding preference for the level of development under Alternative 2 is noted.

Response to Catherine Freudenberg

Comment 1

The comment regarding housing density and relationship to the historic town/waterfront is noted. As indicated in Section 3.6 of the Draft EIS (Historic Resources), Alternatives 1 and 2 would "retain all identified historic single-family residences", and "development would generally reinforce historic development patterns on the Port Gamble site and provide for contemporary interpretations in new construction within the parameters of the proposed design guidelines for the redevelopment area."

Traffic data for the transportation analysis was collected during the summer when traffic peaks in the area. Improvements identified in the DEIS address issues identified under peak conditions.

Response to Keith Beebe

Comment 1

The comment regarding opposition to redevelopment on the Mill Site is noted.

Comment 2

Comment noted.

Comment 3

The comment regarding restoration of the Mill Site is noted. Please note that Draft EIS Alternative 3 (No Action) Scenario C assumes that the Mill Site is restored to a natural conditions and no new development would occur in this area.

Response to Robert Smaus

Comment 1

The comments regarding the clustered nature of the Alternative 1 and 2 plans are noted.

Comment 2

The comment regarding traffic in Kingston is noted. WSDOT is working to identify and implement enhancements that address the effects of ferry traffic in downtown Kingston. Kitsap County received funding to advance the preliminary engineering work to realign ferry traffic to First Street. WSDOT and Kitsap County are working closely to design the widening of First Street. This process will incorporate many of the features from the 2016 Kingston Complete Street Study.

WSDOT and the local partners will also consider exploring the feasibility of constructing a ferry holding lot on property owned by WSDOT near Lindvog Street and SR 104. Construction funding for both the relocation of ferry traffic onto NE 1st Street and new holding near Lindvog Street/SR 104 area have not been identified as of publication of this Final EIS.

Response to Lily Doton

Comment 1

Comment noted. The Draft EIS evaluates a range of alternatives, including a No Action Alternative reflecting less development than under Alternatives 1 or 2.

Response to James Gillick

Comment 1

The comment regarding the need for multifamily units on the site is noted. Please note that Alternative 1 includes a limited number of multifamily units (townhouse and cottages) on the Mill Site.

Response to Kay DuPont

Comment 1

Traffic data for the transportation analysis was collected during the summer when traffic peaks in the area. Improvements identified in the Draft EIS address issues identified under peak conditions. The trip distribution and assignment is meant to reflect typical travel patterns.

Regarding traffic in Kingston, WSDOT is working to identify and implement enhancements that address the effects of ferry traffic in downtown Kingston. Kitsap County received funding to advance the preliminary engineering work to realign ferry traffic to First Street. WSDOT and Kitsap County are working closely to design the widening of First Street. This process will incorporate many of the features from the 2016 Kingston Complete Street Study.

WSDOT and the local partners will also consider exploring the feasibility of constructing a ferry holding lot on property owned by WSDOT near Lindvog Street and SR 104. Construction funding for both the relocation of ferry traffic onto Northeast 1st Street and new holding near Lindvog Street/SR 104 area have not been identified as of publication of this Final EIS.

WSDOT has also studied the backups heading north on SR 3 across Hood Canal for many years. Those backups are caused by bridge openings and only having a single northbound lane with no off-highway parking capacity. These backups during bridge openings would not be materially affected by the Port Gamble project. A regional solution is needed to solve this problem.

Response to Mark Schorn

Comment 1

The comment regarding the potential to create a vibrant community on the Port Gamble site is noted.

Comment 2

The comment regarding traffic and the implementation of additional transit operations is noted. Future Kitsap Transit stops are envisioned as part of the proposal to best facilitate future transit operations and use.

Response to Bert Jackson

Comment 1

As indicated in Section 3.9 of the Draft EIS (Relationship to Plans and Policies), the Port Gamble application was submitted to Kitsap County prior to adoption of the 2014 Shoreline Master Program (SMP) and the Port Gamble Redevelopment Plan is subject to the 1999 SMP in effect at the time of application. Development under Alternatives 1 and 2 would be consistent with applicable regulations; refer to Section 3.9 of the Draft EIS for detail.

Comment 2

The comment regarding view impacts is noted. Section 3.10 of the Draft EIS (Aesthetics/Light & Glare) provides simulations of building massing envelopes from representative viewpoints, including views from Port Gamble Bay and Hood Canal.

Response to Tom Vessella

Comment 1

The comments supporting the proposed Port Gamble Redevelopment Plan are noted.

Response to Mark Morgan (Kitsap County Public Utility District)

Comment 1

The comment regarding water reuse is noted. The Port Gamble Master Plan Plat/PBD did not include a proposal for using reclaimed water. Therefore, this EIS did not include any analysis or discussion concerning this topic. If plans move ahead in the future for the use of reclaimed water, additional SEPA analysis may be needed at that time.

Response to Onida Shapiro

Comment 1

The comment supporting the Port Gamble Redevelopment Plan is noted.

CHAPTER 5

Acronyms and Definitions

CHAPTER 5
ACRONYMS AND DEFINITIONS

BMP	Best Management Practice
CAP	Cleanup Action Plan
CARA	Critical Aquifer Recharge Area
CO	Carbon Monoxide
COC	Constituent of Concern
DEIS	Draft Environmental Impact Statement
DU	Dwelling Unit
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FEIS	Final Environmental Impact Statement
GHG	Greenhouse Gases
HAER	Historic American Engineering Record
KCC	Kitsap County Code
LAMIRD	Limited Area of More Intensive Rural Development
LOSS	Large On-site Septic System
MF	Multifamily
Mill Site	RHTW zoned area
MTCA	Model Toxics Control Act
NAAQS	National Ambient Air Quality Standard
NHL	National Historic Landmark
NRHP	National Register of Historic Places
OHWM	Ordinary High Water Mark
OPG	Olympic Property Group (applicant)
PSCAA	Puget Sound Clean Air Agency
PSE	Puget Sound Energy
PUD	Public Utility District
RHT	Rural Historic Town Ordinance: Ordinance that divides Port Gamble into three district zones (RHTR, RHTC, RHTW).
RHTR	Rural Historic Town Residential
RHTW	Rural Historic Town Waterfront
RI/FS	Remedial Investigation and Feasibility Study
RR	Rural Residential
RW	Rural Wooded
SEPA	State Environmental Policy Act
SF	Single Family
SMA	Shoreline Management Act
SMMWW	Stormwater Management Manual for Western Washington
SMP	Shoreline Master Program
SMS	Sediment Management Standards
TDO	Town Development Objectives
Town Site	RHTC and RHTR zoned area
WAC	Washington Administrative Code
WCI	Western Climate Initiative
WSDOT	Washington Statement Department of Transportation

CHAPTER 6

References

CHAPTER 6
REFERENCES

Deeter, Jerald. Quaternary Geology and Stratigraphy of Kitsap County. 1979 Thesis, Western Washington Uninversity: *http://www.kitsapgov.com/gis/metadata/metadata.asp?xml=enviro/stability.shp.xml*. accessed March 2004.

Department of Ecology. Guidance on Climate Change and SEPA. June 1, 2010

Department of Ecology. Guidance for Ecology Including Greenhouse Gas Emissions in SEPA Reviews and SEPA GHG Calculation Tool. June, 2011.

GeoEngineers. Evaluation of Wetland Nitrate Removal from Groundwater and Impacts of Nitrates and Water Quantity on Wetlands: Port Gamble Large On-Site Sewage System, Port Gamble, Washington. Submitted to: Olympic Property Group I, LLC. January 21, 2014.

Golder Associates. Port Gamble Upland LOSS: Site Risk Survey and Hydrogeologic Report. DOH #2012-035. Submitted to: Olympic Property Group I, LLC. January 10, 2014.

Huppert, Daniel D; Moore, Amber; and, Dyson, Karen. Impacts of Climate Change on the Coasts of Washington State. School of Marine Affairs of Ocean and Fishery Sciences, University of Washington, Seattle Washington.

Intergovernmental Panel on Climate Change (IPCC). Fourth Assessment Report. February 2, 2007.

IPCC. Summary for Policymakers. April 30, 2007.

Kitsap County Code.

Kitsap County Comprehensive Plan, 2016.

Kitsap County Department of Community Development. CARA Map: Kitsap County, Washington, Critical Aquifer Recharge Areas; Category I and II. December 2006.

Kitsap County Department of Community Development. Geological Hazard Map: Kitsap County, Washington, Geologically Hazardous Areas. June 2007.

Kitsap County Final Capital Facilities Plan Update 2013-2025. Kitsap County UGA Sizing and Composition Remand. August 2012. Prepared for: Kitsap County, Special Project Division.

Kitsap County Fire District 18/Poulsbo Fire Department. 2011 Annual Report.

Kitsap County Fire District 18/Poulsbo Fire Department. 2011 Annual Report of Service Level Objectives.

Kitsap County Fire District 18/Poulsbo Fire Department. 2010 Annual Report.

Kitsap County Fire District 18/Poulsbo Fire Department. 2010 Annual Report of Service Level Objectives.

Kitsap County Fire District 18/Poulsbo Fire Department. 2009 Annual Report.

Kitsap County Fire District 18/Poulsbo Fire Department. 2009 Annual Report of Service Level Objectives.

Kitsap County. Parks, Recreation and Open Space Plan. February 2018 http://www.co.kitsap.wa.us/parks/Parks/Pages/PROS_Plan.htm

Kitsap County Sheriff's Office, Personal Communication, 2013.

Kitsap County Sheriff's Office. 2013 Annual Report. 2013.

Kitsap County Shoreline Management Plan. 1999.

Kitsap County Shoreline Management Plan. Locally Adopted, December 2014.

Manning, Jay. Ecology Memo RE: Climate Change – SEPA Environmental Review Proposals. April 30, 2008.

National Park Service. How to Apply the National Register Criteria for Evaluation. National Register Bulletin, 15. U.S. Department of the Interior, National Park Service, Interagency Resources Division, 1997.

North Kitsap School District. 2015 Capital Facilities Plan.

North Kitsap Trails Association. North Kitsap String of Pearls Trail Plan. Adopted by Kitsap County November 28, 2011.

Puget Sound Regional Council. Regionally Significant State Highways – Kitsap County (map). September 2009.

State of Washington, Superintendent of Public Instruction, School Construction Assistance Program. Report 1049 – Determination of Projected Enrollments. School Year 2012-2013.

Terracon. Geotechnical Setback Review: Port Gamble Townsite Development. Kitsap County, Washington; Terracon project 81125064. December 31, 2012.

Transpo Group. Murr Winery Traffic Impact Analysis. 2001.

Transportation Research Board. Highway Capacity Manual 2000. 2000.

Washington State Department of Ecology. Washington State Coastal Atlas Map: *https://fortress.wa.gov/ecy/coastalatlas/default.aspx*. Updated 2013

Washington State Department of Natural Resources. Geology Map: Kitsap County, Washington, Geologic Map Units. OFR 2005-3. December 2005.

Washington State Department of Transportation. Level of Service Standards for Washington State Highways. January 2010.

ZZA (Zipper Zeman Associates, Inc.) Geotechnical Feasibility Report: Baseline Site Conditions Study; Port Gamble Multi-Use Development. Port Gamble (Kitsap County), Washington. ZZA project J-2238. December 15, 2005.

ZZA (Zipper Zeman Associates, Inc.). Geotechnical Pre-Design Report: Townsite & Millsite Study; Port Gamble Multi-Use Development. Port Gamble (Kitsap County), Washington. ZZA project J-2238-03. May 2, 2006.

ZZA (Zipper Zeman Associates, Inc.). Geotechnical Pre-Design Report: Forested Upland Study; Port Gamble Multi-Use Development; Port Gamble (Kitsap County), Washington; ZZA project J-2238-05. January 29, 2007.

CHAPTER 7

Distribution List

CHAPTER 7
DISTRIBUTION / NOTICE OF AVAILABILITY LIST

Federal Agencies

US Navy

State Agencies

WA State Department of Transportation

WA State Department of Ecology

WA State Department of Fish and Wildlife

WA State Department of Natural Resources

WA State Department of Archeology and Historic Preservation

County Agencies/Departments

Kitsap County Public Works

Kitsap County Public Works, Transportation Planning, MS-26

Kitsap County Parks and Recreation, MS-6

Kitsap County Health District

Kitsap County Fire Marshal

Kitsap County SEPA Coordinator

Kitsap County Staff Planner – Jeff Smith

Kitsap County Department of Community Development – Karen Ashcraft

Kitsap County Department of Community Development - Counter

Service Providers

North Kitsap School District #400

Kitsap Public Utility District No. 1 (water purveyor)

Kitsap Transit – Doug Johnson

Kitsap County Fire Protection District No. 18

Puget Sound Energy, Attn: Real Estate

Tribes

Port Gamble S'Klallam Tribe

Suquamish Tribe

Other

Owner – Pope Resources

Applicant – Olympic Property Group, LLC

Engineer/Surveyor/Representative – David Evans and Associates

Adjacent Property Owners

Property owners within an 800 foot radius plus land owners along SR 104 (the sole transportation route serving the site):

- To the west: SR 104 approximately 1.25 miles west of the town site to Hood Canal bridge, and then continuing approximately 0.5 mile south along SR 3.
- To the south: SR 104 approximately 2.5 miles south of the town site, effectively picking up the entire west shore of Port Gamble Bay.
- To the east: Port Gamble S'Klallam Reservation, and Hood Canal Drive approximately 0.5 mi. north of the north reservation boundary.

Interested Parties

Bailey, Brittney

Banfill, Sally

Barabasz, Mark

Beebe, Keith

Bode, Marilyn

Call, Roma

Castigliano, Christine

Charma, Jagdish

Chin, Doug

Collins, Betsy

Cooper, Betsy

Degus, Christine

Doton, Lily

DuPont, Kay

Eber, Ron

Endresen, Patricia

Foritano, Lou

Freudenberg, Catherine

Gillick, James

Gleysteen, Mary

Griffin, Jeffrey

Griffth, Gregory

Haley, Dave

Hirschi, Ron

Ho, Chuimei

Hoffman, Marcus

Jackson, Bert

Jacobrown, Craig

Kilpatrick, Brian

Krisman, Irwin

Landon, Ron

Lee, Paul

McCain, Bruce

Morgan, Mark

Nevins, Tom

O'Sullivan, Alison

Rossworn, Jackie

Salerno, Ben

Schorn, Lyn

Schorn, Mark

Shapiro, Onida

Sledd, John

Smaus, Robert

Smith, Susie

Swenson, Amy

Troup, Linda

Vessella, Tom

Willett, John

Willson, Joyce

Winkler, Lucretia

APPENDIX A

Updated Section 3.1 – Earth

CHAPTER 3
AFFECTED ENVIRONMENT, SIGNIFICANT IMPACTS, MITIGATION MEASURES AND SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

This chapter describes the affected environment, impacts of the alternatives, mitigation measures and any significant unavoidable adverse impacts on the environment that would be anticipated from redevelopment of the Port Gamble site under the DEIS alternatives.

3.1 EARTH

This section of the DEIS describes the existing topographic, soils and geologic conditions on the Port Gamble site. Potential impacts from redevelopment of the DEIS alternatives are evaluated and mitigation measures identified. This section is based on the *Geotechnical Overview* (February 2018) prepared by Terracon (see **Appendix B**).

Subsequent to the issuance of the DEIS, a *Landslide Hazard Assessment* (March 2020) was completed for the Babcock Farm site and surrounding area by Golder (see **FEIS Appendix D**). Information added or changed subsequent to issuance of the Draft EIS is shaded to ease identification of the added or changed information.

3.1.1 Affected Environment

Information on existing site conditions is based on available geologic information and previous geotechnical work conducted at the site (2005; 2006; 2007, 2012, and 2013). Previous investigations included a variety of exploration and background research, such as review of topographic maps, lidar maps, surface reconnaissance, exploratory borings and test pits and limited geotechnical laboratory testing.

Topography

In general, the Port Gamble site occupies part of a relatively flat upland peninsula that is rimmed by marine bluffs on three sides. These bluffs extend up to approximately 100 ft. high, with inclinations ranging from 2H/1V (horizontal: vertical), to near-vertical. Teekalet Bluff spans the northern end of the peninsula over a distance of about 1 ¼ miles. Specific topographic conditions for various area of the site are detailed below.

Town Site and Agrarian Area

In general, surface grades throughout the Town Site (RHTR and RHTC-zoned areas) are fairly level to gently rolling. One notable feature in this area is a broad, shallow grass-covered

depression located near the center of town. The depression is a natural lakebed that was drained in the past and gradually infilled over the past century or more. The Town Site is bordered on both the north and east by natural marine bluffs. In the RR and RW zoned areas in the agrarian portion of the site to the south and west of the town, surface grades slope upward from Port Gamble Bay at a gentle angle.

The northern town bluff begins near the northeastern portion of town and extends approximately 500 yards westward past the community park, the cemetery and a small residential area, terminating at the outlet of Machias Creek. This bluff ranges from 20 ft. high at each end to approximately 85 ft. high near the middle, at a point directly below the cemetery. Slopes along the bluff generally range from about 1H:1V to 1/4H:1V, with angles generally steepening in an upward direction from Hood Canal; as such, most of the bluff has a slightly concave shape, which is likely due to on-going erosion at the top and associated deposition at the bottom. In many locations, the uppermost 10 to 15 ft. of bluff is nearly vertical.

The eastern town bluff begins near the northeastern corner of town and extends southward along the western side of Port Gamble Bay for more than 500 yards, past the community water tanks and adjacent residential area. Bluff heights along the entire segment range from about 20 to 50 ft., and inclinations range from about 1H:1V to 1/4H:1V. There is no indication of landslide activity along the portion of the bluff between the Town Site and the Mill Site; the presence of the Mill Site between the water and the toe of the bluff reduces the potential for erosion and associated landslide activity. South of the Mill Site, erosion associated with wave action have resulted in areas if oversteepened slopes, fresh outcrops of glacial till, toppled trees, and non-vegetated colluvium block; all of which indicate active coastal bluff retreat process.

Mill Site

The Mill Site (RHTW-zoned area) consists of an expansive flat and level area that begins at the base of the northern and eastern town bluffs and extends into the mouth of Port Gamble Bay. This flat area consists of a fill pad that was created in the mid to late 1800s to accommodate the former sawmill. The fill pad surface lies at an elevation approximately 15 ft. above sea level.

Refer to **Figure 2-4** in **Chapter 2** for a graphic showing the site topography.

Subsurface Soil Conditions

General Geology

The Port Gamble site is dominated by Quaternary-age glacially deposited soils of three main types: glacial till, advance outwash and pre-glacial deposits, as described below.

Glacial Till

Glacial till, the most prevalent soil type onsite, ranges from 3 to 80 ft. thick, and is a non-sorted, non-stratified mixture of silt, sand and gravel up to boulder size. Glacial till typically possess a very high density, very high shear strength and very low permeability. This deposit covers most of the upland area within and surrounding the Town Site, forming a till cap over the older soils beneath it.

Advance Outwash

The glacial till deposit is underlain by a laterally extensive deposit of advance outwash with a thickness that can range from 10 to several hundred ft. Advance outwash is moderately to well-sorted, well stratified gravel, and sand, silt and clay. These soils typically possess a high density, high shear strength and low to moderate permeability. Finer grained varieties (clays and silts) can develop stress fractures that reduce their effective shear strength. Advance outwash exposures have been mapped along the east-facing upland hillslope located southwest of the Town Site.

Pre-Glacial Deposits

Several small-scale exposures of older pre-glacial deposits are present in the Town Site vicinity. Typically, the pre-glacial deposits comprise stratified mixtures of clay, silt, sand, and/or gravel. Because these deposits pre-date the local glaciation, they underlie both the glacial till and advance outwash deposits, and they extend several hundreds of ft. below the ground surface.

Mill Site Soils

The Mill Site is underlain by layered dredge sands containing wood particles and other debris associated with past sawmill operations. These non-native soils are quite variable both vertically and horizontally. Beginning with the uppermost layer, the near-surface Mill Site soils are as follows:

Surficial Granular Fill Soil – Consists of sands, silty sands and gravels with relatively small quantities of extraneous materials, such as wood, concrete, brick and seashell fragments. Densities range from very loose to dense, but are primarily in the loose to medium dense category. The thickness ranges from 5 to 20 ft. This layer is most prevalent near the center of the Mill Site pad, where extensive over-excavation has reportedly been performed in association with a former power plant, as well as at the southern end of the pad.

Wood-Laden Fill Soil – A 5 to 15 ft. thick layer of fill consisting of silty sands with a relatively large amount of wood material. Densities ranged from loose to medium dense. This layer appears most prevalent on the northern and eastern margins of the Mill Site pad.

Upper Marine Sediment – Consists of sands, silty sands and sandy silts, with varying amounts of gravels and seashells. Thicknesses are up to 33 ft. and densities range from loose to medium dense or stiff. This layer appears to consist of native marine sediments, but may include some dredged sediments that were used as fill material.

Town Site Soils

Within most of the Town Site, the uppermost soil unit consists of pre-glacial soils, comprised of very stiff to hard clays and silts with variable amounts of sand and gravel extending to depths of approximately 20 to 40 ft. below existing grades.

Within the large, circular depression near the middle of the Town Site, there is a sequence that appears to be lacustrine (lakebed) sediments transitioning into pre-glacial soils. The central depression is underlain by loose, silty gravelly sands (with brick fragments) overlying approximately four ft. of very soft to medium stiff, clayey silt with variable amounts of sand and organic matter; these are likely fill material and/or disturbed native soils. Underlying these soils are medium stiff to stiff, sandy or clayey lacustrine silts interbedded with 1 to 2-inch thick layers of silty sand.

Geologic Hazards

Chapter 19.400 of the Kitsap County Code, Geologically Hazardous Areas, regulates uses and activities in those areas susceptible to erosion, landslide, and seismic (liquefaction) events. The intent of Chapter 19.400 is to: provide standards to protect human life and property; regulate uses of land to avoid damage to structures and property; control erosion, siltation, and water quality impacts; minimize erosion caused by human activity; and, use innovative site planning by placing geologically hazardous areas and buffers in open space and transferring development density to suitable areas on the site. Kitsap County Code 19.000 includes criteria for identifying "High Geologic Hazard" and "Moderate Geologic Hazard" areas for erosion, landslide and seismic (liquefaction).

Erosion Hazards

The steep marine bluffs extending along the northern and eastern sides of the Town Site (RHTC-zoned area) are inherently prone to surficial erosion. According to the Washington State Department of Ecology (Ecology) Coastal Atlas Map (updated 2013), the eastern bluff has an intermediate stability classification and the northern bluff has an unstable classification (see **Figure 3.1-1**). Both bluffs meet Kitsap County's criteria for "Areas of Moderate Geological Hazard" and "Areas of High Geologic Hazard", respectively. Based on published soil mapping and on previous observations of exposed soils, the northern and eastern bluffs possess a risk of erosion. The likely mechanisms for this erosion include surficial raveling, sloughing and creep.

As part of the Landslide Hazard Assessment that was completed subsequent to the issuance of the DEIS, an erosion hazard area was identified in the reservoir amphitheater area. Due the presence of groundwater seepage and apparent erosional nature of the landform, this area meets the Kitsap County Code's definition of an erosion hazard area. Based on Kitsap County Code requirements, a 40-foot building setback would be required from this erosion hazard area (see **FEIS Appendix D** for further details).

Source: Terracon, 2013

EA Engineering, Science, and Technology, Inc.

Figure 3.1-1
Erosion Hazard Areas

Landslide Hazards

The presence of steep marine bluffs extending along the northern and eastern sides of the Town Site (RHTC and RHTR-zoned areas) inherently create a landsliding concern (see **Figure 3.1-2**). As mentioned above, according to the Ecology Coastal Atlas Map, the eastern bluff has an intermediate stability classification and the northern bluff has an unstable classification, and both bluffs meet Kitsap County's criteria for "Areas of Moderate Geological Hazard" and "Areas of High Geologic Hazard", respectively.

Based on published soil mapping and previous observations of exposed soils, landslides could occur on the northern and eastern bluffs. Over the next several years, the landslide risk is considered to be relatively low, and an imminent risk of landsliding is not expected. Over the next several decades, the landslide risk is considered to be moderate. Over a period of several centuries, the landslide risk is considered to be significantly greater.

The localized portion of the northern bluff adjacent to Buena Vista Cemetery reaches a height of about 85 ft., and the ground behind the bluff face has dropped by as much as four ft. relative to the surrounding ground surface. Based on previous observations, this feature appears to be an active earth slump failure of the upper bluff. This portion of bluff has a moderate to high risk of landsliding in a short (over the next several years) - or medium-term (over the next several decades) scenario.

In late 2019, some soil slumping was observed during a site visit within the lower portion of the historic Babcock Farm property. In response to this observation, a landslide hazard assessment was completed for this area of the site and vicinity (see **FEIS Appendix D** for the landslide hazard assessment). A desktop review of existing information, including light detection and ranging (LIDAR) data/images, was completed as part of the assessment. Field investigations were also completed on the site, including three test pit explorations to identify the depth and types of materials within the landslide areas.

The recent and dormant landslides on the site were determined to occur within fine grained glaciolacustrine deposits where overlaying recessional outwash sands are absent but are present further upslope. Based on Kitsap County's critical areas ordinance, these areas would be considered high landslide hazard areas. Preliminary setbacks for the high landslide hazard areas were established based on the existing landslide morphology. Upslope setback distances range from 35 to 100 feet based on the estimated contact between the lower glaciolacustrine and upper outwash deposits. Typically, downslope setbacks and lateral setbacks would be 50 feet from the extent of the landslide area; however, the downslope building setback adjacent to the active slide, has been extended to 100 feet based on the recent active nature of that landslide.

Source: Terracon, 2013

EA Engineering, Science, and Technology, Inc.

Figure 3.1-2
Landslide Hazard Areas

Seismic (Liquefaction) Hazards

The term liquefaction refers to a sudden loss of shear strength due to earthquake motions. This condition can result in ground subsidence, heaving and/or lateral spreading, along with damage to buildings, slabs, pavements, and other surface elements.

Previous geotechnical analysis of subsurface conditions indicated that a crescent-shaped area forming the eastern margin of the Mill Site is highly susceptible to liquefaction during a moderate or severe earthquake (see **Figure 3.1-3**). This could potentially lead to surface settlements on the order of 3 to 12 inches, depending on the earthquake severity. The crescent-shaped area on the Mill Site meets Kitsap County's criteria for "Areas of Moderate Geologic Hazard". Subsurface conditions throughout other areas of the site are characterized by dense, granular soils or stiff to hard cohesive soils. Such soils are generally not associated with liquefaction, and consequently have a low or negligible potential for liquefaction during a moderate or severe earthquake.

Sea Level Rise

The Climate Impacts Group (CIG) -- a Washington-state based interdisciplinary research group that collaborates with federal, state, local, tribal, and private agencies; organizations; and, businesses -- studies impacts of natural climate variability and global climate change on the Pacific Northwest. In 2009, CIG issued the *Washington Climate Change Impacts Assessment*, which included climate change scenarios for Washington State. CIG used those scenarios to assess the potential future impacts of climate change. Key findings for climate change impacts included:

- Average temperature would increase by 2ºF by the 2020s, 3.2º F by the 2040s, and 5.3º F by the 2080s.
- The April 1 snowpack is projected to decrease by 28 percent across the state by the 2020s, 40 percent by the 2040s, and 59 percent by the 2080s.
- The timing of peak river flow will shift for Puget Sound water supplies from late spring (driven by snowmelt) to winter (driven by precipitation) and summer and fall storage levels would be reduced as well.
- Sea level rise will shift coastal beaches inland and increase erosion of unstable bluffs.

Predictions regarding sea level rises were developed for very low, medium and very high scenarios for the years 2050 and 2100. For the Puget Sound, by the year 2050, sea level rise is projected to be 3 inches, 5 inches and 18 inches under the very low, medium and very high scenarios, respectively. By the year 2100, sea level rises is estimated at 6 inches, 13 inches and 50 inches, respectively.

For purposes of this DEIS analysis, a conservative estimate of potential sea level rise in Port Gamble Bay by 2100 is assumed to be up to approximately 50 inches over current levels (very high scenario).

Source: Terracon, 2013

EA Engineering, Science, and Technology, Inc.

Figure 3.1-3
Liquefaction Hazard Areas

3.1.2 Impacts of the Alternatives

This section identifies and analyzes impacts to topography, soils and geologic hazard areas on and in the vicinity of the Port Gamble site with proposed redevelopment. Impacts are expected to be similar for Alternative 1 and Alternative 2; any differences between the alternatives are noted.

Alternatives 1 and 2

Construction

Construction activities associated with redevelopment under Alternatives 1 and 2 would include earthwork activities, primarily on the Mill Site. Under Alternative 1, approximately 175,000 cubic yards of fill would be provided on the Mill Site (within the RHTW portion of the site) to raise the elevation by five to eight feet, bringing the ground elevation above the floodplain in order to provide protection for new structures.[1] It is anticipated that the fill material would be imported onto the site. In addition, up to approximately 10,000 cubic yards of cut could occur, primarily to remove debris not suitable for construction. It is assumed that this material would not be suitable for structural fill and would be exported from the site.

Grading activities in the RHTR and RHTC-zoned portions of the site are anticipated to be less than those anticipated for the Mill Site and would primarily relate to utility trenching, building foundations and road construction. Approximately 15,000 cubic yards of cut and 30,000 cubic yards of fill could be required. The Town Site and adjacent land would be raised as much as 18 ft. in some areas and lowered as much as 15 ft. in other areas.

These grade changes would generally occur as balanced or near-balanced cut-and-fill operations over the lateral extent of new building pads and improved roadway sections. Fill would be placed in thin wedges on gently inclined subgrades and as thicker wedges on moderate slopes. Generally, these fills would be very localized and would not cover large areas.

In the RR and RW-zoned portions of the site, grading activities would be primarily limited to roadway construction, and utility trenching. Approximately 35,000 cubic yards of cut and 45,000 cubic yards of fill could be required.

Grading under Alternative 2 would generally occur as described for Alternative 1. However, overall cut and fill within the RHTW area would slightly decrease due to less area being filled to bring development pads above the flood elevations.

[1] Based on compliance with FEMA standards for floodplain development (see Section 3.9, **Plans and Policies**, for additional detail).

Subsurface Soils

Impacts to subsurface soils across the Mill Site would be extremely minor with proposed redevelopment under Alternatives 1 and 2, because excavation would largely occur within the new fill material being used to raise surface grades. Only excavation for deep foundations or deep utilities (if any) would extend into existing Mill Site soils.

Impacts to soils across the Town Site and adjacent areas with redevelopment under Alternatives 1 and 2 would include excavations for new building pads, new underground utilities and improved roadways. Excavation depths would range up to 15 ft. Soils in which excavation would occur would primarily consist of variable deposits of silts, sandy silts, clayey silts, sands and silty sands. Nearly all such soils are highly moisture-sensitive and would not be suitable for reuse as structural fill during the wet season or any extended periods of wet weather.

During the appropriate dry seasons, wherever possible, soils excavated from the site would be reused as on-site structural fill. If development of the upland areas coincides with the proposed development, then soil generated by excavations for the off-site roadways, houses and utilities could be available for reuse at the Town Site or Mill Site. The upland soils are comprised of a sequence of glacial till (silty, gravelly sands) over advance outwash (gravelly sands and sandy gravels), which are generally suitable for reuse as structural fill.

Vibrations

Construction activities associated with redevelopment under Alternatives 1 and 2 would generate a moderate level of vibrations. The greatest vibration sources would likely be oscillating-drum compactors, dump trucks, trackhoes and bulldozers. Given the soil types underlying the Town Site and most of the Mill Site, ground vibrations from such sources would be attenuated over relatively short distances. Therefore, adverse effects from construction vibrations would be expected to be negligible except when equipment is used within several ft. of an existing structure. Where construction must occur immediately adjacent to an existing structure, the vibration risk would be addressed by using conventional smaller equipment. It should be noted that the soils underlying the outer margin of the Mill Site are more sensitive to vibrations, due to their liquefaction potential. However, little or no construction is expected to occur in this area.

Static Settlement

Static settlement is non-earthquake-related settlement. The greatest potential for static settlements with proposed redevelopment under Alternatives 1 and 2 is within the depression near the center of the Town Site. New structures located within this depression would be susceptible to long-term static settlement due to compression of the underlying soft sediments. The static compression of the soft, cohesive sediments in this depression could lead to structural settlements in the range of several inches to one ft. Such settlement would be addressed by conventional methods, such as over excavation and replacement with granular structural fill, or through the use of intermediate-depth foundations.

Geologic Hazards

Erosion

The steep northern and eastern marine bluffs are inherently prone to surficial erosion. Although no development is proposed for either of these bluffs under Alternatives 1 and 2, any stormwater runoff that flows over the bluffs would increase the magnitude of erosion. However, the proposed permanent stormwater control system would redirect runoff away from the bluffs and no significant erosion impacts are anticipated. Development would also be located outside of the identified 40-foot buffer area surrounding the erosion hazard area associated with the reservoir amphitheater (see **FEIS Appendix D** for details).

Landslide

The steep northern and eastern marine bluffs possess a landslide risk that ranges from low to high, depending on the time frame being considered. Because no development is proposed for these bluffs under Alternatives 1 and 2, a risk of increased landsliding is not expected unless stormwater runoff would be allowed to flow over the bluffs. The localized portion of the northern bluff adjacent to Buena Vista Cemetery represents a greater risk of landsliding due to the active landslide slump set in this area. However, the proposed permanent stormwater control system would direct runoff away from the bluffs, and no significant landslide impacts are anticipated. In addition, development under Alternatives 1 and 2 would be located outside of the identified buffer areas associated with the landslide hazard area on the Babcock Farms site (see **FEIS Appendix D** for details).

Liquefaction

A liquefaction hazard exists within a crescent-shaped area forming the eastern margin of the Mill Site. During a moderate or severe earthquake, any new structures within this area could potentially experience dynamic settlements on the order of 3 to 12 inches, depending on the earthquake severity.

Where new buildings would be located within or near the liquefaction zone, the risk would be effectively addressed through the use of conventional geotechnical foundation designs such as drilled or driven piles, mat foundations and aggregate bearing pads, depending on the project specifics. As a result, significant liquefaction impacts are not anticipated.

Operation

At build-out, the portion of the Port Gamble site in roadways, parking areas, structures, and landscaping would increase over existing conditions, with the remainder of the site preserved in natural open space. A permanent stormwater management system would be designed and installed onsite, in accordance with Kitsap County's Stormwater Design Manual. As a result, erosion and sedimentation during operation of the project would be minimal (see **Section 3.2**, **Water Resources**, for details).

Sea Level Rise

As discussed under Affected Environment, for purpose of this DEIS analysis, a reasonable estimate of potential sea level rise in Hood Canal by 2100 is considered to be up to approximately 50 inches over current levels. As part of redevelopment, it is assumed that site grades on the Mill Site would be raised by at least five feet above existing grades. Raising site grades on the Mill Site by at least five feet would mitigate the potential impact of a long-term sea level rise in Hood Canal and Port Gamble Bay (see prior discussion under *Construction*).

No Action Alternative

Scenario A – Continuation of Existing Conditions

Under Scenario A, no redevelopment would occur and topography, subsurface soil conditions, groundwater conditions and geologic hazards would remain relatively unchanged.

Since no redevelopment would occur, no excavation or fill would be required and no impacts due to vibrations or static settlement from construction would result.

Scenario B – Redevelopment by Others Under Existing Zoning

Topographic, subsurface soil conditions, groundwater conditions and geologic hazards impacts under Scenario B of the No Action Alternative would be similar to those described for Alternatives 1 and 2.

Impacts as a result of construction vibrations and static settlement would be similar to those described for Alternatives 1 and 2.

Scenario C – Redevelopment of Upland by Others Under Existing Zoning/Purchase of Mill Site by Others for Conservation

Topographic, subsurface soil conditions, groundwater conditions, geologic hazards impacts, and construction vibration and static settlement impacts under Scenario C of the No Action Alternative would be similar to those described for Alternatives 1 and 2 on the Town Site. Under Scenario C, it is assumed that the Mill Site surface grade would not need to be raised above the floodplain, as no development would occur in this portion of the site; no topographic impacts would occur on the Mill Site. No subsurface soil impacts would occur on the Mill Site, because there would be no development in this portion of the site; no excavation for building foundations or utilities would be required. As well, because no structures would be developed on the Mill Site, no buildings would be subject to liquefaction hazards.

3.1.3 Mitigation Measures

Required/Proposed Mitigation Measures

Prior to and During Construction

- The Mill Site surface grades would be raised above the flood plain, which would provide protection for structures on the site.[2] Future excavations for footings, utilities and other development-related features would occur primarily within new fill soils; which would minimize excavations into existing Mill Site soils.
- All utility excavations would be immediately backfilled with suitable fill soils, and all fill soils would be compacted to achieve a dense condition.
- During the appropriate dry seasons, wherever possible, soils excavated from the site would be reused as on-site structural fill.
- If construction work is performed immediately adjacent to an existing structure, conventional smaller equipment would be used to address the potential for vibration and settlement.
- Site soils would be over excavated and replaced with granular structural fill, or intermediate-depth foundations would be installed in the depression in the center of the Town Site and in other localized zones of compressible soils to prevent long-term static settlement.
- If pile-driving or other heavy construction must be performed here (such as for a new boardwalk or wharf), work would be completed before building any settlement-sensitive structures nearby. Pile-driving vibrations would be significantly reduced by using low-displacement pile types (such as H piles) instead of high displacement piles (such as pipe piles).
- Mitigation factors related to erosion, liquefaction, and settlement hazards are summarized below.
    - A Temporary Erosion and Sedimentation Control Plan (TESCP) would be prepared and implemented, per the Kitsap County Stormwater Design Manual and would include any or all of the following:
    - Earthwork would be scheduled for the drier summer months, whenever possible, especially in the case of construction sites on sloping terrain.
    - Disturbance of existing trees and undergrowth on sloping terrain would be minimized.
    - Best-management practices would be applied on all construction sites, such as silt fences, bioswales, check dams, stockpile covers, and grate filters.

[2] Based on compliance with FEMA standards for floodplain development.

- Trees and groundcover vegetation would be replanted as soon as feasible in areas that are necessarily disturbed by earthwork activities.
- Temporary erosion-control blankets or permanent rock armoring on steep terrain would be provided where vegetation is slow to get established.
- Temporary or permanent tightline pipes installed, where practical, to convey stormwater from steep areas to appropriate downslope facilities on flatter terrain to prevent erosion (see **Section 3.2**, **Water Resources**, for details).
- The permanent stormwater control system would include runoff diversion systems, such as swales, curbs, berms, or pipes, to prevent flow directly over steep slopes (see **Section 3.2**, **Water Resources**, for details).

- Development would generally adhere to Kitsap County requirements for buffers and setbacks adjacent to landslide hazard areas. Actual setbacks and buffers would comply with the following criteria:
  - ***Northern Bluff***: The northern bluff and a 25-ft.-wide strip of ground immediately behind the brink (the intersection of the slope face and the upland surface) would be protected from disturbance of any native vegetation and would be free from construction of any impervious surfaces. All buildings would be setback a minimum horizontal distance equal to 1.3 times the vertical height of the slope or equal to the vertical slope height plus 25 ft., whichever is greater.

  - ***Eastern Bluff***: The slope itself and a 25-ft.-wide strip of ground immediately behind the brink (the intersection of the slope face and the upland surface) would be protected from disturbance of any native vegetation and would be free from construction of any impervious surfaces. All buildings would be setback a minimum horizontal distance of 40 ft. from the top of slope.

- Conventional geotechnical foundation designs, such as drilled or driven piles, mat foundations and aggregate bearing pads would be used along the peripheral margin of the Mill Site to address liquefaction hazards during earthquakes. The actual foundation designs would depend on several variables, including the specific structure location, the structure type and the risk-tolerance.

3.1.4 Significant Unavoidable Adverse Impacts

With the implementation of the required/proposed mitigation measures listed above, no significant unavoidable adverse earth-related impacts are anticipated with development of the Port Gamble site.

APPENDIX B

Updated Section 3.3 – Plants and Animals

3.3 PLANTS AND ANIMALS

This section of the DEIS describes the existing plants and animals on and in the vicinity of the Port Gamble site. Potential impacts from redevelopment of the DEIS alternatives are evaluated and mitigation measures identified. This section is based on the *Plants, Animals and Wetlands Technical Discipline Report* (August 2018) prepared by GeoEngineers (see **Appendix C**), and the *Evaluation of Impacts to Water Quantity on Wetlands Memo, Port Gamble LOSS* (February 2014), also prepared by GeoEngineers (**Appendix F**), and the *Port Gamble Heron Management Plan* (January 2018) prepared by Tetra Tech.

Subsequent to the issuance of the DEIS, a *Floodplain Habitat Assessment Report* (**FEIS Appendix D**) and *Stream Review and Typing Report* (**FEIS Appendix E**) were also prepared by GeoEngineers. Information added or changed subsequent to issuance of the Draft EIS is shaded to ease identification of the added or changed information.

3.3.1 Affected Environment

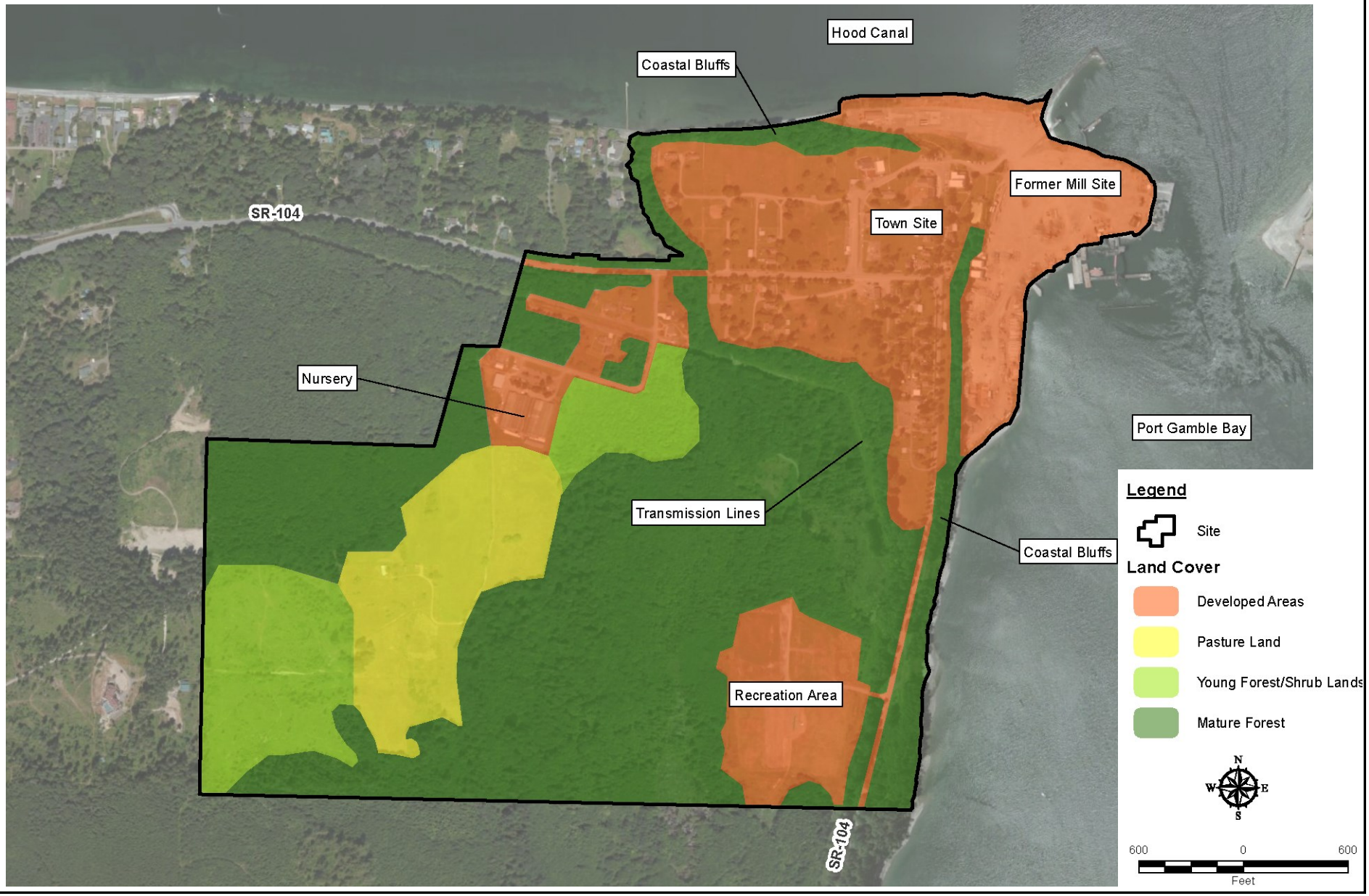
Information on existing site conditions is based on a file review of available information on existing and historic sensitive fish, wildlife and plant species occurring on and in the vicinity of the site, as well as a biological and geomorphic field reconnaissance conducted on May 24, 2013, to supplement previous investigations. The biological reconnaissance included observing and documenting fish and wildlife conditions onsite. The geomorphic reconnaissance included completing a site survey to evaluate existing shoreline conditions and littoral drift cell (nearshore sediment supply/transport units) processes to complement previous mapping by the Washington State Department of Ecology (see **Appendix C** for details).

Upland Habitats

Four general upland land cover types occur within the site: Developed Areas, Pasture Land, Young Forest/Shrub Lands, and Mature Forest (see **Figure 3.3-1**). A description of these areas follows:

Developed Area

Existing developed areas on the Port Gamble site total approximately 111 acres and include: the former Mill Site; existing Town Site; and a recreation area that has been cleared and maintained in the RW-zoned upland area onsite. As described below, these areas provide very limited habitat value.



Source: GeoEngineers, 2013.

EA Engineering, Science, and Technology, Inc.

Figure 3.3-1

Land Cover

Former Mill Site

Terrestrial areas within the approximately 28-acre Mill Site have been cleared and contain little in the way of native vegetation or habitat value. In 2017, Pope Resources completed the cleanup of over 106 acres of Port Gamble Bay which included the removal of approximately 8,592 pilings, 1.3 acres of over-water structures and docks, dredging 110,000 cubic yards of wood waste and sediments, and placing 200,000 tons of clean cap materials. Surface conditions include a mix of pavement, gravel and compacted earth.

The shoreline has been altered and armored throughout the Mill Site in the last 160 years to accommodate construction, expansion and maintenance. Shoreline conditions around the Mill Site are discussed in further detail in the Marine Habitats section below.

Town Site

The existing Town Site is approximately 65 acres in size and is located in the upland area both north and south of SR 104. The Town Site is characterized by residential, retail and commercial development. There is also a horticultural compound and associated administrative building in the southwest portion of the town. Vegetation throughout the Town Site consists mostly of landscaping with native and ornamental trees, shrubs and mowed grass. In addition, some areas within the Town Site that are not actively being maintained have become invaded by Himalayan blackberry (*Rubus armeniacus*) and Scotch broom (*Cytisus scoparius*).

Recreation Area

The informal recreation area in the southeastern corner of the site in the RW-zoned area consists of approximately 18 acres of land currently lacking native vegetation, and without substantial development (**Figure 3.3-1**). There are access roads and parking areas, as well as extensive areas of mowed grass. The perimeter of this cleared area is dominated by invasive species, particularly Himalayan blackberry. There are no aquatic critical areas or buffers extending into this area. This area was used as a permitted-limited-purpose landfill for the Mill Site cleanup efforts; sediment materials and wood waste removed from the Mill Site were placed within this area.

Pasture Lands

Approximately 28 acres (approximately 9 percent of the site) located in the western portion of the site in the RW-zoned area are used as pasture (see **Figure 3.3-1**). The area is currently accessed via a dirt road extending from the western terminus of Carver Drive. These lands consist primarily of non-native grass pastures grazed by cattle.

Young Forest/Shrub Lands

Young forest and shrub lands occur in two distinct areas on the site (see **Figure 3.3-1**). The first area is located on the RW-zoned portion of the site where shrub lands with sparse tree cover have developed after relatively recent logging activities. The second area occurs in the central portion RW-zoned portion of the site near Carver Drive where it appears the land was previously cleared and subsequently allowed to return to a forested condition.

The total area of these lands is approximately 30 acres (approximately 9 percent of the site). These areas are currently dominated by a community of young trees and shrubs, with a few scattered remnant mature trees. Dominant species include Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), red alder (*Alnus rubra*), salmonberry (*Rubus spectabilis*), salal (*Gaultheria shallon*), huckleberries (*Vaccinium* spp.), Himalayan blackberry, bracken fern (*Pteridium aquilinum*) and sword fern (*Polystichum munitum*). There are no aquatic critical areas in these areas.

Mature Forest

Mature forested habitat occurs throughout a large portion of the site that has not been otherwise developed or cleared, primarily in the RW-zoned area occupying roughly 157 acres (approximately 49 percent of the site) and likely representing the dominant land cover type prior to human settlement (see **Figure 3.3-1**). However, on-site forests are typical of second growth stands, rather than old growth stands. Forested areas include upland and wetland habitats and include most of the Machias Creek riparian corridor as well as bluffs above the shorelines of the site. Some wetland areas within the mapped forested landscape are dominated by shrubs or open water rather than forest as the climax vegetation condition. There are also some smaller cleared areas, secondary and/or abandoned roads, and a utility corridor within the mature forest landscape.

Mature forest habitat in upland areas of the site is representative of typical lowland second-growth serial forest stands in the *Tsuga heterophylla* (Western hemlock) zone. This zone is the most extensive native vegetation type in western Washington and the most important as far as timber production. These stands are generally dominated by Douglas fir, western red cedar (*Thuja plicata*), big leaf maple (*Acer macrophyllum*), and red alder, with an understory of salmonberry, Indian plum (*Oemleria cerasiformis*), red elderberry (*Sambucus racemosa*) and sword fern. Hardwood tree species are less common on the site than conifers and typically occur in areas of recent disturbance. Evidence of former logging activities on the site is widespread.

With the exception of the Mill Site, discussed above, most marine shorelines on the site are characterized by forested bluffs that rise steeply from the high water line. These bluffs extend west from the Mill Site along Hood Canal and south along Port Gamble Bay. Forest conditions include an overstory of bigleaf maple, Douglas fir, and red alder, with a thick understory consisting of Himalayan blackberry, English ivy (*Hedera helix*), oceanspray (*Holodiscus discolor*), Queen Anne's lace (*Daucus carota*) and Canada thistle (*Cirsium arvense*). There are also some areas south of the Mill Site apparently affected by landslide activity, which are currently lacking in forest canopy and instead are dominated by shrubs, with some exposed soil surfaces. In general, forested bluffs have the potential to provide valuable habitat for predatory birds (e.g., bald eagle, osprey) that may perch and/or nest in tall trees.

Marine Habitats

The site is bordered by the marine areas of Port Gamble Bay to the south and east, and Hood Canal to the north. For the purposes of this EIS, marine areas are considered those areas below the mean higher high water (MHHW) level (high tide line) which includes marine shoreline, intertidal and littoral nearshore environments.

Shoreline Conditions

The nearshore area immediately adjacent to the site has been significantly altered. The shoreline has been modified and armored around the Mill Site with a mix of concrete bulkheads, large riprap, concrete pieces and bricks to accommodate construction, expansion and maintenance as an industrial facility throughout the last 160 years. A jetty, made of large pieces of rip rap, is located at the northeast corner of the site and extends into Hood Canal. Thirteen sets of stairs access shoreline habitats. Paved surfaces directly abut Port Gamble Bay through much of the Mill Site. As a result, shoreline habitat function has been severely compromised.

Several docks, piers, structures and wooden piles are located within Port Gamble Bay below the mean high water (MHW) level. These structures, most of which appear to be derelict, were removed as part of the cleanup effort for Port Gamble Bay that was permitted through a separate environmental review process (see **Section 3.4, Environmental Health**, for details). Since the cleanup has been completed, the shoreline conditions have improved. A new/replacement dock is also proposed as part of another separate project; however, if approved, net overwater coverage would still be reduced relative to past conditions. Overall, shoreline and nearshore habitat conditions would improve with these separate projects.

Vegetation along the shoreline occurs sporadically between the armoring and along the upper elevations of the shoreline. The vegetation primarily consists of Himalayan blackberry and Scotch broom with some Queen Anne's lace, fireweed (*Chamerion angustifolium*), pickleweed (*Salicornia virginica*) and Puget Sound gumweed (*Grindelia integrifolia*). Forested shoreline bluffs also occur in the western and southern portions of the marine shoreline at the site, as described previously.

The Shoreline Inventory and Characterization (Kitsap County, 2011) identified continuous and patchy eelgrass and macroalgae adjacent to the site, both on the Hood Canal side and within Port Gamble Bay.

Sediment

Sediment in the nearshore littoral environment adjacent to the site is provided by shoreline banks and bluffs. Mass wasting events or bank erosion typically produces a large input of sediment to the nearshore environment. Tidal energy increases erosion of cohesive banks and introduces sandy/silty material to the nearshore environment. Strand lines of drift sediment and wood were found along the MHHW line in areas lacking riprap during reconnaissance of the site.

A wide assortment of shoreline substrate exists adjacent to the site (see **Figure 3.3-2**). Sand is the dominant substrate, particularly near the mean lower low water (MLLW). West of the boulder jetty, sand is dominant with gravel as subdominant substrate composition. Parallel bands of cobbles were found immediately west of the boulder jetty. Fine gravels and cobbles are intermixed with sand in some locations east and south of the jetty beneath the overwater structures. Sandbars about 150 feet wide extending several hundred feet in length are forming in about five different locations south of the riprap on the south end of the site. A large sand bar approximately 400 feet in length about 50 feet in width is also forming near the western boundary of the site.

Littoral Drift Processes

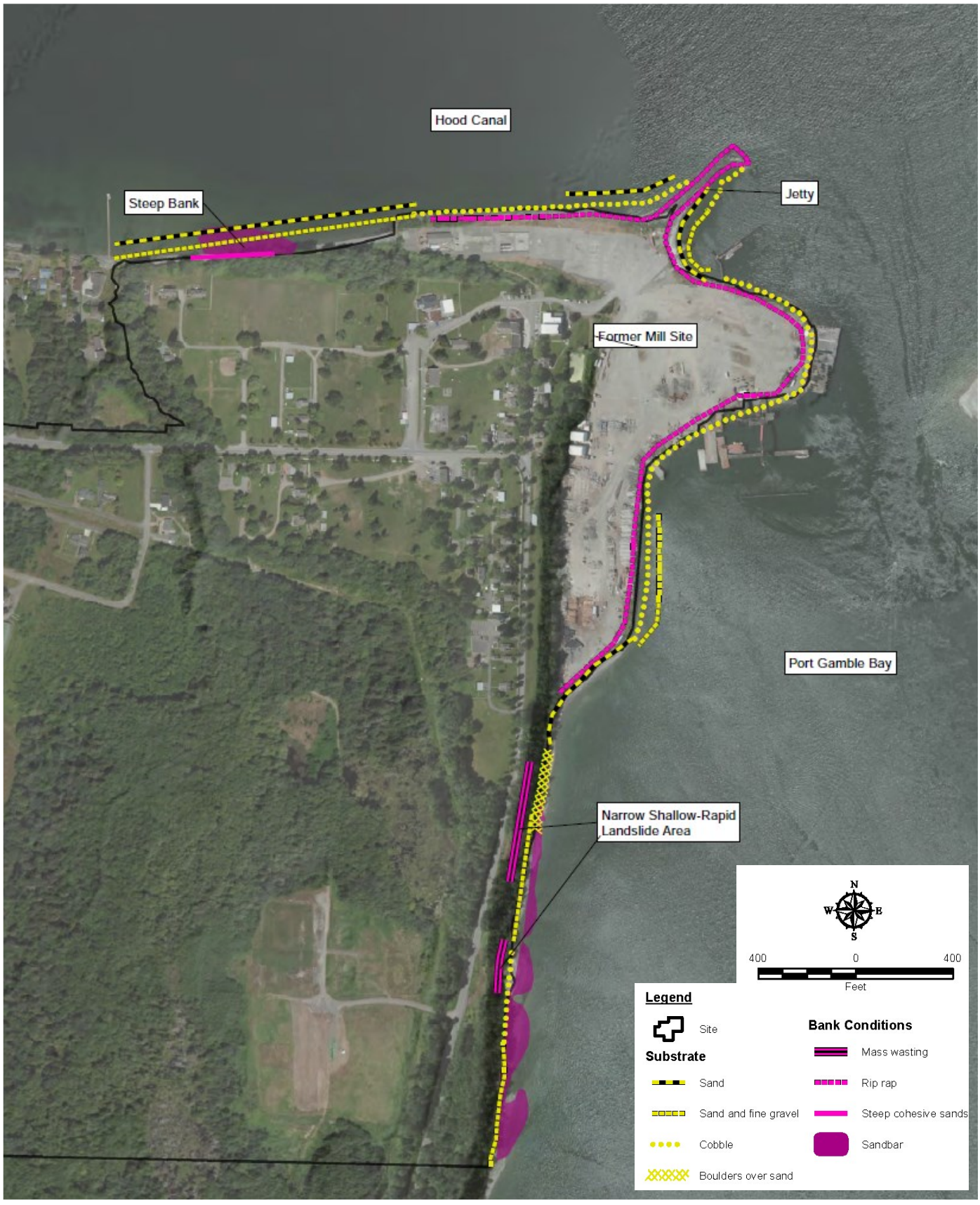
Drift cells are directional paths of sediment transport along the nearshore. Drift cell pathways represent general patterns of sediment deposition. Ecology data indicates that most of the area adjacent to the site has no appreciable net shore drift pattern. However, during field reconnaissance, indicators of drift cell directional patterns were found in a number of locations as evidenced by ripple marks and sediment accumulation behind obstructions such as drift wood and boulders (see Figure 4 in **Appendix C**).

Wetland Habitats

A total of 17 wetlands encompassing approximately 24 acres and five streams, including Machias Creek and Streams 1-4, were identified and delineated during the field investigations of the site (see **Figure 3.3-3**). These wetland and riparian areas provide habitat for a variety of plant and animal species as described later in this section. **Table 3.3-1** below provides a summary of these critical areas and required buffers as prescribed by Kitsap County Code (KCC) 19.200.220. In addition to the required buffers, KCC 19.200.220F and KCC 19.300.315 require a minimum impervious surface/building setback of 15-feet from the edge of any wetland or stream buffer.

Wetlands N and P, and portions of the buffers for Wetland M and Machias Creek, extend into currently developed and/or landscaped portions of the town. These areas are highly degraded as a result of past land clearing activities and ongoing landscape maintenance, including mowing. Portions of the Machias Creek buffer currently contain developed, occupied residences.

Wetlands D, E, F, G, I, and J and Stream 2 are located within pasture lands. Wetland habitats are degraded as a result of land clearing and grazing activities, and are typically dominated by weedy herbaceous species. Wetlands D and G also contain young forest/shrub components where it appears the land was formerly cleared and vegetation allowed to grow back. These wetlands were identified as a majority covered in weedy pasture species in the February 2014 memorandum from GeoEngineers (GeoEngineers 2014).



Source: GeoEngineers, 2013.

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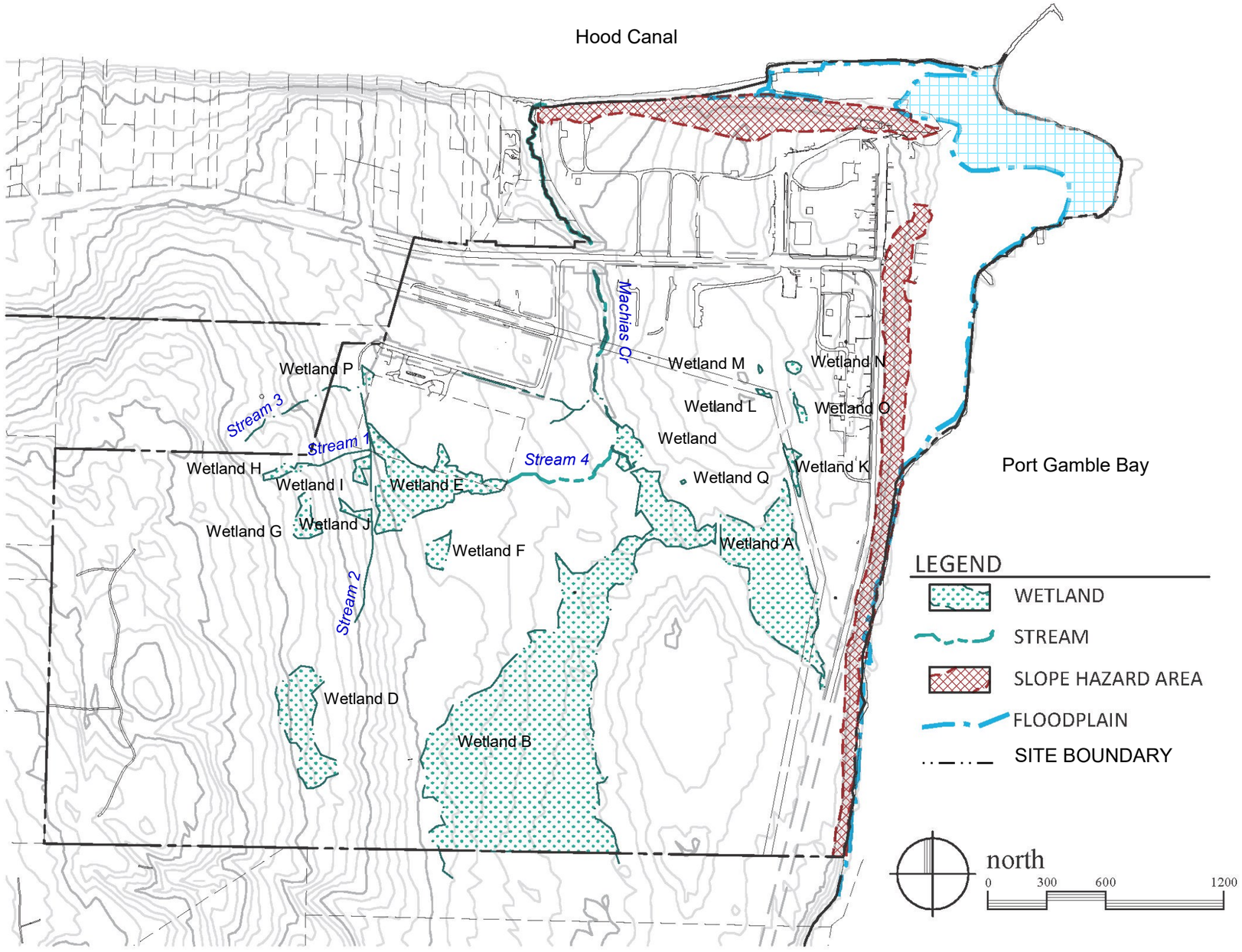
Figure 3.3-2
Substrate and Bank Conditions



Source: David Evans and Associates, 2013.

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Figure 3.3-3
Wetlands and Streams

Table 3.3-1
PORT GAMBLE PROPERTY - EXISTING WETLANDS AND STREAMS

Wetland / Stream Name	Wetland Category / Stream Type[1]	Buffer Width[2] (feet)
Wetland A	Category II	150
Wetland B	Category II	150
Wetland C	Category III	150
Wetland D	Category IV	40
Wetland E	Category III	150
Wetland F	Category III	40
Wetland G	Category IV	40
Wetland H	Category III	110
Wetland I	Category IV	25
Wetland J	Category IV	25
Wetland K	Category III	40
Wetland L	Category III	80
Wetland M	Category III	80
Wetland N	Category III	80
Wetland O	Category III	40
Wetland P	Category IV	50
Wetland Q	Category IV	25
Machias Creek	Type F	150
Stream 1	Type NS	50
Stream 2	Type NS	50
Stream 3	Type NP	50
Stream 4	Type F	150

Source: GeoEngineers, 2018 and 2020.

Notes:

1. Wetland rating in accordance with Washington State Wetlands Rating System for Western Washington, (Hruby, revised 2008) and stream typing in accordance with KCC 19.300.310 (Fish and wildlife habitat conservation area categories).

2. Kitsap County Code (KCC) 19.200.220 – Wetland buffer requirements and KCC Table 19.300.315 (Fish and Wildlife Habitat Conservation Area Development Standards). The final buffer widths would be determined by land intensity use and would be subject to approval by the jurisdictional authority.

Stream 2 is essentially a ditch along the dirt road with a degraded riparian condition completely lacking canopy cover. Stream 2 was reviewed as part of the Stream Review and Typing Report subsequent to the issuance of the DEIS. Based on the field investigation and results identified in **FEIS Appendix E**, the extent of Stream 2 was updated and is identified

as shorter than previously indicated to reflect its origination at the first contribution of natural surface waters. The classification and buffer width for Stream 2 remains unchanged (see **Figure 3.3-4** for a map of Stream 2).

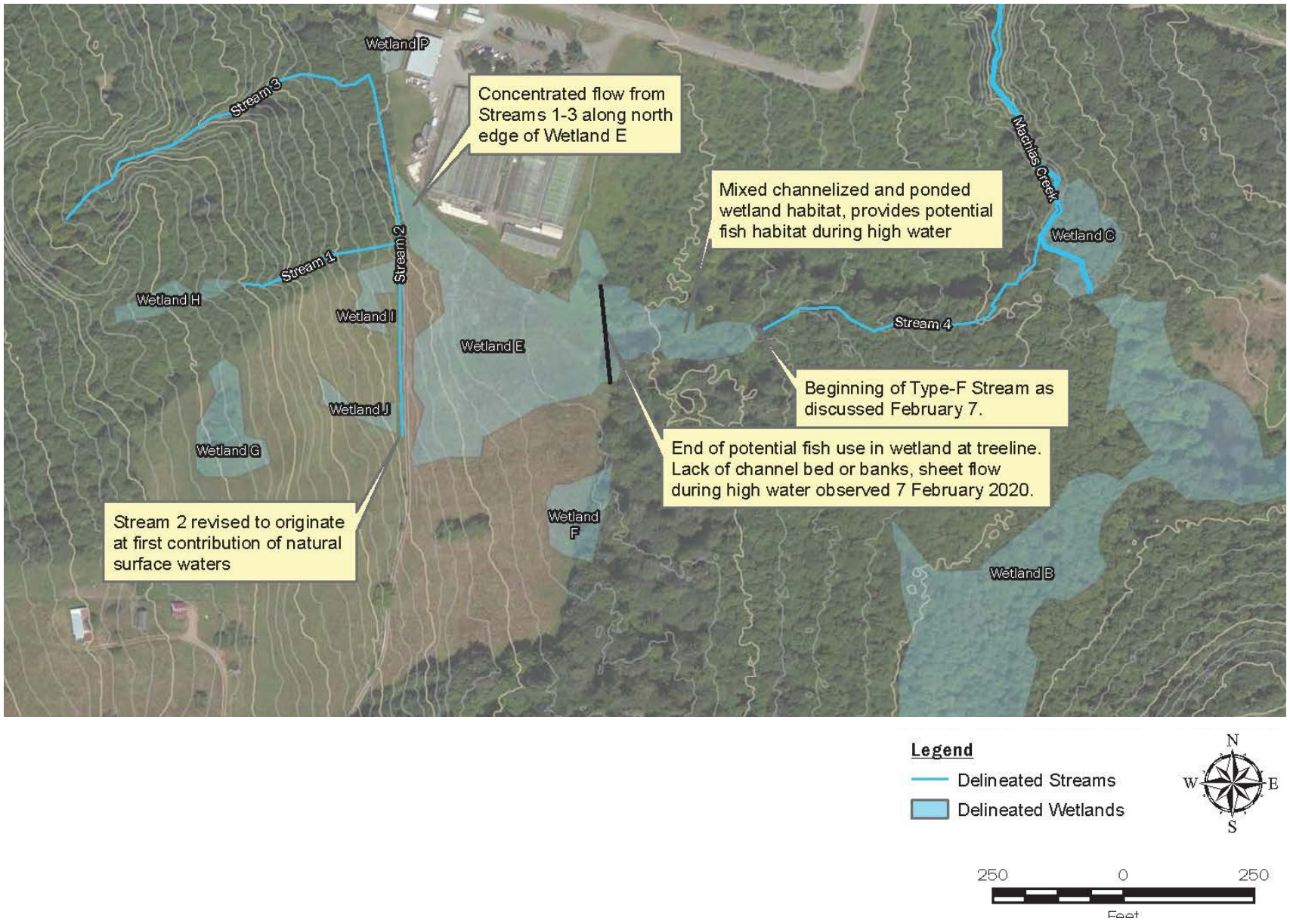
Wetlands A, B, C, H, K, L, M, O and Q, and Streams 1, 3, 4 and Machias Creek are generally located within mature forest land. However, Wetlands K and L are located within a utility corridor that has been cleared of overstory trees and Wetland Q is located in a small clearing that is not typical of the forested area. Buffers for Wetlands A, B, C, H, K, L and Q are generally intact although they are interrupted by abandoned road beds currently used as recreational trails, as well as by smaller trails interspersed throughout the site. Buffers for Wetlands M and O extend into landscape and developed areas and have been degraded as a result. Buffers for Streams 1, 3 and 4 are generally intact. Much of the buffer for Machias Creek is also intact, although the riparian corridor is broken by SR 104, a utility corridor, and an old maintenance access road bed. In a February 2014 evaluation of wetland nitrate removal from groundwater and the impacts of nitrates and water quality on wetlands, (GeoEngineers 2014) identified the majority of Wetland H as a weedy pasture wetland. Wetland and stream critical areas in the mature forest portion of the site provide a variety of habitats that are important for wildlife within urban and suburban landscapes.

Stream 4 was also review as part of the Stream Review and Typing Report subsequent to the issuance of the DEIS. Based on the observations and measurements obtained in the field, the typing of Stream 4 was changed from its original Type NP designation to Type F (fish bearing) and its buffer was modified from 50 feet to 150 feet. (see **FEIS Appendix E** for details and **Figure 3.3-4** for a map of Stream 4).

Machias Creek is the only stream within the project site that is mapped as containing and providing habitat for salmonid fish species. The 1.2-mile-long stream is located within a ravine, and is fed from groundwater seeps, a spring collection box, and wetlands. Machias Creek conveys runoff from the central portion of the project site north, and into Hood Canal via a 36-inch by 140-foot pipe culvert under SR 104. This culvert is mapped by the Washington State Department of Fish and Wildlife (WDFW) as a "total barrier" to fish migration. A second, smaller culvert under an old maintenance access road crosses the creek further south, and is mapped as a "partial barrier." This culvert appears to contribute to minor, localized erosion.

Coho salmon (*Oncorhynchus kisutch*) and resident coastal cutthroat trout (*Oncorhynchus clarki clarki*) have been documented within Machias Creek. The creek is vegetated with a forested canopy dominated by coniferous tree species including Douglas fir and western red cedar. Riparian vegetation consists of salmonberry, Indian plum, and red elderberry.

Ladine-DeCouteau Creek, located immediately south of the Port Gamble site, conveys water from the southern portion of the project site to Port Gamble Bay. Ladine-DeCouteau Creek is also mapped as containing and providing habitat for Coho salmon and resident cutthroat trout.



Source: GeoEngineers, 2020.

EA Engineering, Science, and Technology, Inc.

Figure 3.3-4

Updated Wetlands and Streams Map

Wildlife Networks and Corridors

Wildlife corridors provide habitat, pathways for movement, extension of foraging ranges for large, wide-ranging species, and escape routes from predators. Within the Port Gamble site, wildlife corridors include large forested areas, large wetland complexes and linear riparian zones primarily located in the RW-zoned portion of the site. Movement along these corridors and to natural areas to the west and south is currently easy for most animals. SR 104 currently separates the northernmost portion of the site, including the outlet of Machias Creek and the Hood Canal shoreline, from the remainder of the site.

Machias Creek, south of SR 104, provides a corridor for resident fish and other riparian species, even though the culvert under SR 104 is mapped as a total fish barrier. Ladine–DeCouteau Creek also provides a corridor for coho salmon and resident cutthroat trout. The Hood Canal and Port Gamble Bay shorelines also act as salmon migration corridors along the coast.

Plants

See the discussions above for typical plant species observed onsite. The Washington State Department of Natural Resources (DNR) lists known occurrences of rare plants by county. A search of the DNR Natural Heritage Program database for Kitsap County revealed no records of any listed plants, high quality ecosystems or other significant natural features within the vicinity of the site (DNR, 2017). Plant assemblages in undeveloped forest and shrub lands within the site are described generally in the preceding sections.

Animals

The site is expected to be used by a variety of resident and migratory birds, amphibians, reptiles, and common mammals such as mice, squirrels, raccoon, bear and deer. The WDFW Priority Habitat Species (PHS) data identified a bald eagle (*Haliaeetus leucocephalus*) nest west of SR 104. During the field investigation, a large raptor nest was observed in the vicinity of the PHS mapped eagle nest, and an osprey (*Pandion haliaetus*) was perched in the nest tree. At this time, it cannot be confirmed if the nest is an eagle nest or an osprey nest. Prior to development associated with Phase 2, a nesting survey would be required prior to issuance of a clearing and grading permit in the area of the identified nest in the PHS data. The nesting survey would require confirmation of whether the observed nest is the nest identified in the PHS data. The following species were directly observed on the site within terrestrial habitats: mountain quail (*Oreortyx pictus*), northern flicker (*Colaptes auratus*), and American robin (*Turdus migratorius*). Indirect evidence (e.g., tracks, scat) of Columbian black-tailed deer (*Odocoileus hemionus columbianus*) was observed and, based on habitat conditions, there appears to be high potential for other mammals such as black bears (*Ursus americanus*) and coyotes (*Canis latrans*) to utilize the site.

Great blue herons have also been observed on the site within the RW zone area to the west of SR 104. While not listed as a state-listed species in Washington, great blue herons are listed as a state monitor species and are listed as a species of special concern elsewhere

within their range. Nine nests were identified on the site and site investigations were conducted in 2017 to determine whether the nests were still active or had been abandoned. Egg shell fragments were identified under seven of the nine nests indicating avian predation by bald eagles which was the primary cause for abandonment of the nests. Given the herons located their colony next to an existing transmission line right-of-way and in proximity to SR 104 and the town of Port Gamble, it appears that they are somewhat tolerant to human disturbance. A Heron Management Plan (Tetra Tech, 2018) has been developed for the area which includes a 60-meter year-round management buffer and a 100-meter seasonal buffer area.

Within the nearshore habitat adjacent to the site, the following marine species were observed: various crabs (family Cancridae), harbor seal (*Phoca vitulina*), sand dollar (*Dendraster excentricus*), a variety of barnacles and purple sea stars (*Pisaster ochraceus*). Bird species, including great blue heron (*Ardea herodias*), bald eagle, seagulls (family Laridae), killdeer (*Charadrius vociferus*), and osprey were also observed using marine and tidal areas.

Table 2 in **Appendix C** summarizes animal species that may be expected or potentially could occur on the site, including their federal or state protection status and in which habitats they would most likely be found.

State-Listed and Priority Habitats and Species

WDFW lists state threatened and endangered (T&E) species, and the PHS data map locations of these species and priority habitats. According to the WDFW PHS web mapper, there are no T&E animal species located on or within the vicinity of this site (WDFW, 2018). Priority habitats within the site consist of wetland habitat and streams. Breeding areas for Pacific sand lance (*Ammodytes hexapterus*), surf smelt (*Hypomesus pretiosus*) and pacific herring (*Clupea pallasi*), which are state priority species, are mapped along the shoreline of Port Gamble Bay and Hood Canal. Pacific pond turtles (*Clemmys marmorata*) are not mapped on the site, but this state endangered species may occur within the site based on the presence of suitable habitat. Because of the presence of federally listed fish and marine mammal species in marine areas adjacent to the site, these areas (adjacent marine habitat) would likely be regulated as Class 1 Wildlife Habitat Conservation Areas according to KCC 19.300.310(B)(3). Stream and disturbed (developed or cleared of native vegetation) habitats on the site, which do not contain documented T&E and sensitive species (coho salmon and cutthroat trout are not considered sensitive) would not qualify as Wildlife Habitat Conservation Areas according to the KCC. Stream habitat areas would still be protected, however, via required buffers per KCC Chapter 19.300.

Federal Threatened and Endangered Species

The United States Fish and Wildlife Service (USFWS) lists species and critical habitat designated as threatened or endangered under the federal Endangered Species Act (ESA). The USFWS identifies five ESA animal species, no plant species and no designated critical habitats occurring in Kitsap County (USFWS, 2013). The five listed animal species are bull

trout (*Salvelinus confluentus*), marbled murrelet (*Brachyramphus marmoratus*), streaked horned lark (*Eremophila alpestris strigata*), yellow-billed cuckoo (*Coccyzus americanus*), and Dolly varden (*Salvelinus malma*) (USFWS, 2018). The bull trout, Dolly varden and marbeled murrelet are found in marine waters within Kitsap County. The yellow-billed cuckoo is typically associated with large deciduous forested or shrub riparian habitats. Streaked horned larks are typically associated with large open fields. The NOAA Fisheries identifies west coast fish species listed under the ESA (NOAA Fisheries, 2018). NOAA Fisheries listed species that could be present within marine waters of the project area include Hood Canal Summer-run chum (*Oncorhynchus keta*), Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*) and Puget Sound Steehead (*Onsorhynchus mykiss*). Species from both the NOAA Fisheries and USFWS lists are likely found in the marine waters adjacent to the site but none were observed.

Port Gamble Bay estuary and nearshore areas provide important salmonid migration corridors and rearing habitat. Nearshore estuary refugia include the Gamble Creek estuary (approximately 2.5 miles south of the site) and the surrounding nearshore areas (approximately one mile south of the site and directly across Port Gamble) according to the 2003 Kitsap Salmonid Refugia Report. Juvenile salmonids utilize the estuary for rearing and migration. Other nearshore areas include gravel beaches, mud flats, sand spits and the estuaries of numerous small streams that provide important nursery habitat for multiple species of salmonids. Although a good portion of the shoreline in this area has been altered, including the Mill Site, patches of natural forested and nearshore areas remain.

Subsequent to the issuance of the DEIS, a Floodplain Habitat Assessment was also completed by GeoEngineers (see **FEIS Appendix F**). The purpose of the assessment was to identify the effects to floodplain habitat and species listed under the Endangered Species Act (ESA) from the EIS Alternatives along the shoreline of Hood Canal and Port Gamble Bay.

ESA-listed fish species within the site vicinity include: Puget Sound Chinook salmon, Hood Canal summer chum, Coastal-Puget Sound bull trout, Puget Sound steelhead, bocaccio rockfish, and yelloweye rockfish. Other ESA-listed animals may be present in the site vicinity, including the marbled murrelet and the Southern Resident killer whale. The site area and vicinity contain designated critical habitat for Puget Sound Chinook salmon, Hood Canal summer chum, bocaccio rockfish, yelloweye rockfish, and Southern Resident killer whale. There are no other listed terrestrial species and no known listed plant species identified in the site area or vicinity.

3.3.2 Impacts of the Alternatives

This section identifies and analyzes impacts to plants and animals on and in the vicinity of the Port Gamble site with proposed redevelopment. Impacts are expected to be similar for Alternatives 1 and 2; where impacts would differ, they are so noted.

Alternative 1

Upland Habitats

Construction Impacts

The majority of the existing large forested, wetland and riparian areas within the site would remain intact with proposed redevelopment under Alternative 1. Proposed redevelopment would generally be concentrated in previously disturbed areas, thus minimizing impacts to wildlife networks and corridors. With proposed redevelopment under Alternative 1, existing upland natural and wooded areas, including pasture lands, young forest, shrub-dominated lands and mature forested areas would be reduced from approximately 122.4 acres (existing condition) to approximately 45.8 acres, primarily in the RW-zoned area. Approximately half of the loss of upland natural and wooded areas would be converted to ornamental landscaping and lawns in the proposed clustered residential area in the southwest portion of the site. Most of this converted area is existing pasture lands. About one-quarter of these natural and wooded areas lost would be converted to a large on-site septic system (LOSS) area along the southwestern edge of the site, which is currently mature forest or young forest lands. The remainder of loss of natural and wooded areas in the RW area would be converted to agricultural land use and stormwater ponds. These land use conversions would reduce the vegetation and habitat of these areas, primarily in the western portion of the RW-zoned area. Critical areas and buffers, however, would be retained consistent with KCC Chapter 19.

Proposed development would displace forested areas near the periphery of existing developed areas (e.g., west of SR 104 south of the Town Site, south of SR 104 adjacent to existing residences and east of the existing greenhouse facility), as well as in the southwest portion of the site where a new road, residential lots and associated agriculture uses are proposed. For the most part, the newly developed areas would not provide habitat for native species, although some common human-acclimated species (e.g., small rodents, common native and invasive songbirds, raccoons, etc.) may be tolerant of and/or make partial use of landscaped and agricultural areas. Pasture lands that would be lost likely have similar habitat value as new agricultural areas.

Under Alternative 1, habitat for animal species documented as occupying upland forested areas (e.g., bald eagle, mountain quail, northern goshawk, peregrine falcon) would be reduced. Those documented species that occupy upland forests along the shoreline bluffs (e.g., osprey, great blue heron) would remain unaffected, however. Construction under Alternative 1 would not result in the removal of nest trees on the site, including great blue heron nests identified in the Heron Management Plan (Tetra Tech, 2018) as those trees are located within permanent open space. Construction of Alternative 1 would not result in the removal of the nest tree located during the field investigation, as the tree is located within a proposed permanent open space area. If the observed nest is that of a bald eagle (the most restrictive scenario), potential construction disturbance and permanent development within a 660-foot buffer management zone would be reviewed by USFWS at the time of

permitting for clearing and grading. Other upland species documented as on or adjacent to the site, including Coho salmon and Coastal resident cutthroat, would not likely be affected (see Section 3.2, **Water Resources**). Species identified as having potential to occur on the site (see Table 2 in **Appendix C**) would be affected by the proposed development if any of these species utilize on-site habitats.

Any project encompassing a Kitsap County designated Class 1 Wildlife Habitat Conservation Area requires submittal and approval of a Habitat Management Plan (HMP) at the time of development permits. As indicated previously, Class 1 Wildlife Conservation Areas may be present in the upland mature forest due to the potential presence of nest sites for bald eagles. The potential for adverse effects to bald eagle habitat at the time of permit approval, including the impacts to the potential bald eagle nest tree, would be updated in the HMP, if the nest survey prior to Phase 2 of development indicates the presence of bald eagle nests.

Operational Impacts

With redevelopment under Alternative 1, habitat for species identified as occupying upland forested areas (e.g., bald eagle, mountain quail, northern goshawk, peregrine falcon) would be reduced. Those species that typically occupy upland forests along the shoreline bluffs (e.g., osprey, great blue heron) would remain unaffected. Species that have the potential to occur on the site would be affected by the proposed development due to a permanent loss of habitat.

Wetland and Stream Habitats

Construction Impacts

With proposed redevelopment under Alternative 1, direct impacts to Machias Creek would be limited to extension of an existing culvert under an old access road in order to accommodate the new Carver Drive and the associated creek crossing. In addition, there would be impacts to Stream 4 due to the new crossing to access the West Sound Wildlife Shelter Construction activities associated with these crossings would likely result in temporary impacts to riparian vegetation as a result of clearing and grading activities. Impacted areas would be restored with native vegetation in accordance with Kitsap County critical areas requirements and provisions outlined in a Temporary Erosion and Sedimentation Control (TESC) plan. An HPA would also likely be required for this work. As a result, no significant construction-related impacts to wetland and stream habitat are anticipated.

A series of Native Growth Protection Areas (NGPA) and/or tracts would be established along Machias Creek consistent with the requirements of KCC 19.300.315. The NGPA would be 150 feet in width on either side of the creek, unless otherwise provided by KCC Chapter 19.300, and would be supplemented by a further 15-foot impervious surface setback. The proposed new stormwater pond along the south side of Carver Drive would be located outside of regulated critical areas and associated buffers; associated pipes and flow control structures could be located within the buffer area and energy dissipation structures would

be provided, as necessary. Aside from the widening of the existing road and stream crossing associated with Carver Drive, no new development within the stream buffer or setback is proposed.

Wetlands, streams, and their associated buffers would generally be protected per the requirements of KCC 19.200 and KCC 19.300. No direct impacts to wetlands (i.e., temporary or permanent fill) would be anticipated under Alternative 1. During construction, there could be potential for indirect impacts from stormwater runoff; however, a TESC plan would be implemented and temporary stormwater treatment would be employed. A permanent stormwater control system would be installed that would direct clean rooftop runoff to wetlands to maintain their hydrology. As a result, no indirect impacts on wetlands, streams, and their associated buffers are anticipated.

Wetland and stream buffer averaging would likely be required for lots proposed for residential, open space and roadways; areas of buffer averaging would be proposed at the time of the final design. Utility/sewer easements would extend through the buffers of Wetland A, B, C and Q; these easements would be located within existing trail prisms to the extent feasible.

Those buffer areas that would be reduced through the use of buffer averaging are generally currently degraded as a result of existing landscaping and do not provide significant wildlife habitat, nor do they significantly contribute to integrity of wetland or stream habitat function. Proposed development within wetland and stream buffers through buffer averaging would not result in a change from existing conditions.

Operational Impacts

Approximately 103 acres of the site would be permanently retained as critical areas and associated buffers.

No federal- or state-listed wetland animal species are documented within the site. Western pond turtles (state endangered) are the only listed animal species identified that may occur in on-site wetland/stream habitats. Coho salmon and cutthroat trout are not considered sensitive species. Other unlisted wetland and stream species likely occur, but these species are common. Because there would be no reduction of on-site wetland and stream habitat availability, development under Alternative 1 is not likely to have a significant impact on wetland and stream species.

Marine and Shoreline Habitats

Construction Impacts

Alternative 1 would require grading and development activities within limited areas of the shoreline buffer, and stormwater control improvements below the ordinary high water mark (OHWM) of the adjacent marine waters.

Proposed grading activities within the Mill Site and the shoreline buffer include both cut and fill; all cuts and fill would occur landward of the OHWM. This grading would comply with FEMA standards, demonstrating no harm to listed species, as indicated in the Biological Assessment of the project application (see Section 3.9, **Plans and Policies**, for additional detail). Approximately 175,000 cubic yards of fill would be placed on the Mill Site (including the area within the shoreline buffer), in order to raise the ground elevation by five to eight feet on average, and bring the elevation above the 100-year floodplain.

Construction activities could result in temporary impacts to the marine waters through erosion and sedimentation, pollutants from construction equipment and underwater noise. Construction work would occur within the permitted salmon "work window" (when work could occur), and nearshore marine and intertidal habitat for forage fish, shellfish and habitat for federally-listed fish and marine mammal species (i.e. bull trout and marbled murrelet) would not be significantly impacted.

All work within the shoreline buffer and below the OHWM would be regulated through local, state, and federal permitting which would address when the work could occur (i.e., inside the fish "work window," only at low tide), construction means and methods, and restoration requirements. It is anticipated that all construction access would be via the uplands - barges or boats would not be required and thus would not have the potential to impact marine and shoreline habitats.

Operational Impacts

Alternative 1 would result in permanent changes to existing shoreline and nearshore marine habitat. Areas adjacent to the shoreline buffer within the Mill Site and along Port Gamble Bay would be occupied by residential and commercial land uses together with associated parking and landscaping. Land uses within the shoreline buffer itself would include access to the shoreline from two waterfront parks, a new shoreline trail or boardwalk situated at the landward edge of the buffer, and underground stormwater drainage pipes. When developed, activity levels along the shoreline would increase, with more people (and pets) utilizing the shoreline trail and shoreline access.

Proposed development of a hotel under Alternative 1 would result in shadows that would reach the shoreline during winter months. Most of the intertidal zone that would be affected by shadows is comprised by the riprap revetment that currently protects the shoreline and there is no eelgrass within 165 feet of the proposed hotel. During winter months, shadows from the hotel would extend approximately 110 feet into the upper subtidal area; however, the habitat in this area is minimal and shading would occur outside of the eelgrass and macroalgae growing season. As a result, it is anticipated that because there is no vegetation or other fish habitat along the shoreline and because the shadow from the hotel will only extend 110 feet into the water for a portion of the year, there will be no significant impacts to fish or nearshore habitat from shadows from the proposed hotel (see **Appendix C** for further details).

Alternative 1 would include a permanent stormwater control system with water quality treatment that would improve existing marine habitats (no water quality treatment facilities are currently present).

The existing community sewage discharge has been shifted from Hood Canal to a large, upland on-site septic system (LOSS). The existing sewage treatment plant and outfall would be abandoned and removed. The development of the LOSS has improved water quality and existing marine habitats when compared to the prior condition, and has allowed the state to open aquaculture resources in the area to recreational and commercial harvest, and improve water quality and habitat (Golder 2014).

Because of the degraded nature of the marine shoreline throughout the Mill Site under existing conditions, Alternative 1 is not anticipated to result in displacement of any marine species utilizing the site, and could result in improved habitat conditions if the shoreline area is enhanced. A number of federally-listed fish and marine mammal species could occur in nearshore environments adjacent to the site. Assuming compliance with all regulatory requirements, no marine or intertidal species would be significantly impacted by the proposal, except those that could benefit from the improvement in restored buffer areas, as described above. Species that could benefit include marine salmon, trout, forage fishes and shellfish.

Removal of the existing sewer outfall to Hood Canal is not anticipated to impact coastal processes. A stormwater infrastructure system would be provided under Alternative 1 to serve residences and businesses in Port Gamble. Associated with the stormwater system, which includes two outfall diffuser Tees situated on the beach above the OHWM, are anchored drift logs and rock that also will serve as habitat features and components of a created pocket beach. Removal of the existing concrete bulkhead and creation of the pocket beach and backshore area will restore the beach and enhance ecological functions of nearshore systems. A gravel trail that will extend from the top of slope to the shoreline also will be constructed for maintaining the stormwater outfall and for public access to the upper intertidal beach.

Although independent of the proposed project, the environmental cleanup (completed in 2017) and potential new dock proposed on the site as part of a separate project have and will affect the existing conditions in coastal portions of the site. The cleanup action has generally improve nearshore littoral functions over current conditions. Removal of overwater structures and associated support pilings has augmented littoral drift functions. A new dock, if approved, would increase overwater coverage in in-water support piles, but the cumulative effect of the cleanup and new dock together would result in a net benefit to coastal processes.

A described earlier in this section, a *Floodplain Habitat Assessment* was completed subsequent to the issuance of the DEIS. Based on that assessment, it was determined that development “may affect, not likely to adversely affect” listed Chinook, summer chum, steelhead, bull trout, bocaccio rockfish, yelloweye rockfish, Southern Resident killer whale,

and marbled murrelet that may be present in the site area. The effect determination for critical habitat within the area of the project is that it "may affect, not likely to adversely affect".

Over the long term, the project would result in the following:

- No change in noise levels as the site would change from industrial uses to residential and commercial uses.
- Increased water functions along the shorelines as impervious surfaces would be reduced and stormwater would be treated before being discharged into Port Gamble Bay and Hood Canal.
- Increase habitat functions since vegetation would be planted in areas that currently have no vegetation cover.
- The project will utilized BMPs and there would be no impacts to water quantity or water quality from development.

See **FEIS Appendix F** for further details on the Floodplain Habitat Assessment.

Wildlife Networks and Corridors

The majority of the existing large forested, wetland and riparian areas within the site would remain intact with proposed redevelopment under Alternative 1. Proposed redevelopment would generally be concentrated in previously disturbed areas, thus minimizing impacts to wildlife networks and corridors. The extension of Carver Road north of Wetlands C and B, and across Machias Creek, would however, limit wildlife movement between Carver Drive and SR 104 in the northern portion of the site. Proposed development within the westernmost portion of the site (Carver Drive/Rose Loop, agricultural area, and the LOSS) would also limit some animal movement to natural areas to the west. Overall, wildlife movement along Machias Creek, Ladine-Couteau Creek and the Hood Canal and Port Gamble Bay shorelines would not be significantly altered with proposed development.

Alternative 2

With respect to plants and animals, the impacts of Alternative 2 would be similar to those of Alternative 1, with the following exceptions:

- Approximately 16 acres within the Mill Site, adjacent to the shoreline, would be purchased and established as a conservation area (see Marine and Shoreline Habitat below for details); the purchase and conservation would be completed by others, under separate permitting.
- Grading quantities (pavement removal and placement of new fill) within the Mill Site would be less, including within the shoreline buffer.

- Residential and commercial building and parking footprints within the Mill Site, and their associated impacts on shoreline habitat, would be less.
- Educational/institutional uses related to the waterfront and marine sciences would be increased.
- Changes to the storm drainage outfall into Port Gamble Bay from the Mill Site would not occur.
- Wetland buffers would be placed within common open space tracts instead of Native Growth Protection Easements.

Upland Plant and Animal Habitats, Wetlands and Steams

It is assumed that all upland critical areas and associated buffers would be protected under Alternative 2 per the requirements of the Kitsap County Critical Area regulations; and impacts would be the same as those described for Alternative 1.

Marine and Shoreline Habitat Conditions

The intent of restoring approximately 16 acres within the Mill Site is to improve shoreline habitat conditions beyond that proposed in Alternative 1. Although a specific conservation plan is not yet proposed, activity under Alternative 2 would allow the possibility of future conservation. It is assumed that the conservation would improve shoreline and marine habitat. In addition, human and pet activity along the Port Gamble Bay shoreline and their associated potential impacts on wildlife could be reduced due to the reduced level of development along the shoreline. Impacts to floodplain habitat would also be similar to those described for Alternative 1.

No Action Alternative

Scenario A – Continuation of Existing Conditions

Under Scenario A, it is assumed no new development or infrastructure improvements would occur. The site would remain in its partially developed condition, and there would be no new temporary or permanent impacts to existing plant and animal habitats and species. Existing habitats that are intact would remain intact and degraded habitat would remain degraded. Human and pet activity along the shorelines would remain substantially unchanged. The continued operation of the limited stormwater control system and the existing sewer treatment plant would continue to impact marine resources.

Scenario B – Redevelopment by Others Under Existing Zoning

Redevelopment of the site over a long period of time by different property owners would result in more piecemeal development of the site, which would result in a greater (+20 acres) loss of the upland natural wooded areas and associated habitat compared to Alternatives 1 and 2; this acreage would be largely replaced by residential landscape/lawn area. This loss of wooded areas would result in more fragmentation of the large areas of natural open space compared to Alternatives 1 and 2, further impacting wildlife habitat.

Scenario C – Redevelopment of Upland Area by Others Under Existing Zoning and Purchase of Mill Site by Others for Conservation

Redevelopment of the upland portion of the site under existing regulations and purchase and conservation of the Mill Site by others would result in piecemeal development of the upland portion of the site, as described in Scenario B above, and conservation of the entire Mill Site. The Mill Site would be restored to a more natural condition compared to Alternatives 1 and 2 and the No Action Alterative Scenarios A and B, thus providing a greater opportunity for improving habitat for nearshore species including marine salmon, trout, forage fishes, and shellfish. Conservation could include removing existing debris and invasive species and planting a mix of native trees, shrubs and shoreline grasses. The portion of this area lying within the 100-year floodplain would not be filled, and would be subject to periodic storm surges. Human-induced noise and light and glare would be significantly reduced in this area.

3.3.3 Mitigation Measures

The following required/proposed mitigation measures address the potential impacts to plants and animals that could result from the construction and long-term use of Alternatives 1 or 2.

Required/Proposed Mitigation Measures

Prior to and During Construction

- Construction would be conducted in accordance with the conditions of all applicable permits issued by regulatory agencies (Kitsap County, WDFW, Ecology, U.S. Army Corps of Engineers).
- All work below the MHW level would be conducted during the approved work windows for fish species that may occur in the project area.
- A forage fish survey may be required along the Hood Canal and Port Gamble Bay shorelines prior to construction, consistent with WDFW requirements.
- Forage fish monitoring may be required during construction.
- Construction equipment would be stationed above the OHWM of Hood Canal and Port Gamble Bay, and would operate as far from the water's edge as possible. Construction equipment would not enter any waterbody without authorization from appropriate agencies.
- Debris and sediments would be disposed of outside all critical areas and associated buffers.
- Waste materials would be transported off-site and disposed of in accordance with all applicable regulations.
- A spill prevention, control and containment (SPCC) plan would be developed to ensure that all pollutants and products are controlled and contained.

- A TESC plan and source control plan would be developed and implemented, including BMPs.
- BMPs would be implemented to ensure that no foreign materials such as oil or fuel from construction equipment enters marine waters and that sedimentation is minimized.
- Adequate material and procedures to respond to unanticipated weather conditions or accidental release of materials would be available onsite.
- Contract documents would specify that equipment used shall be free of external petroleum-based products while works is performed around water.
- Equipment staging and/or materials storage would be restricted to existing un-vegetated surfaces.
- Daily inspections of the erosion control measures would be conducted throughout the construction period to ensure the effectiveness of the measures and determine the need for maintenance, repairs or additional measures.
- All construction debris would be removed or contained on a daily basis before leaving the construction area for the work day.
- Disturbance would be limited to those areas necessary for construction, which will be identified on site plans and marked on site before construction begins.
- The project would comply with KCC Title 19, Kitsap County Critical Area regulations, including:
    - Preparation of a detailed Habitat Management Plan addressing potential impacts to species regulated under County Code, including the bald eagle; this may include a nesting survey.
- Shoreline and shoreline buffer enhancement would be provided, including:
    - Removal and restoration of existing rip/rap in areas in areas of stormwater outfall improvements, and
    - Installation of native vegetation (planting trees in the shoreline environment could contribute to habitat benefits for birds of prey, such as bald eagles and osprey, as well as herons, which use shoreline trees for rookeries).
- Additional site-specific critical area and engineering studies would be prepared during permitting to evaluate potential impacts associated with any utility work below OHWM, as necessary.
- Native plants would be incorporated into the landscaping in commercial areas, multifamily residential areas and parks. Residents in single family residential areas would also be encouraged to incorporate native plants into their landscaping.

- A permanent stormwater control system would be installed as approved by Kitsap County to avoid erosion, sedimentation and pollutant impacts on water resources and their associated habitat on and in the vicinity of the site.
- If development is proposed in the vicinity of an eagle nest, USFWS guidelines would be implemented during the local permitting process and a HMP would be developed.

During Operation

- Interpretive or educational materials would be developed and made available in order to foster an understanding and appreciation of the primary natural features (e.g. shoreline, wetlands and creeks) of the Port Gamble site and vicinity by future residents, employees, and visitors.

3.3.4 Significant Unavoidable Adverse Impacts

Permanent loss of habitat would occur, similar to any major development project on a partially undeveloped site. However, with the implementation of the required/proposed mitigation measures listed above, no significant unavoidable adverse plants and animal impacts would be anticipated.

APPENDIX C

Updated Section 3.5 – Cultural Resources

3.5 CULTURAL RESOURCES

This section describes the existing cultural resource conditions on and in the vicinity of the Port Gamble site. Potential impacts from redevelopment of the DEIS alternatives are evaluated and mitigation measures identified. This section is based on the *Archaeological Resources Discipline Report* (June 2014) and the *Technical Report of Archaeological Field Investigations* (February 8, 2018), both prepared by SWCA (**Appendix H**).

Information added or changed subsequent to the issuance of the Draft EIS is shaded to ease identification of the added or changed information.

3.5.1 Affected Environment

The Port Gamble site has been influenced by both Native American and subsequent historic (non-native American) use, and this section describes the influence of both in the archaeological record.

Regulatory Overview

Several Washington state laws specially address archaeological sites and Native American burials, and would pertain to redevelopment of the Port Gamble site. The Archaeological Sites and Resources Act [RCW 27.53] prohibits knowingly excavating or disturbing prehistoric and historic archaeological sites on public or private land without a permit issued by the Washington State Department of Archaeology and Historic Preservation (DAHP). The Indian Graves and Records Act [RCW 27.44] prohibits knowingly destroying American Indian graves, cairns and glyphys, and provides that inadvertent disturbance through construction or other activities requires re-interment under supervision of the appropriate Indian tribe. In order to prevent the looting or depredation of sites, any maps, records, or other information identifying the location of archaeological sites, historic sites, artifacts, or the site of traditional ceremonial, or social uses and activities of Indian Tribes are exempt from disclosure [RCW 42.56.300]; accordingly, maps or other information identifying the specific location of archaeological sites are not part of this section.

Analysis Methodology

2014 Archaeological Resources Discipline Report (2014 Report)

A previous study conducted in 2010 evaluated the Port Gamble Bay shoreline landforms in terms of potential human use through time, and presented a review of archival sources including maps, photographs, historical documents, and ethnographic accounts. This study identified sensitive locations along the eastern margin of the site that included a reported Native American village site, an historical ferry landing, Chinese millworkers' living quarters and a variety of other early historical period residential features. As well, a Native American sensitivity model was produced that assigned high risk values for impacts to archaeological resources in limited portions of the western shore of Port Gamble Bay and

the Hood Canal shoreline; the model predicted some sensitive locations within the Port Gamble site.

In order to assess the affected environment for this EIS, modeling was conducted to evaluate the sensitivity for encountering pre-contact and historic archaeological materials on the Port Gamble site. This modeling built on the prior 2010 study, and determined that the highest sensitivity for pre-contact archaeological materials remained the pre-fill shoreline of Port Gamble Bay where a sand spit is now deeply buried beneath historic fill. Moderate sensitivity for pre-contact archaeological resources was assigned to areas around creeks, wetlands and an in-filled kettle lake in the middle of the Town Site (RHTR and RHTC-zoned areas). Lower sensitivity for pre-contact archaeological resources was designated for the remainder of the upland portion of the site (RHTR, RHTC, RR and RW-zoned areas). The highest sensitivity for early historical cultural materials on the upland area was assigned to the northeast corner of the Town Site (RHTC -zoned area). Expansion of the town through the nineteenth century and into the twentieth is captured by the boundary of the National Register-listed Historic District. A single area to the west, the location of a dance hall, later a dairy farm, was the only other high sensitive area identified outside of the District boundary.

Archaeological fieldwork consisted of pedestrian survey, shovel probe excavation, magnetometer survey completion of geotechnical cores and mechanical test pit excavation. Locations for testing were guided by the sensitivity model and assembled geotechnical information. Pedestrian survey with shovel probes was completed on the portion of the upland assumed to have the lowest potential for discovery, including the woodlands and wetlands occupying most of the southern portion of the site (RW zoned area).

2018 Technical Report of Archaeological Field Investigations (2018 Report)

The 2018 Technical Report of Archaeological Field Investigations (2018 Report) presents the methods and results of archaeological fieldwork completed to support the 2014 Report. Archaeological fieldwork conducted in support of the 2014 Report is described and expanded upon in the 2018 Report, including discussion on pedestrian survey, shovel probe excavation, magnetometer survey, completion of geotechnical cores, and mechanical test pit excavations (refer to **Appendix H**).

Natural Environment

The structure of the natural environment largely determines human use of any landscape, conditioning the availability of food and shelter. Locations and types of resources are dependent on geologic substrates, topography, geographic relationships among landscape features, solar exposure,

Port Gamble Bay is a shallow saltwater embayment which has been influenced by geologic events and geomorphologic changes throughout its history, including ice sheet glaciation, tectonic activity, climate change and sea-level rise. The operation of geologic and geomorphic processes has shaped the modern topography of Port Gamble Bay and the

surrounding landscape, and has influenced both the probability for human occupation in and around Port Gamble Bay, as well as archaeological site visibility and preservation.

The Port Gamble site lies within a large north-south oriented structural trough called the Puget Lowland, bounded by the Cascade Range on the east and the Olympic Mountains on the west. The modern landscape of the Puget Lowland and Strait of Juan de Fuca has been sculpted by the advance and retreat of multiple continental glaciations during the Pleistocene, 1.8 million to 10,000 years ago. The low-lying portions of the region are mantled by thick unconsolidated deposits that form a stratigraphically complex sequence of Quaternary glacial and interglacial deposits overlying pre-Tertiary or Tertiary bedrock.

Landforms

Site landforms were mapped for the 2018 Report based on surface geomorphology and earliest available historic maps. Four different landforms were identified for the site, including tide flats, beaches, bluffs, and uplands.

Tide Flats

Tide flats are found where tidal action is moderate and sediment is available. Native American villages were often located near tide flats because of abundant and diverse resources. Today, thick fill deposits containing mill waste and dredge spoils are on top of the earlier tide flats along the east edge of the Mill Site. The tide flats below fill on the site contain a moderate potential for buried pre-contact cultural resources and relatively high preservation potential where historical dredging did not occur. The east edge of the site, where the tide flats drop off into the bay and land was not exposed, has low potential for pre-contact archaeological remains.

Beaches

Beaches are coastal accumulations of sediment derived from rivers and eroding bluffs that are moved by tides and waves. The backshore is the portion of a beach usually only inundated during storms. Today, thick fill deposits containing mill waste and dredge spoils are on top of the earlier beach deposits in the Mill Site. Older beaches may be buried north of the modern shoreline. Although beaches have a high potential for buried pre-contact cultural resources, preservation across most of the beach landform is moderate to low. The potential for preservation of resources is highest in the backshore zone.

Bluffs

Bluffs of varying height define the back of the shoreline, and suitability for human use varies according to topography and height of the bluff edge. The shoreline of the site is characterized by low bluffs fronting a marine platform that was created when relative sea level was higher than the present shoreline. The bluff edges and upland immediately behind or above the bluff edge would have been available to inhabitants of the region. In general, bluffs are characterized as having moderate sensitivity for buried archaeological resources.

Bluffs are generally unstable, so preservation potential is lower at the top of the bluff and along the bluff slope. Preservation potential increases at the toe of the bluff, but this potential is tempered by wave action when tides bring the high water line up to the bluff base.

Uplands

The uplands behind the bluffs were generally forested, and productivity of resources that may have been useful to Native Americans varied depending on soils, hydrology, and slopes. Native Americans mainly used the uplands for special purposes, such as activities related to resource procurement of cedar, game animals, etc., as well as for other purposes such as burials. In general, there is a low potential for encountering cultural resources on the uplands, except where fresh water and access points are present

Cultural Setting

The chronology of human occupation in the Puget Lowland remains poorly understood, with major gaps still existing in the archaeological record, particularly for earlier periods of time. Limited archaeological evidence may reflect inundation of early marine shorelines during the late Pleistocene and early Holocene epochs, as sea levels and land mass elevations fluctuated in response to melting glacial ice.

Pre-contact Period

Archaeological evidence documents more than 13,000 years of human occupation in the Puget Lowland, with indications of both Clovis and Olcott sites. The Clovis were highly mobile hunting and foraging groups who ranged across North America during the late Pleistocene, following herds of big game animals. Evidence of Clovis people in western Washington includes fluted chipped stone and projectile points, found in the Olympia area, the Chehalis River Valley and Whidbey Island. Olcott sites, characterized by leaf-shaped projectile points and flake tools have been identified in the region and dated between 9,000 and 5,000 BP. These sites are typically found in the uplands or on secondary stream terraces some distance from marine shorelines.

By 5,000 BP, the regional climate had stabilized and achieved its modern character, and dense coniferous forests covered the land. Human populations expanded during the period and people began to exploit a greater variety of resources, including large and small mammals, fish, shellfish, roots and berries. Evidence of buildings and hearths are common in archaeological sites dating to this period. By 3,000 BP, groups of people had begun to follow a seasonal round, moving between permanent village sites and favored resource collection locations as plant and animal foods became available. In time, the seasonal round became the norm, accompanied by improved resource collection and storage technologies. By the time of European contact, Native peoples' diets comprised a variety of foods and salmon had emerged as a dietary staple.

Ethnographic Period

Tribal Views

The Port Gamble S'Klallam Tribe and the Suquamish Tribe both provided their perspectives on early Native American use of Port Gamble Bay to Kitsap County during discussions related to the 2011 String of Pearls Trail project. Because of their relevance to the current project, these tribal statements are included here.

Statement from the Port Gamble S'Klallam Tribe:

"Port Gamble S'Klallam oral history indicates that a settlement predated the development of the Port Gamble Mill in 1853. Ethnographic and linguistic evidence collected by John Peabody Harrington in the early 1940s also indicates that the historic S'Klallam name for the place was nəxʷqi̓yt̓ (place of midday sun). Following the establishment of the mill, the community re-established itself on Point Julia. The name nəxʷqi̓yt̓ (place of midday sun) was applied to this re-established community, which grew with the expansion of the mill. Ethnographic evidence indicates that the name nəxʷqi̓yt̓ applied historic settlements on both sides of the bay and to Port Gamble Bay itself."

Statement from the Suquamish Tribe:

"Port Gamble is within the Ancestral Territory of the Suquamish People. Hudson's Bay traders met Suquamish Chief Challicum in 1833, near Port Gamble. A United States Exploring Expedition survey party described the presence of the Suquamish throughout the north end of Hood Canal. The survey party camped at the mouth of Port Gamble in the summer of 1841 and did not report any evidence of Indian camps or villages. United States Exploring Expedition maps published in 1845 show the area was part of Suquamish Territory."

Historic Period (Port Gamble Development)

The historic context of the development of the mill town of Port Gamble, beginning in 1853, is documented in detail **Section 3.6**, **Historic Resources**, and in **Appendix H** and **Appendix I**.

Recorded Archaeological and Historic Resources

Fieldwork conducted for this EIS identified seven new archaeological sites including one ethnographic site, four historic-period sites and one pre-contact site. In addition, two historic properties were previously recorded within the Port Gamble site including the Port Gamble Historic District and the Port Gamble Buena Vista Cemetery. **Table 3.5-1** below, lists the description, age, National Register of Historic Places (NRHP) -status and compiler/date of all nine sites. All but two of the sites are considered eligible for listing or are listed (Port Gamble Historic District) in the NRHP. Detailed descriptions of each archaeological site follow.

Table 3.5-1
ARCHAEOLOGICAL SITES AND HISTORIC PROPERTIES WITHIN PORT GAMBLE

Description	Age	Considered Eligible for NRHP	May Contribute to Historic District
Port Gamble Historic District	1853 - 1977	Listed in NRHP and designated NHL	N/A
Port Gamble Buena Vista Cemetery	1856 - 1941	Yes	Contributes
Point Totten Shell Midden	Pre-contact	Yes	No
Gamble Creek Ravine Historic Dump	1890s - 1940s	No	No
Babcock Dairy and Port Gamble Dance House	1980s – 1930s	Yes	Yes
Port Gamble Chinese Laundry and Residences	1870s – 1930s	Yes	Yes
Port Gamble Workers Housing Debris Scatter	1880s – 1930s	Yes	Yes
Isolate – historic bottle fragment	pre-1880	No	No
Road 1100 Culturally Modified Cedars	ethnographic	Yes	No

Source: SWCA, 2014.

Port Gamble Historic District

The Port Gamble Historic District encompasses the historic Port Gamble company town built around the 1853 Puget Mill Company lumber mill, which operated nearly continuously until it was closed and dismantled in 1995. The site includes residences, commercial buildings, a cemetery, the Mill Site and wharf remnants. The district is listed on the NRHP as a National Historic Landmark. See **Section 3.6**, **Historic Resources**, for more information on the historic district.

Buena Vista Cemetery

The Buena Vista Cemetery is situated on a bluff overlooking Hood Canal in the RHTR-zoned area, and was established before 1870. The cemetery contains 115 graves and 11 grave depressions. Landform and documentation suggest that boundaries are relatively inclusive of all or most historic interments. The Historic American Engineering Record (HAER) documentation has been completed for the cemetery site.[1]

Pre-contact Midden

A shell midden deposit was identified on the Mill Site during sonicore testing on a sand spit historically referred to as Point Totten. The midden is now buried below 7.3 feet of historic fill and is a maximum of 2.8 feet thick. Both intact and disturbed midden was identified, and the deposits contain fire modified rock, mammal and fish bone, and a variety of shell fish (see **Appendix H** for detail).

[1] HAER WA-143.

Gamble Creek Ravine Historic Dump

Cultural materials dating as early as the 1890s were found in two shovel probes on a small terrace on the Gamble Creek ravine; modern cultural materials were also observed on the surface. The historic dump site, measuring approximately 49 ft. by 89 ft., extends to approximately one foot below the surface. Materials identified included metal, glass, ceramic and plastic objects together with a few pieces of cut bone and shell (see **Appendix H** for detail).

Babcock Dairy and Port Gamble Dance House

Historic archaeological materials dating from the 1870s to the 1930s were discovered in shovel probes in pastures just southwest of the Town Site (within the RW-zoned area). Probes were targeted to explore the approximate location of buildings identified on the 1877 Government Land Office survey map. The buildings' locations are within the boundary of the historic Babcock Dairy established in 1892 and near existing and former buildings associated with these agricultural activities. Although the 40-acre parcel's most recent agricultural use was primarily for dairy (the dairy operated into the mid-twentieth century), other agricultural activities likely took place much earlier. Structures currently on the site date to the early twentieth century and were recorded on historic property inventory forms by the historic resources consultant for this EIS (see **Section 3.6**, **Historic Resources**, for details).

The ownership history of this area indicates that a dance house was located on the property as early as the 1860s; this was confirmed by artifacts discovered during testing. Dance halls and saloons were common with industry towns and waterfronts where many single men and sailors worked. In the case of Port Gamble, the mill owners discouraged the use of alcohol and generally owned or controlled most of the local businesses, so the location of the dance house just outside the town limits would have been a way to circumvent company edicts. The 40-acre parcel within which the site is located went through a series of landowners from its first patent in 1869, many of whom were involved in the liquor business. Most revealing was the sale of March 16, 1872 which names the dance house as part of the property sold.

Shovel probes were excavated across the area where three buildings were shown on the 1877 map. Of 94 probes, 24 were positive for historical archaeological materials. The probes yielded fragmented bottle glass, ceramics, and a few faunal remains, and metal artifacts such as nails, cartridges and fence staples. Some of the glass colors, manufacture technology and trademarks suggest a pre-1880 origin for the vessels, many of which were for beer, whisky or other spirits. Co-mingled were fragments of glass vessels and other objects more likely to date to the late nineteenth or early decades of the twentieth century, and probably related to the Babcock Dairy and its inhabitants (see **Appendix H** for details).

Port Gamble Chinese Laundry and Residences

A Chinese laundry is shown on an 1885 map of the town and may have been in place before 1880. Archaeological materials dating between the 1880s and 1930s were found at the

historical location. A handwritten notation on a later map indicates that the laundry burned in April 1925. Artifacts associated with the Chinese Laundry were found in 35 shovel probes and included bone, ceramic, composite materials, fabric, glass, leather, metal and wood. Two artifact groups of note in the assemblage included bitters bottles and Chinese brown glazed stoneware (see **Appendix H** for details).

Port Gamble Workers Housing Debris Scatter

Historical artifacts from Port Gamble worker cabins were found in test pits throughout the upper layer of fill (to a depth of approximately 3.5 feet below the surface) at a location on the Mill Site. Prior to historical occupation of the Mill Site, a sandy, gravelly beach was at the base of Teekalet Bluff. Once the mill began production, sawdust accumulated on the shoreline and buried the beach gravels. Sawdust may have also been used to intentionally fill the beach. The workers cabins were either built directly on top of dredge fill (sand on top of the sawdust), or on planks and piles above the beach. The deposits that were discovered contained jumbled glass, ceramic, metal, fabric and leather objects, and brick and sawn mammal bone and shell. A variety of ages are assignable to ceramic and glass artifacts ranging from the 1840s to 1950s found along with plastic, aluminum, and other relatively modern materials. At a depth between approximately 1 to 2 feet below the surface, all of the artifacts can be attributed to the period between 1880 and 1930, when the area would have been occupied by the mill workers (see **Appendix H** for details).

Isolate – Historic Bottle Fragment

An assumed bottle base manufactured between 1850 and the 1880s was observed in a shovel probe excavated in a yard on Rainer Avenue. The shovel probe yielded a hand-manufactured bottle. Five shards of clear glass, one nail and four large mammal bones were also found in disturbed upper soil horizons, while the bottle base was in the truncated B-horizon. Landscaping activities likely disturbed shallower sediments and their associated artifacts, but left the more deeply buried B horizon and the older artifact.

Road 1100 - Culturally-Modified Cedars

Two culturally modified trees were identified just north of the reservoir in the woods southwest of the Town Site. The trees were observed along Port Gamble road 1100 to the reservoir that has been converted to a hiking trail. Both trees are peeled cedar of about 2.5 feet in diameter. The trees represent Native American use of the uplands and signal the importance of the area resources for past subsistence. The forest is second and third growth, indicating twentieth century modification of these trees.

3.5.2 Impacts of the Alternatives

This section identifies and analyzes impacts to cultural resources on the Port Gamble site with proposed redevelopment. Impacts are expected to be similar for both the shoreline setback variance and no shoreline setback.

This following discussion of impacts assumes that evaluation of newly identified archaeological sites is completed, and that seven of the nine sites are determined eligible

for listing in the NRHP (note that the Buena Vista Cemetery is already eligible for the NRHP and the Port Gamble Historic District is already listed as an NHL).[2]

Alternative 1

Construction Impacts

Ground disturbance from construction of proposed infrastructure and transportation elements, as well as from the construction of new buildings, has the potential to impact recorded, NRHP-eligible or designated archaeological sites, as well as unrecorded archaeological materials on the Port Gamble project site. In general, the potential for impacts to the *Buena Vista Cemetery* is considered low, and the *Gamble Creek Ravine Historic Dump* and *Isolate-historic Bottle Base* are not considered eligible for listing in the NRHP, and therefore no impacts would occur to these sites under proposed redevelopment.

Pre-Contact Shell Midden

The pre-contact shell midden occupies approximately 3 acres on the RHTW Mill Site. Intact stratified midden was identified below an average of approximately 6.5 feet of fill associated with the mill. The intact portions of the midden extend up to approximately 9.8 feet below surface. Disturbed midden mixed with historical fill was identified as shallow as 4 feet below surface.

Any proposed development that would require excavations below 4 feet has the potential to impact this resource, and may require a permit from DAHP. If the resource site cannot be avoided, DAHP and other concerned parties would be consulted to develop ways to mitigate the impacts. Mitigation could include moving the development to "reserve lots" in the event of an inadvertent discovery.

Babcock Dairy and Dance Hall

The Babcock Dairy and Port Gamble Dance House site includes historical artifacts that were recovered within the RW portion of the site. The existing agricultural and recreational uses that currently occur in this portion of the site are expected to expand and may include agritourism, a wildlife rehabilitation facility, and large open spaces for agriculture.

Any proposed development that would require alteration of the existing ground surface including clearing and grubbing of vegetation, grading, and planting has the potential to impact this resource and may require a permit from DAHP. Given the resource site's location in the RW area that is slated for a low level of development, avoidance of the

[2] The newly identified sites considered eligible for listing in the NRHP include: *Pre-contact Midden*, *Port Gamble Dance House and Babcock Dairy*, *Port Gamble Chinese Laundry and Residences*, *Port Gamble Workers Housing Debris Scatter* and *Culturally Modified Cedars*. The *Gamble Creek Ravine Historic Dump* and *the Isolate – Historic Bottle Fragment* are not considered eligible for the NRHP.

resource site is assumed. If the resource site cannot be avoided, DAHP and other concerned parties would be consulted to develop ways to mitigate the impacts. Mitigation could include moving the development to "reserve lots" in the event of an inadvertent discovery.

Port Gamble Chinese Laundry and Residences

The Port Gamble Chinese Laundry and Residences Site is within the RHTR area. Historical artifacts associated with the laundry and residences were recovered from near the surface. As currently planned, the site primarily occupies wetland area and extends to the proposed Talbot Street NE; the Alternative 1 site plan avoids locating new residential uses within this resource site.

Any proposed development that would require alteration of the existing ground surface including clearing and grubbing of vegetation, planting, grading, and utility trenching has the potential to impact this resource and may require a permit from DAHP. The portion of the site that is within the wetland would be avoided as possible. For areas where the resource site cannot be avoided, DAHP and other concerned parties would be consulted to develop ways to mitigate the impacts. Mitigation could include moving the development to "reserve lots" in the event of an inadvertent discovery.

Port Gamble Workers Housing Debris

The Port Gamble Workers Housing Debris Scatter site is at the base of the bluff in the RHTW area. Although historical artifacts were identified throughout the upper layer of fill that had been placed in the area, a disturbed historical surface is present at 2.5 to 3.4 feet below surface. Above that surface are artifacts dating from the 1840s to the 1950s time period; time the area was occupied by workers for the mill.

Any proposed development that would extend more than 2 feet below surface has the potential to impact this resource and may require a permit from DAHP. If the site cannot be avoided, DAHP and other concerned parties would be consulted to develop ways to mitigate the impacts. Mitigation could include moving the development to "reserve lots" in the event of an inadvertent discovery.

Culturally Modified Cedars

The two culturally modified cedar trees are within the wetland buffer of wetland B in the RW area. As proposed, the resource site is in an area with no proposed disturbance and no construction impacts are anticipated. The resource site would be avoided during development and construction of other elements within the proposal.

Operational Impacts

Operational impacts to recorded archaeological properties as well as undiscovered properties in sensitive areas are possible due to increased site population, increased recreational use of the site and a potentially associated increase in vandalism. With implementation of identified mitigation measures, including an archaeological resources management plan, no significant operational impacts are anticipated.

Alternative 2

In general, construction and operational impacts to archaeological resources under Alternative 2 would be similar to those described for Alternative 1, except at the Mill Site (RHTW Zone) where it is assumed that a portion of the area would be retained for conservation. Conservation of a portion of the Mill Site would result in a lower potential for impacting unrecorded archaeological sites, as well as the *Pre-contact Midden* and the *Port Gamble Workers Housing Debris Site*. However, redevelopment and conservation activities conducted by different parties could result in less coordinated planning for management of archaeological resources or a consistent response to the inadvertent discovery of archaeological resources encountered during construction.

No Action Alternative

Scenario A – Continuation of Existing Conditions

Under Scenario A, no redevelopment would occur. The existing land uses would remain as described under existing conditions. However, even with a continuation of existing conditions, there is potential for future impacts to archaeological resources on the project site associated with maintenance or other activities associated with existing uses. Without ongoing management or agreed-upon treatment measures, damage could occur to archaeological properties as well as undiscovered resources in areas deemed sensitive for hosting archaeological resources.

Scenario B – Redevelopment by others under Existing Zoning

Under Scenario B, impacts to archaeological resources would be similar to those described for Alternatives 1 and 2, except that development would be carried out by different parties at different times under different applications, and there would likely be a less coordinated approach to cultural resources.

Scenario C – Redevelopment of Upland by Others Under Existing Zoning/Purchase of Mill Site by Others for Conservation

Under Scenario C, impacts to archaeological resources would be similar to those described for Alternatives 1 and 2 on the upland portion of the site. On the Mill Site, if grading or debris removal does not extend more than six feet below the existing ground surface, no impacts would be expected occur to archaeological resources as a result of conservation by others.

3.5.3 Mitigation Measures

Required/Proposed Mitigation Measures

At this time only the *Buena Vista Cemetery*, is eligible for the NRHP. Mitigation measures that follow assume evaluation of the archaeological properties is completed and that all sites in **Table 3.5-1** indicated as "considered eligible for NRHP" are determined eligible for

listing in the NRHP. In addition, the Port Gamble Historic District is assumed to delineate an area of high sensitivity for future discovery of additional archaeological sites.

Implementation of the following mitigation measures would prevent impacts to significant archaeological sites:

- **Avoidance**. Impacts to an archaeological site can be avoided by re-designing elements of the proposal to by-pass the archaeological site boundaries and a buffer area. Avoidance requires delineation of archaeological site boundaries and project impacts, and agreement on appropriate site buffers.

  Buena Vista Cemetery - impacts (the potential to encounter unmarked interments) can be avoided by establishing a sufficient buffer zone through consultation with DAHP around the existing fence at the base of the slopes on the east and west, at the north edge of the road along the south boundary, and between the fence and the bluff scarp on the north edge.

  Pre-Contact Shell Midden - impacts can be avoided by limiting the depth of excavation on the Mill Site to six feet or less, or by raising the elevation of the existing ground surface and thereby the depth of excavation relative to the site location.

  Port Gamble Workers Housing - impacts can be avoided by establishing a buffer to prevent excavation below existing grade that is 15 meters (50-feet) wide around the boundary. Increased protection would be provided by adding fill to the site to increase the distance below proposed surface to the site. Data recovery would be provided where it is determined that avoidance cannot be fully observed.

- **Data Recovery**. Recovery of the information that makes a site significant can be implemented through consultation among the County, DAHP, affected Tribes, and other appropriate consulting parties. A research design guides excavation under permit from DAHP.

  The *Port Gamble Dance House and Babcock Dairy*, the *Port Gamble Chinese Laundry and Residences*, and the *Port Gamble Workers' Housing* sites could require data recovery of all or part of each site, depending on final project design.

- **Inadvertent Discovery Plan**. A plan to be implemented on the discovery of archaeological deposits or human remains at any time within the redevelopment area would minimize impacts over the life of the redevelopment and beyond.

- **Monitor**. Ground disturbance related to infrastructure development would be monitored by a qualified archaeologist under the guidance of a Monitoring and Discovery Plan (MDP) approved by DAHP, the County and other consulting parties. The MDP would provide notification protocols to be followed upon discovery.

- **Archaeological Resources Management Plan**. The Port Gamble Redevelopment Project assumes a long period of development. Given the identified archaeological sites and indication of the correlation of buried remains with historic maps in the *Port Gamble Historic District*, development of an archaeological resource management plan (ARMP) for the entire redevelopment area is the best way to guide identification, evaluation, and treatment of archaeological properties through the course of future development. The ARMP would be developed by a professional archaeologist in consultation with Kitsap County, OPG, DAHP, and affected tribes at a minimum.

  The ARMP would include a long-term research design based on an historic context expanded from HAER documentation prepared by Eakins 1997a, the overview of Sharley et al. 2010, and the technical investigations of Rinck et al. 2013. The research design would identify significant gaps in current understanding and would pose research questions to fill those gaps which archaeological research could help to answer. Also included would be methodologies for survey, testing, and data recovery and thresholds for their implementation. Provisions for curation, reporting, and continued consultation would also be included as would a comprehensive guide to existing archival resources, including those kept by the Puget Mill Company and its successors.

  The ARMP would provide GIS-based management tools at various scales related to archaeological potential to ensure that cultural resources are protected during the extended development. GIS would indicate the sensitivity level of a parcel, tract, or alignment and might recommend: 1) additional cultural resource investigation; 2) investigation to identify boundaries or establish buffers for a known site; 3) archaeological monitoring during construction or; 4) guidelines for development of mitigation measures, like data recovery. The plan would also provide an inadvertent discovery protocol that would guide consultation with DAHP, the Tribes, and other consulting parties in the event of unplanned discovery of human remains or archaeological deposits. Such a management plan would be adjusted through the life of the project as data was collected.

- In the case of inadvertent discovery of cultural resources within the RHTR, RHTC and RHTW areas, the proposed use resulting in the discovery could be moved to the "reserve lots" to avoid disturbance of the discovered resources.

3.5.4 Significant Unavoidable Adverse Impacts

No significant unavoidable adverse impacts on archaeological resources are anticipated with implementation of the required/proposed mitigation measures listed above.

APPENDIX D

Babcock Farms Landslide Hazard Assessment

March 30, 2020 Project No. 19134145

Linda Berry-Maraist
Olympic Property Group
19950 7th Avenue NE, Suite 200
Poulsbo, Washington 98370

PRELIMINARY LANDSLIDE HAZARD ASSESSMENT; BABCOCK FARM SITE
PORT GAMBLE, WASHINGTON

Dear Linda:

Golder Associates, Inc. (Golder) is pleased to provide this technical memorandum to Olympic Property Group (OPG) which summarizes the findings of our preliminary landslide hazard assessment at the Babcock Farm site. The project is located in Port Gamble, Kitsap County, Washington at the location shown (Site) on Attachment A – Site Map and Exploration Locations. The work presented herein is based on our scope of work and cost estimate provided to you on December 19, 2019 (P19134145, REV 1).

1.0 PROJECT OVERVIEW

OPG hired Golder to help with understanding the extent and nature of existing landslide hazards at the Site as they relate to future development plans in the upland area of Port Gamble. To better assess potential landslide hazards at the Site, Golder was requested by OPG to conduct a desktop data review, field reconnaissance and limited field investigation. This technical memorandum summarizes our findings. Additional Site background and geologic history are also provided below.

2.0 DESKTOP REVIEW

A recent landslide occurred on a sloping pasture on the Babcock Farm parcel in the upland development area of Port Gamble. This recent landslide can be clearly observed in publicly available 2018 light detection and ranging (LIDAR) data provided in Attachment B – LiDAR slope model. Based on a review of the 2018 LiDAR, there is also evidence of dormant landslides (i.e. likely occurred greater than about 100 years ago) located immediately north and south of the recent landslide (Attachment B). These landslides were selected for additional field observations to confirm our desktop assessment on landslide boundaries, relative age, the geologic unit involved in the slope instability, depth of landslide, and appropriate buffer recommendations.

Also visible in LiDAR is a large, steep-sided, circular depression located south of the Port Gamble Municipal water tank and access road. The circular depression is hereafter referred to in this report as the reservoir amphitheater. The shape and morphology of the reservoir amphitheater do not suggest that the feature was caused by a

landslide. It was selected for observations during our field investigation so we could confirm our assumption, provide an explanation for its formation and recommend appropriate development buffers.

3.0 GEOLOGIC BACKGROUND

A 1:36,000 scale geomorphic map of the Kitsap Peninsula shows that the general project area is mapped as a glaciated surface that may have pockmarked, fluted, or exhibit kame-kettle topography (Haugerud 2009). Two landslide areas mapped at 1:36,000 scale generally coincide with the older and recently active landslides observed by Golder at the Site (Haugerud 2009). At larger scales, the geology of the Site is generally mapped as Vashon-age glacial till—typically a very dense, non-sorted, non-stratified mixture of clay, silt, sand, gravel, cobbles, and boulders deposited through glacial processes (Yount et al. 1993). However, the actual geology observed by Golder at the Site does not appear to conform with the general designation of glacial till that is mapped at larger scales (e.g., Yount et al. 1993). The actual geology of the Site appears to comprise loose, recessional outwash containing stratified fine to medium sand that overlays firm to hard glaciolacustrine deposits of silt and clay. These geologic conditions are consistent with subsurface borehole data available for the surrounding area, including the Port Gamble community well that was completed adjacent to the Site in 1990 (Golder 2014). Therefore, the actual geology observed at the Site is not represented well on available geologic maps, although the 1:24,000 scale geologic map of Port Gamble was 'In preparation' and could not be reviewed at the time of this study (WSDNR 2020).

4.0 FIELD INVESTIGATION

Two Golder geologists, John Hennessy and Clay Johnson, met onsite at 9:00 am on February 14, 2020 with Stephanie Foster and Linda Berry-Maraist of OPG and Dave Noble of Seton Construction. Geospatial data were collected in the field using mapping grade (i.e. sub-meter horizontal accuracy) GPS receivers paired to smartphones. During the field investigation we conducted the following tasks:

- Visual geomorphic assessment of the desktop-identified landslide deposits, with the purpose to better understand the limits and nature of landslides present at the Site;
- Three (3) test pit explorations were completed within the identified landslide deposits, with the purpose to better understand the depth and type of materials failing within the landslides and the geologic controls/landslide processes at the Site;
- Identification of seeps/springs contributing to slope instability; and
- Visual geomorphic assessment of the reservoir amphitheater to better understand the nature of the landform and potential impacts on future planned infrastructure development.

4.1 Visual Assessment and Mapping of Active and Dormant Landslides

Visual assessment of the landslides present within open pasture at the Babcock Farms site corroborates the LiDAR-based assessment for the presence of both recent and dormant landslide deposits. At the time of the February site visit, Golder observed very rounded and subdued landslide morphology where the southern dormant landslide deposit is identified (Attachment B).

Within the southern dormant landslide, we observed saturated conditions in several places throughout the slope, in particular where an apparent localized reactivation within the dormant landslide was observed along the south/right lateral boundary of the landslide. Within the localized reactivation we observed several small, typically

less than about 6-inch high scarps with fresh soil and a distinct toe about 4 feet high at the downslope extent of the reactivation. The fence located on the upslope side of the road within the disturbed area did not appear significantly displaced by the slope movement indicating it was likely repaired.

The recent landslide exhibited distinct/fresh appearing landslide morphology. The vertical soil separation measured at the ground crack at the head of the landslide (headscarp) measured a maximum of 3 to 4 feet high. Internal uneven and bumpy ground areas (hummocks) were distinct and measured 2 to 3 feet high. The downslope extent, or toe, of the recent landslide was similarly distinct, consisting of a raised ridge of ground, about 4 to 5 feet high. Several areas of wet ground (groundwater seepage areas) were observed throughout the landslide, typically forming wetland areas. The north-south gravel road passes through the lower portion of the recent landslide has clearly been offset by the landslide movement. However, the fence along the road did not appear disturbed and has therefore likely been repaired.

Golder walked within the boundary of the northern dormant landslide along the banks of the stream outlet from the reservoir amphitheater. Golder did not observe any geomorphic evidence (ground cracks, hummocky terrain, tilted trees, etc.) that would indicate recent landslide movement within the northern dormant landslide. The slopes were covered with conifer and deciduous trees that did not appear disturbed.

The limits of the recent and dormant landslides at the Site appear to be constrained by a particular set of geologic conditions. The test pit explorations discussed in the following section indicate that shallow (generally <10 feet thick) landslides have occurred within a fine grained glaciolacustrine deposit that is present generally between approximately elevation 170 and 80 feet (based on Google Earth™) on the east facing Babcock Farms slope. The glaciolacustrine deposits are overlain by loose, fine to medium sand. Perched groundwater is present within the sand unit overlying the glaciolacustrine deposits. The landslides described in this report appear to be constrained to the portion of the slope within the glaciolacustrine deposits where the overlying sand deposit discharges seasonal groundwater (as evidenced by springs and wetlands). As described in Section 4.3 below, the reservoir amphitheater feature is located above elevation 170 feet, within the loose sand deposit, and is not formed by landslide processes.

4.2 Test Pit Explorations

Test pit explorations were completed at three select locations where landslides have been observed at the Site, test pit TP-1 within the southern dormant landslide, test pit TP-2 at the left lateral of the recent landslide, and test pit TP-3 at the headscarp of the recent landslide. TP-3 dissected both landslide and native undisturbed material. Test pit locations are shown on Attachment A. The materials encountered and Golder's geotechnical and geologic interpretations are included in Table 1 below. The subsurface materials encountered included weathered and unweathered glaciolacustrine clay and silt. The upper approximately 7 to 9 feet represent weathered glaciolacustrine deposits that are tan/olive-gray in color and overly a laminated gray/blue clay and silt (unweathered glaciolacustrine). No distinct landslide failure surfaces were identified within the test pits. However, based on the presence of the undisturbed gray/blue glaciolacustrine deposits at depth, the landslide deposits do not appear to be greater than about 10 feet thick. Annotated photographs of the test pits are included in Attachment D.

Test Pit ID	Exploration Depth (ft)	Material Description[1]
TP-1 (dormant landslide deposits)	12	*0 to 6 inches – TOPSOIL* *6 inches to 9 feet – (CL) CLAY*, trace silt, trace fine gravel (upper 1 ft); tan/olive-gray, laminated/fissured below 3 feet and appears more plastic with depth; cohesive, moist to wet (w<PL), stiff to very stiff. LANDSLIDE DEPOSITS/WEATHERED GLACIOLACUSTRINE *9 - 12 feet – (CL) CLAY*, trace silt; gray/blue, laminated; cohesive, moist to dry (w<PL), very stiff to hard. GLACIOLACUSTRINE
TP-2 (left lateral boundary of recent landslide)	13	*0 to 6 inches – TOPSOIL* *6 inches to 7 feet – (CH) CLAY*, trace silt; tan/olive-gray, iron stained, fissured; cohesive, moist (w<PL), stiff to very stiff; LANDSLIDE DEPOSITS/WEATHERED GLACIOLACUSTRINE *7 - 13 feet – (MH) CLAYEY SILT*, trace fine sand lense (1 foot thick) in upper 1 foot of unit, trace wood; gray/blue, laminated (varves); cohesive, moist to dry (w<PL), dense to very dense. GLACIOLACUSTRINE
TP-3 (headscarp of recent landslide)	11	*0 to 6 inches – TOPSOIL* *6 inches to 8 feet – (CL) SILTY CLAY*, low plasticity; tan/olive-gray, iron stained (staining is erratic, but mostly vertical in apparent undisturbed material upslope of the scarp), moist (w<PL), firm to stiff. LANDSLIDE DEPOSITS/WEATHERED GLACIOLACUSTRINE *9 - 11 feet – (ML) SILT*, trace clay (varies within deposit), trace fine sand; gray/blue, laminated; cohesive, moist to dry (w<PL), dense to possibly very dense. GLACIOLACUSTRINE

Notes:
1) Contacts are approximate and may be irregular or gradual.

4.3 Reservoir Amphitheater

Golder conducted a visual inspection of the reservoir amphitheater and dug several hand explorations within the landform, as well as above the crest of the amphitheater slope. Golder observed multiple seeps and springs that were flowing along the base of the reservoir amphitheater and draining out through an incised channel at about elevation 165 feet. Old-growth tree stumps, in vertical growth position, were observed throughout the base of the amphitheater and there were mature second growth conifers growing upright/straight throughout the base of the amphitheater, and in many places along the amphitheater slopes. There was some evidence of slow, gravity-induced movement of soil down the steep side slopes (soil creep). The evidence was the presence of several trees with trunks curved in a downslope direction (pistol butted trees) (Attachment D). While some tree species will exhibit this behavior even on flat slopes, for example, to seek more sunlight, we believe the cause, in this case, is shallow soil creep occurring in loose sand. Shallow hand dug explorations encountered fine to medium sand throughout the slopes and above/beyond the crest of the amphitheater slope. The sand along the slopes was moist to dry and the only seeps observed were emanating from the amphitheater floor, indicating the materials on the slopes of the amphitheater appear well drained. The fine and medium sand observed within the reservoir amphitheater is consistent with the glacial outwash deposits mapped in other areas of the Site

(Golder 2014). Golder did not observe any evidence for landslides (other than shallow soil creep) within the reservoir amphitheater. Clean fine to medium sand up to 4 to 6 inches thick was observed overlying forest duff in a few locations within the base of the amphitheater.

Golder observed a concrete structure located at the outlet of the reservoir amphitheater (Attachment D). Golder is not aware of any accounts for the specific use of the concrete structure. However, it is likely that the structure served the purpose of damming water within the reservoir amphitheater, which possibly would have been used historically by Port Gamble. The presence of clean fine to medium sand overlying forest duff within the base of the amphitheater may be explained as a result of sand depositing in quiet water conditions behind a dam.

Golder considers the reservoir amphitheater to be formed as a result of long-term/ongoing erosional processes and not the result of landslide-related movement. We base our conclusion on the lack of geomorphic evidence for landslides within the reservoir amphitheater. For example, there are no landslide deposits on the floor and no scarps or landslide scars on the amphitheater slopes. The presence of mature vegetation and old-growth stumps observed throughout the amphitheater floor indicate a stable environment during the life of the trees. The presence of active groundwater seepage and loose easily erodible fine to medium sand provide a mechanism for the steady, long-term removal (erosion) of material from the amphitheater (groundwater sapping). Therefore, the ongoing processes responsible for creating the reservoir amphitheater feature is groundwater sapping and the removal or transport of the sand sediment out of the reservoir amphitheater over time within the active creek channel. The bottom elevation of the reservoir amphitheater is controlled by the long-term groundwater elevation which in turn is controlled by the elevation of the underlying low permeability glaciolacustrine silt and clay on which the groundwater is perched.

5.0 DISCUSSION

The recent and dormant landslides observed by Golder at the Site occur within fine grained glaciolacustrine deposits where the overlaying recessional outwash sands are absent but are present farther upslope. Based on a review of the critical areas ordinance for Kitsap County, the recent landslide and the dormant landslides on the Site are considered high landslide hazard areas based on the following criterion for areas of high landslide hazard in the ordinance:

> *19.400.425 Landslide hazard areas.B.1.a. "Shallow landslide areas with factor of safety (FS) of 0.5 to 1.5. FS is a method (Harp, 2006) for determining slope stability based on the angle of the slope from LiDAR elevation data and strength parameters."*

Due to the recent landslide movement, we consider the landslide areas at the Site to have a factor of safety of just over 1.0, which meets the criteria for high landslide hazard areas. The development standards for high landslide hazard area setbacks do not align well with the landslides identified at the Site because the setbacks are defined based on the 'top of slope' and 'toe of slope'. The setback criteria defined in the ordinance for top of slope (19.400.435.A.2.a) and toe of slope (19.400.435.A.3) are not well suited for the type of landslides and terrain present at the Site because the landslide headscarps occur mid-slope. The potential for the landslide headscarp to advance upslope (retrogression) is constrained at the Site by the geologic and topographic conditions present mid-slope and is not defined by the height of the slope per the ordinance (19.400.435.A.2.a).

The outwash sand deposits upslope appear stable. As such, we have delineated preliminary setbacks for the high landslide hazard areas based on existing landslide morphology. Our upslope setback distances from the landslide headscarps range from approximately 35 to 100 feet and are based on the estimated contact between the lower

glaciolacustrine and upper outwash deposits, which is delineated based on topography and observations of soil conditions in the vicinity (Attachments B and C). Generally, our downslope setbacks and our setbacks from the northern and southern boundaries (i.e., laterals) of the landslides are about 50 feet from the mapped extent of the landslides (Attachments B and C). However, the estimated downslope setback beyond the limit of the recent landslide has been extended to 100 feet based on the active nature of that landslide. Due to the lack of geomorphic evidence for longer landslide runouts we consider the 50-foot buffer beyond the dormant landslide toes and 100 feet beyond the recent landslide toe an adequate buffer for the current development purposes.

Golder considers the reservoir amphitheater to represent a potential erosion hazard area as defined by the Kitsap county critical area ordinance where erosion hazard areas are defined as: "*Slopes of fifteen percent or greater and not classified as I, U, UOS, or URS, with soils classified by the U.S. Department of Agriculture NRCS as "highly erodible" or "potentially highly erodible"; or "slopes of fifteen percent or greater with springs or groundwater seepage".* Due to the presence of groundwater seepage and apparent erosional nature of the landform Golder believes the reservoir amphitheater fits the definition of an erosion hazard area. The building setback based on the Kitsap County Critical Areas Ordinance is 40 feet for an erosion hazard area. As such, we have applied a 40-foot buffer to the reservoir amphitheater as shown on Attachments B and C.

This memorandum is not intended to satisfy all the criteria of a landslide and steep slope critical areas report under Kitsap County critical areas code. It is intended as a guide for site civil land planning. Therefore, a critical areas study compliant with Kitsap County code may be needed for permit level design.

We based our landslide and steep slope buffer recommendations for the setback based on morphology of historic landslides and the nature and timing of landslide movement observed at the site. A comprehensive site-specific slope stability evaluation of the landslide factors of safety was not conducted for this study and is not warranted at this level of site development planning.

Subsequent investigations will be required in the future as designs are finalized for infrastructure development in this area.

Golder Associates Inc.

Clay Johnson
Senior Project Geologist

James G. Johnson, LEG, LG
Principal

CPJ/JJ/JH/ks

Attachments: Attachment A – Site Map and Exploration Locations
Attachment B – LiDAR Slope Model
Attachment C – Preliminary Site Plan and Hazard Areas
Attachment D – Photographs

https://golderassociates.sharepoint.com/sites/118750/project files/6 deliverables/final/19134145-rev0-babcock_farms_landslide_report-033020.docx

6.0 REFERENCES

Golder (Golder Associates Inc.). 2014. Port Gamble Upland LOSS, Site Risk Survey and Hydrogeologic Report – Rev. 3 (DOH #2012-035). Consultant Report prepared for Olympia Property Group, LLC. Project No. 13-00649.004. Dated March 24, 2014.

Haugerud, R.A. 2009. Preliminary geomorphic map of the Kitsap Peninsula, Washington. US Geological Survey, Open-File Report OF-2009-1033. 1:36,000 scale.Kitsap County. 2020. Kitsap County Code website. Accessed 3/6/2020, Accessed From: https://www.codepublishing.com/WA/KitsapCounty/#!/Kitsap19/Kitsap19400.html#19.400.

WSDNR (Washington State Department of Natural Resources). 2020. Geologic Maps—1:24,000-scale. Website accessed March 2020. https://www.dnr.wa.gov/programs-and-services/geology/geologic-maps/surface-geology#get-our-maps

Yount, J.C., J.P. Minard, and G.R. Dembroff. 1993. Geologic map of surficial deposits in the Seattle 30’ by 60’ quadrangle, Washington. US Geological Survey, Open-File Report OF-93-233. 1:100,000 scale.

ATTACHMENT A

Site Map and Exploration Locations

LEGEND

- Test Pit
- Secondary Road

0 220 440

1 " = 220 FEET FEET

REFERENCE(S)

1. ARCGIS ONLINE (USA MAJOR ROADS)
2. COORDINATE SYSTEM: NAD 1983 STATEPLANE WASHINGTON NORTH FIPS 4601 FEET
3. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
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CLIENT
OLYMPIC PROPERTY GROUP

PROJECT
BABCOCK FARMS LANDSLIDE ASSESSMENT

CONSULTANT
GOLDER

YYYY-MM-DD	2020-03-06
DESIGNED	TL
PREPARED	TL
REVIEWED	CJ
APPROVED	CJ

TITLE
SITE MAP AND EXPLORATION LOCATIONS

PROJECT NO.	PHASE	REV.	ATTACHMENT
19134145	300	A	A

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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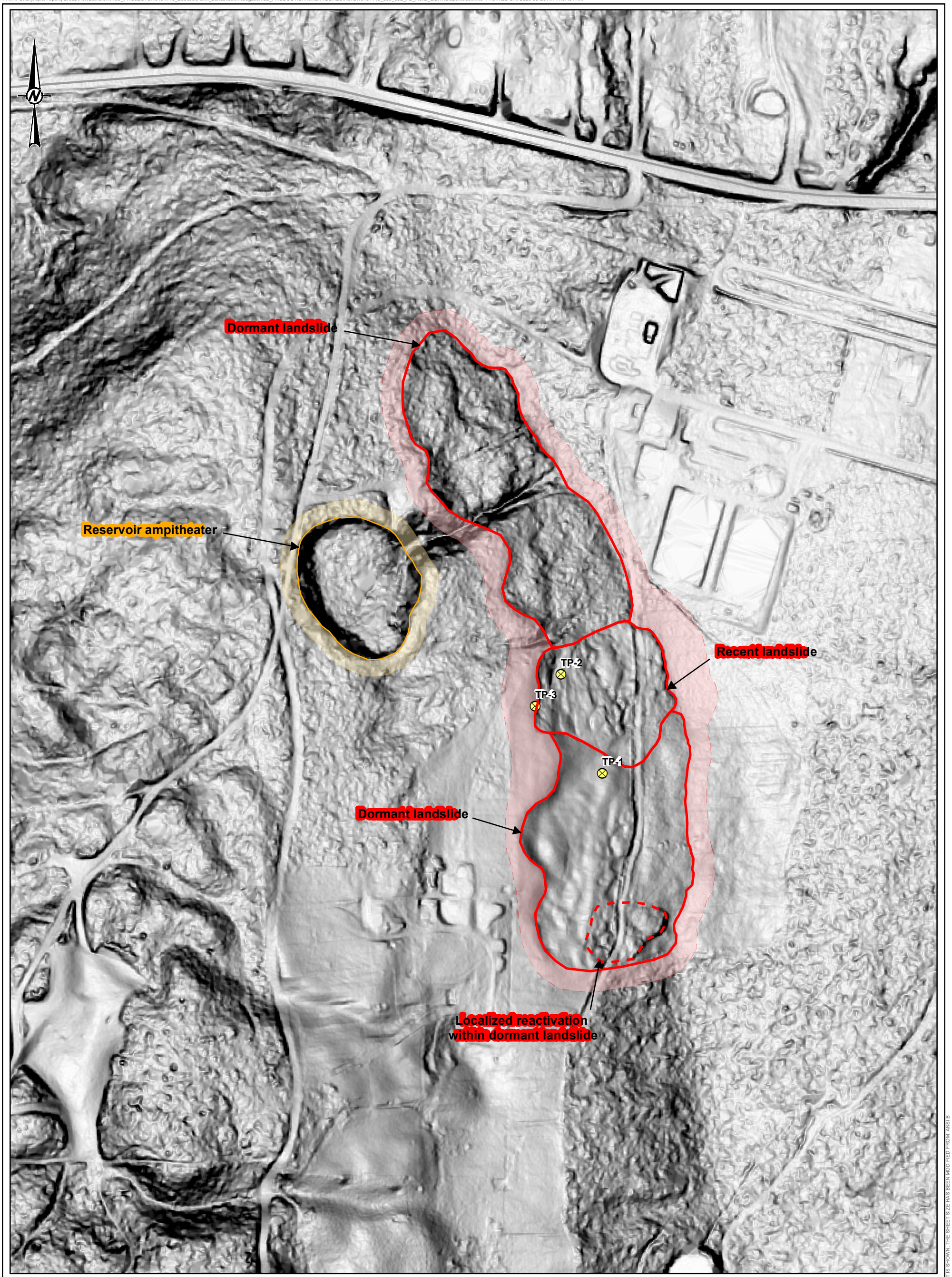
ATTACHMENT B

LiDAR Slope Model



LEGEND

- Localizied Reactivation within Dormant Landslide
- Landslide Deposits
- Preliminary High Landslide Hazard Setback
- Reservoir Amphitheater
- Preliminary Erosion Hazard Area Setback
- Test Pit
- Secondary Road

0 220 440

1 " = 220 FEET FEET

NOTE(S)

1. RECENT LANDSLIDE AND DORMANT LANDSLIDE BOUNDARY ESTIMATED WITH 2018 LIDAR.
2. HAZARD AREAS AND SETBACKS ARE TO BE USED FOR PRELIMINARY PLANNING PURPOSES, AND ARE SUBJECT TO CHANGE BASED ON FURTHER SITE-SPECIFIC INVESTIGATIONS OR ENGINEERING ASSESSMENTS.

REFERENCE(S)

1. QUANTUM SPATIAL (2018 LIDAR MODEL)
2. GOLDER (LANDSLIDE FEATURES, TEST PITS, SETBACK AREAS)
3. ARCGIS ONLINE (USA MAJOR ROADS)
4. COORDINATE SYSTEM: NAD 1983 STATEPLANE WASHINGTON NORTH FIPS 4601 FEET

CLIENT
OLYMPIC PROPERTY GROUP

PROJECT
BABCOCK FARMS LANDSLIDE ASSESSMENT

CONSULTANT
GOLDER

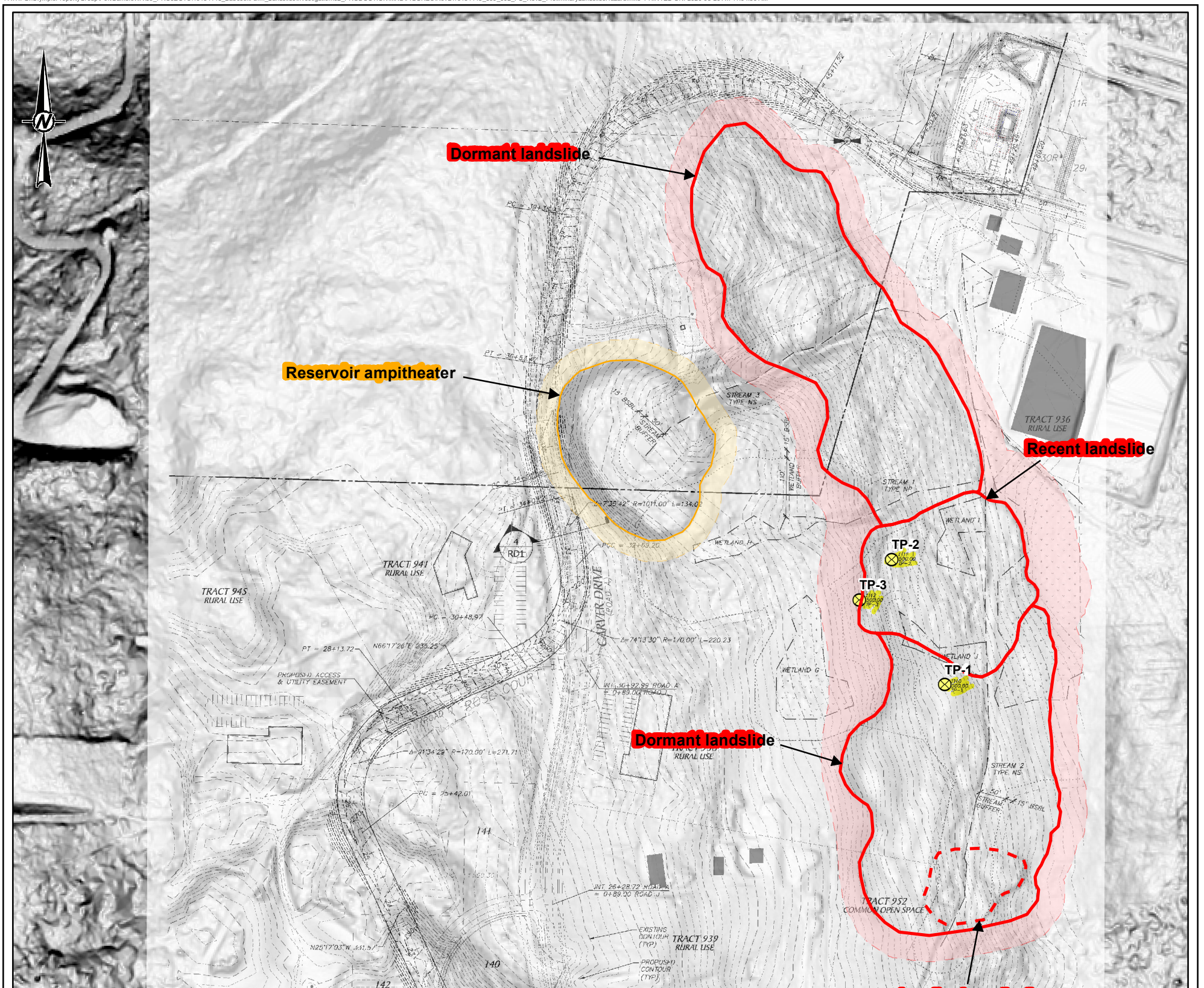
YYYY-MM-DD	2020-03-26
DESIGNED	TL
PREPARED	TL
REVIEWED	CJ
APPROVED	CJ

TITLE
BABCOCK FARMS PRELIMINARY LANDSLIDE ASSESSMENT

PROJECT NO.	PHASE	REV.	ATTACHMENT
19134145	300	B	B

ATTACHMENT C

Preliminary Site Plan and Hazard Areas



LEGEND

- Localizied Reactivation within Dormant Landslide
- Landslide Deposits
- Preliminary High Landslide Hazard Setback
- Reservoir Amphitheater
- Preliminary Erosion Hazard Area Setback
- Test Pit
- Secondary Road

0 220 440

1 " = 220 FEET FEET

NOTE(S)

1. RECENT LANDSLIDE AND DORMANT LANDSLIDE BOUNDARY ESTIMATED WITH 2018 LIDAR.
2. HAZARD AREAS AND SETBACKS ARE TO BE USED FOR PRELIMINARY PLANNING PURPOSES, AND ARE SUBJECT TO CHANGE BASED ON FURTHER SITE-SPECIFIC INVESTIGATIONS OR ENGINEERING ASSESSMENTS.
3. PLANNED ROAD AND INFRASTRUCTURE DEVELOPMENT SITE PLAN SHOWN ON ATTACHMENT C WAS PROVIDED BY DAVID EVANS ASSOCIATES.

REFERENCE(S)

1. QUANTUM SPATIAL (2018 LIDAR MODEL)
2. GOLDER (LANDSLIDE FEATURES, TEST PITS, SETBACK AREAS)
3. ARCGIS ONLINE (USA MAJOR ROADS)
4. COORDINATE SYSTEM: NAD 1983 STATEPLANE WASHINGTON NORTH FIPS 4601 FEET

CLIENT
OLYMPIC PROPERTY GROUP

PROJECT
BABCOCK FARMS LANDSLIDE ASSESSMENT

CONSULTANT
GOLDER

YYYY-MM-DD	2020-03-26
DESIGNED	TL
PREPARED	TL
REVIEWED	CJ
APPROVED	CJ

TITLE
PRELIMINARY SITE PLAN AND HAZARD AREAS

PROJECT NO.	PHASE	REV.	ATTACHMENT
19134145	300	B	C

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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ATTACHMENT D

Photographs

Photo 1: General location of TP-1.

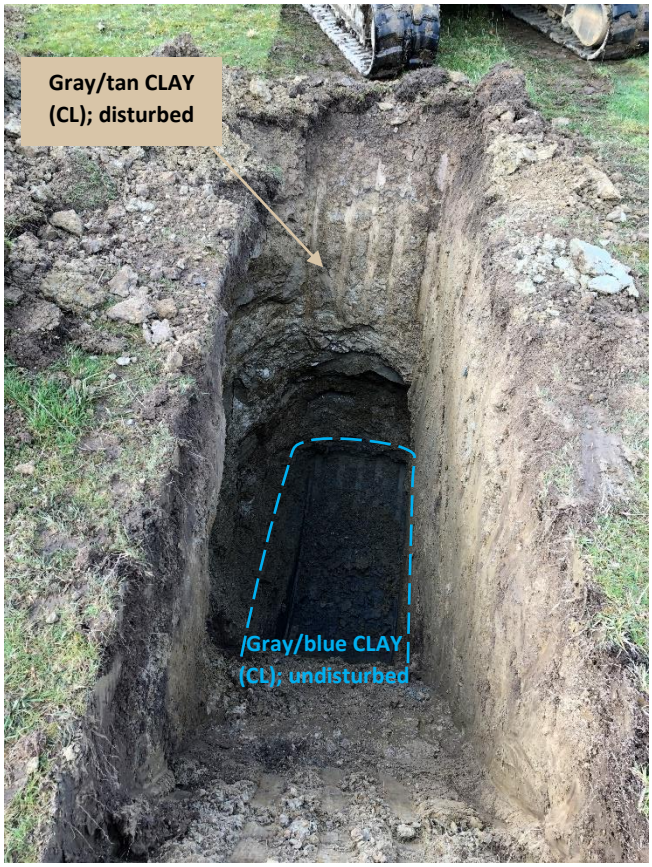

Photo 2: Subsurface conditions encountered in TP-1.

Photo 3: General location of TP-2.

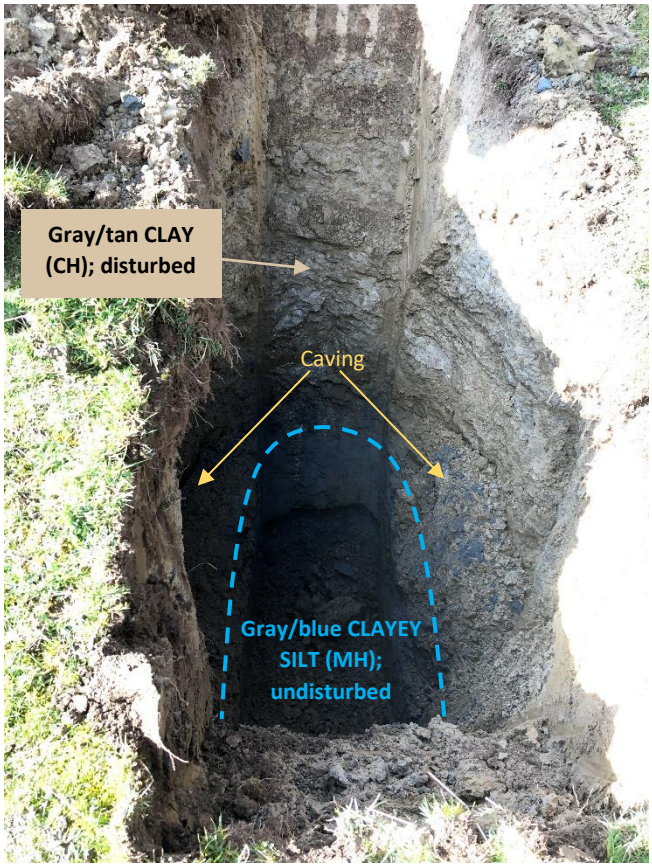

Photo 4: Subsurface conditions encountered in TP-2.

Photo 5: General location of TP-3.

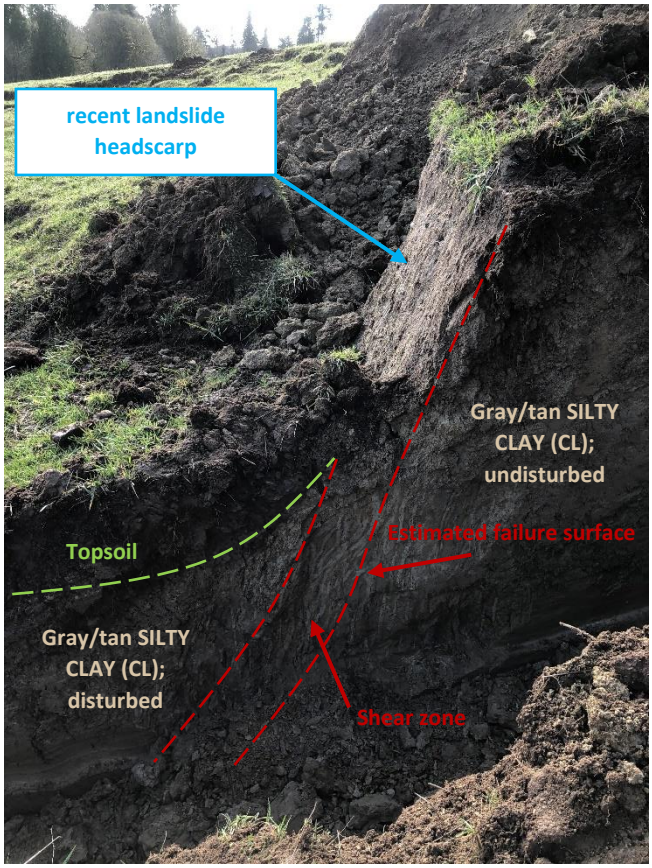

Photo 6: Profile of landslide headscarp excavated at TP-3.

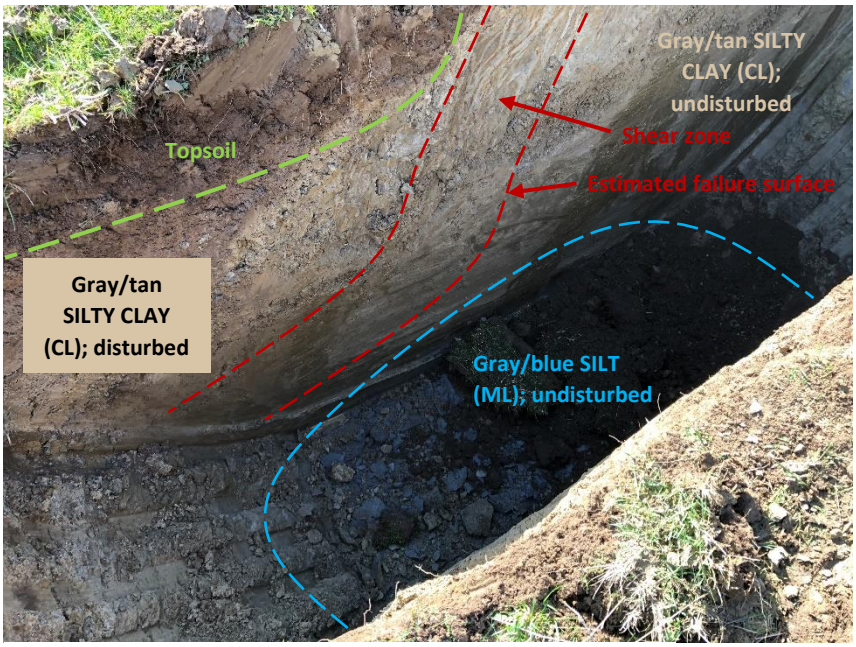

Photo 7: Subsurface conditions encountered in TP-3 (1 of 2).

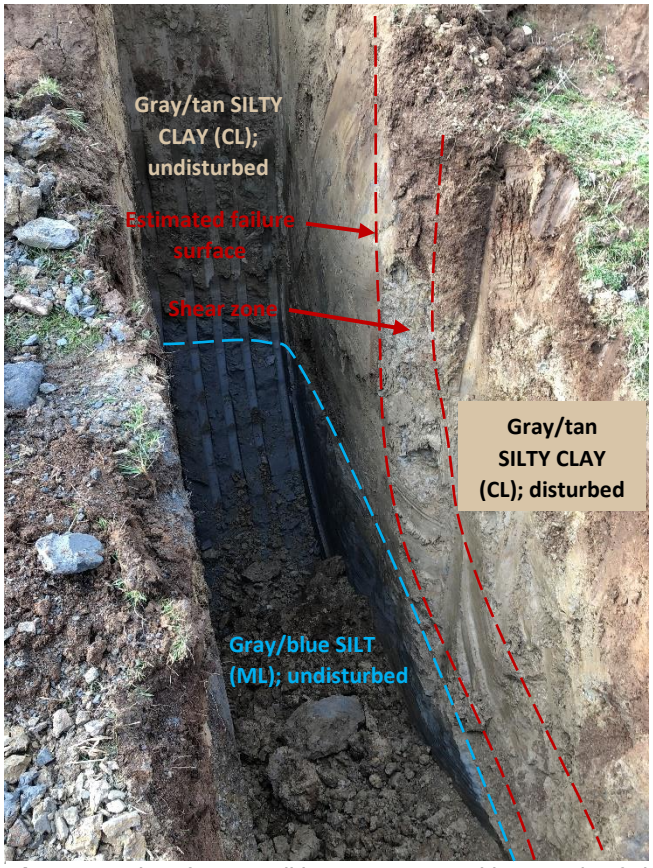

Photo 8: Subsurface conditions encountered in TP-3 (2 of 2).

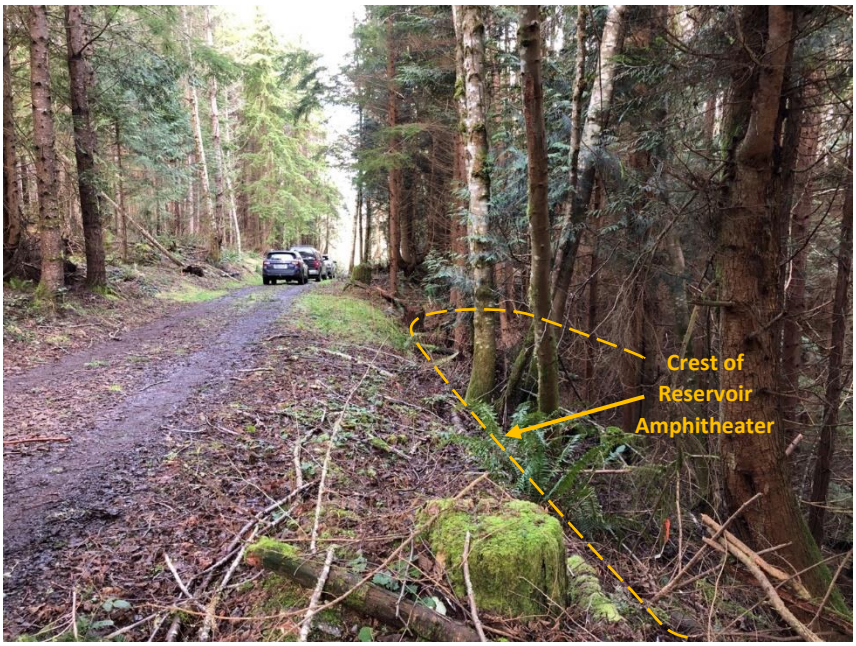

Photo 9: View facing north along access road near the crest of the reservoir amphitheater.

Photo 10: Pistol-butted trees (i.e., bent at the base) located along the steep slopes of the reservoir amphitheater, which may be indicative of ongoing soil creep as surficial material slowly migrates downslope.

Photo 21: One of multiple active springs observed within the reservoir amphitheater.

Photo 12: Shallow handholes encountered loose, fine to medium sand within and around the reservoir amphitheater.

Photo 13: View facing southwest to show general surface and vegetation conditions observed within the reservoir amphitheater. Note previously logged old growth stump at center of photo is located within the amphitheater and indicates the amphitheater is at least hundreds of years old.

Photo 14: View facing south at the remnants of an abandoned concrete dam/weir located near the head of the drainage that outlets from the reservoir amphitheater. A corresponding structure is located on the north side of the channel behind the photographer. The dam/weir may have been used to pipe water to the Port Gamble mill site.

Photo 15: Small concrete weir near lower portions of drainage outlet that is maintained by the greenhouse operator. Note evidence indicates the operator needs to periodically clear out sand deposits from behind the weir.

Photo 16: Sand terraces observed behind the small concrete weir indicate sand eroded from the reservoir amphitheater can accumulate behind the weir when not maintained regularly.

APPENDIX E

Machias Creek Stream Assessment

GeoEngineers
1101 South Fawcett Avenue, Suite 200
Tacoma, Washington 98402
253.383.4940

May 6, 2020

Olympic Property Group, LLC
19950 7th Avenue NE, Suite 200
Poulsbo, Washington 98370

Attention: Linda Berry-Maraist

Subject: Stream Review and Typing
Port Gamble Biological Permitting Support
Kitsap County, Washington
File No. 2378-044-08

INTRODUCTION

This letter report summarizes the observations made by GeoEngineers, Inc.'s (GeoEngineers) staff during the 2020 site assessment update of Machias Creek and associated tributaries near the Port Gamble Development Project in Kitsap County, Washington (Figure 1, Vicinity Map). GeoEngineers previously conducted biological assessment services, including critical areas delineations in 2012 and prepared supporting reports and permit documents. This report has been prepared in response to comments received from the Suquamish tribe regarding the typing (fish bearing or non-fish bearing) of identified streams.

Our efforts predominantly focused on one channel identified as Stream 4, which is a tributary to Machias Creek. Stream 4 originates from a series of wetland seeps and several small tributary streams (Streams 1 through 3) that enter Wetland E near a farm field and several large greenhouses. Within Wetland E flow from Streams 1 through 3 gradually disperses into sheet flow, continuing without defined streambed or banks for several hundred feet before gradually joining into a single-thread channel at the downstream end of Wetland E, where Stream 4 originates (Figure 2, Wetlands and Streams). Stream 4 flows through a predominantly coniferous upland forest, then finally enters Machias Creek at the downstream end of Wetland C. Figure 2 provides an overview of Stream 4 while Figure 3, Machias Creek Watershed Overview provides a wider view of the Machias Creek drainage, including elevations based on 2018 Light Detection and Ranging (LiDAR), public-mapped hydrology and fish passage barriers identified by Washington Department of Fish and Wildlife (WDFW). Site photographs are presented in Appendix A.

DESKTOP STUDY

Public mapped features and previous site studies were reviewed to support this assessment. WDFW has conducted barrier assessment mapping at several sites within this drainage as shown on Figure 2

(WDFW 2020). The Machias Creek crossing on State Route (SR) 104 (Site ID 990710) is mapped as a total passage barrier, with the system potentially supporting chum (*Oncorhynchus keta*) and coho (*Oncorhynchus kisutch*) salmon as well as steelhead (*Oncorhynchus mykiss*) and cutthroat (*Oncorhynchus clarkii*) trout. A partial passage barrier (Site ID 930873) is then mapped on an abandoned logging road/walking trail about 800 feet upstream of the highway. About 1,000 feet above this crossing flow splits, with Stream 4 flowing from the west as discussed above, while drainage from a complex of beaver ponds and wetlands flows from the southeast. Two passage barriers (Site IDs 930874 - partial and 930875 - total) are mapped on this eastern system while no barriers are mapped to the west.

LiDAR flown in late 2017/early 2018 was accessed from the Washington LiDAR Portal (DNR 2019). This recently collected bare earth digital elevation model clearly shows channelized drainages, roads and low areas previously mapped as wetlands. Hydrography data (USGS 2019) was accessed to compare with this map and included on Figure 3.

During the desktop study a potential discrepancy between publicly mapped hydrology and field observations was identified. Machias Creek is mapped with headwaters over 1.5 mile to the south, beyond Wetland B (Figure 3). When compared to recent LiDAR data it appears this flowpath follows a walking trail north from its headwaters, as opposed to a drainage watercourse. Topography instead shows a drainage leading more east, into the southern extent of Wetland B and ultimately to Port Gamble Bay through Ladine DeCouteau Creek (WDFW Site ID 992199). Topography within Wetland B appears to show decreasing elevations to both the north and south. This agrees with our field observations, which included a large beaver dam flowing south near the southern end of our Wetland B assessment and culverts conveying flow north along walking trails in the Vicinity of Wetlands A, B, and C. WDFW's habitat assessment of Site 992199 was limited to a 200 meter threshold determination; no records of assessments in the upstream watershed at this location were identified. Estimated drainage pathways are sketched onto Figure 3.

FIELD ASSESSMENT

GeoEngineers conducted field reconnaissance on December 23, 2019. Field equipment included a hip chain to measure linear distance along the channel, laser rangefinder to collect channel gradient, stadia rod to measure channel widths and bank heights, cameras and notebooks to document general observations of the site. The assessment began by observing the creek near several passage barriers mapped by WDFW on the system: just above the SR 104 culvert crossing (WDFW Site ID 990710), a partial barrier on an abandoned logging road (WDFW Site ID 930873) and a gravel walking trail (WDFW Site ID 930874). Although GeoEngineers' biologists did not observe the culvert under the gravel walking trail during the field assessment, but others have observed it in the past.

Data collection of physical habitat parameters began at the confluence of flow from the beaver wetland complex at Wetland C and Stream 4 and continued upstream through the channelized portion of Stream 4. At the forest edge, within Wetland E, we observed sheet flow over emergent vegetation without defined banks or streambed substrate. Hydrology to this area is supplied by seeps from within the sloping farm field (Wetlands E, H, I and J) and a short ditch between the field and greenhouses collecting flow from Streams 1, 2 and 3.

Streams 1 through 3 were observed from the farm road. Stream 1 was observed near a gate and consisted of sheet flow seeping down a steep soil embankment. Stream 2 is confined to a roadside ditch and appears to be a stormwater feature associated with the roadway that also collects hydrology from Wetlands J and I. Stream 3 is a narrow single-thread channel, flowing into the northern extent of Stream 2. Stream 2 crosses the farm road at a low point between Stream 1 and Stream 3 into a ditch along the northern portion of Wetland E.

Washington Administrative Code (WAC) 222-16-031 defines potential fish habitat channels as having a scour width greater than 2 feet and a gradient less than 20 percent. Habitat assessment data collection methods described by WDFW (2019) were utilized to both assess the channel's stream type according to WAC guidance as well as provide a brief analysis of potential fish habitat resources at the site. This information is presented in the results section below.

RESULTS

Data collection on Stream 4 began at the beaver wetland complex/Machias Creek confluence. Individual habitat units were measured extending upstream for approximately 250 feet. Above this distance occasional channel width and gradient checks were conducted as the channelized habitat transitioned to wetland. Most of this distance runs through mature coniferous forest with an open understory of ferns and sparse native shrubs.

The approximate lower third of the assessed reach is composed of a series of pools separated by vertical drops less than 2 feet high or short, steeper rapids. Substrate is commonly consolidated soil with occasional patches of loose sand or gravel. Banks are 2 to 3 feet high and near vertical. Large woody debris commonly spans the channel while smaller material that is less than 4 inches diameter, commonly interacts with flow. Channel scour width was relatively consistent at 3 to 5 feet with occasional lateral erosion caused by wood or increased gradient.

Fewer vertical drops or cascades and more developed riffles were observed further upstream. Banks are less incised, and shrubs and deciduous trees become more common surrounding the channel. Off-channel wetland conditions (Wetland E) are encountered about 300 feet from the farm field, and through this distance the stream gradually becomes less defined with shorter, shallower banks and vegetation within the channel. As depicted on Figure 2, sheetflow over emergent vegetation was observed at the tree line with no defined channel. Hydrology to the stream is supplied by a vegetated ditch, that runs between the field and greenhouses and groundwater from Wetland E. A definable channel between the ditch and Wetland E was not observed.

Per WAC definitions Stream 4 meets the definition for potential fish habitat. Minimal observations of substrate and flow conditions suitable for salmonid spawning were observed, however potential juvenile rearing and resident trout habitat appeared diverse and abundant. Table 1 below depicts the WDFW habitat assessment data that was collected during the site visit.

TABLE 1. STREAM 4 HABITAT UNIT SUMMARY

Hip Chain (ft)	Habitat Unit	Scour Width (ft)	Wetted Width (ft)	Gradient	Substrate (%Boulder/Cobble/ Gravel/Sand)	Notes
12	Riffle	4.5	2.5	1.5%	0/0/20/80	
35	Pool	7.2	3.0			
41	Rapid	3.7	1.8		Hardpan	
48	Pool	4	4.0			
65	Rapid			15%		1 minor resting pool midway
80	Pool	8.2	3.5			
97	Riffle	3.2	2.8		0/0/15/85	
122	Pool	5.0	3.4			1.5-ft drop @ outlet
125	Rapid	3.6	1.3			
133	Pool	5.7	4.8			
151	Riffle	3.2	2.0	2.3%		
206	Pool	1-foot water surface drop midway through 15-foot long pool				
215	Rapid	Scour width 1.6 feet				
350	Riffle	Gradient check 2.8%				

WATER TYPING SITE VISIT

An additional site visit was performed on February 7, 2020 with representatives of WDFW, Washington Department of Natural Resources (DNR), Kitsap County and local tribes to reach consensus on water typing at the site. The farm road was walked beyond the upper limits of Stream 2 to assess potential headwater wetlands and determine the upper extent of regulation for this waterbody. The first contribution of surface waters entering Stream 2 occurs at Wetland J, situated uphill and bordering the road. Flow was observed discharging from the wetland to the Stream 2 at this location. Above this location the feature appears to be an artificial ditch constructed for stormwater conveyance from uplands associated with the roadway and thus does not constitute a regulated waterbody of the state. Figure 2 depicts the beginning of where Stream 2 becomes a regulated waterbody of the state. Above that point, the ditch is not regulated.

The northern boundary of Wetland E was then walked from the farm road heading east. Along this route a ditch gradually widens and transitions to a wide, vegetated swale and eventually flow disperses into a flat emergent wetland. Approximately 3 to 6 inches of water was observed throughout this area following heavy rains in the preceding week. During the December 23rd site visit this area was saturated with some surface inundation but minimal depth. At the forest's edge a defined channel gradually forms as flow concentrates and signs of scour become more common. Multiple channels and areas of ponding were observed through this transition. The downstream (east) end of Wetland E was observed where hydrology had fully coalesced into a single-thread channel that continued uninterrupted to its confluence with Machias Creek. This

location was agreed to be the upstream extent of Type-F Stream 4 (water type break). Additionally, it was understood that a portion of Wetland E could provide fish habitat during periods of high water Discontinuous areas of scour and depressions that could hold floodwater were observed extending from the upstream end of Stream 4 up to the forest boundary. Wetland E does not provide channelized habitat or surface water hydrology upstream of the tree line except during periods of extreme high water. Figure 2 notes these locations, and a water type modification form is in preparation to confirm these changes with the state maps managed by DNR.

SUMMARY

GeoEngineers performed a site reconnaissance to assess Streams 1 through 3 and identify potential fish habitat within Stream 4 at the Port Gamble Redevelopment Project site. Stream 2 becomes a regulated waterbody where Wetland J discharges into the roadside ditch; above this point, the ditch is not regulated. Stream 4 meets the physical parameters for potential fish habitat, providing perennial flow from a series of wetlands and small creeks into Machias Creek. Limited potential spawning habitat was observed; however, a diverse series of pools with varying depth and cover characteristics provides rearing habitat for juvenile salmonids. There is a stream typing break within Wetland E (as shown on Figure 2) where conditions transition from non-fish-bearing waters in the west end and fish-bearing waters at the east end. We also identified a suspected discrepancy between the public hydrology maps and the observed drainage pathways on site. The maps show a stream following a walking trail north from its headwaters; however, field observations revealed that the stream discharges into wetlands and does not flow north along the walking trail as shown on Figure 3.

Identified buffers from the GeoEngineers 2013 Wetland and Stream Delineation Report (GeoEngineers 2013) will not change for Streams 1 through 3 (50-foot buffers) or Wetland E (150-foot buffer) as a result of these stream typing efforts. However, the buffer of Stream 4 will likely increase from 50 feet to 150 feet as a result of having the characteristics of a Type F, fish-bearing stream.

Detailed project design plans for the areas around the streams and associated buffers have not been developed. However, we understand that the proposed wildlife shelter will be constructed adjacent to the Stream 4 buffer. After project designs are finalized, final stream and buffer impacts should be assessed and if needed, avoidance, minimization and mitigation options should be evaluated. If potential impacts to streams or buffers are identified, a mitigation plan and other development permits may be required.

It appears based on preliminary plans for the wildlife shelter that a 25 percent buffer reduction or buffer averaging may be required for the wildlife shelter. This reduction or averaging would be completed according to Kitsap County Code requirements and depending on the mitigation requirements and actions implemented, provide no change to buffer functions or increased buffer functions depending on mitigation actions taken. Preliminary discussions with Kitsap County have indicated that such a reduction would be a reasonable application of Kitsap County Code.

LIMITATIONS

We have prepared this report for Olympic Property Group, LLC. to support permitting efforts for the Port Gamble Redevelopment Project. Client may distribute copies of this report to their authorized agents and regulatory agencies as may be required for the project.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices in the field of fisheries science in this area at the time this report was prepared. The conclusions, recommendations and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

REFERENCES

GeoEngineers, Inc. 2013. Wetland and Stream Delineation Report, Port Gamble Redevelopment Plan Kitsap County, Washington. Prepared for Pope Resources. January 8, 2013. GEI File No. 2378-044-02

United States Geological Survey (USGS). 2019. National Hydrography Dataset. Available at: https://viewer.nationalmap.gov/basic/#startUp.

Washington Department of Fish and Wildlife (WDFW). 2019. Fish Passage Inventory, Assessment, and Prioritization Manual. Olympia, Washington. April 2019.

Washington Department of Fish and Wildlife (WDFW) 2020. Fish Passage Web App. Available at: https://geodataservices.wdfw.wa.gov/hp/fishpassage/index.html.

Washington Department of Natural Resources (DNR) 2019. Washington LiDAR Portal, Kitsap County OPSW 2018 dataset. Available at: https://lidarportal.dnr.wa.gov/.

Sincerely,
GeoEngineers, Inc.

Adam L. Wright, PWS
Biologist

Joseph O. Callaghan, MS, PWS
Principal Fisheries Biologist

ALW:JOC:tlm

Attachments:
Figure 1. Vicinity Map
Figure 2. Wetlands and Streams
Figure 3. Machias Creek Watershed Overview
Appendix A. Site Photographs

One electronic copy submitted

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Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2016

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

Port Gamble Stream Assessment
Kitsap County, Washington

GeoEngineers

Figure 1

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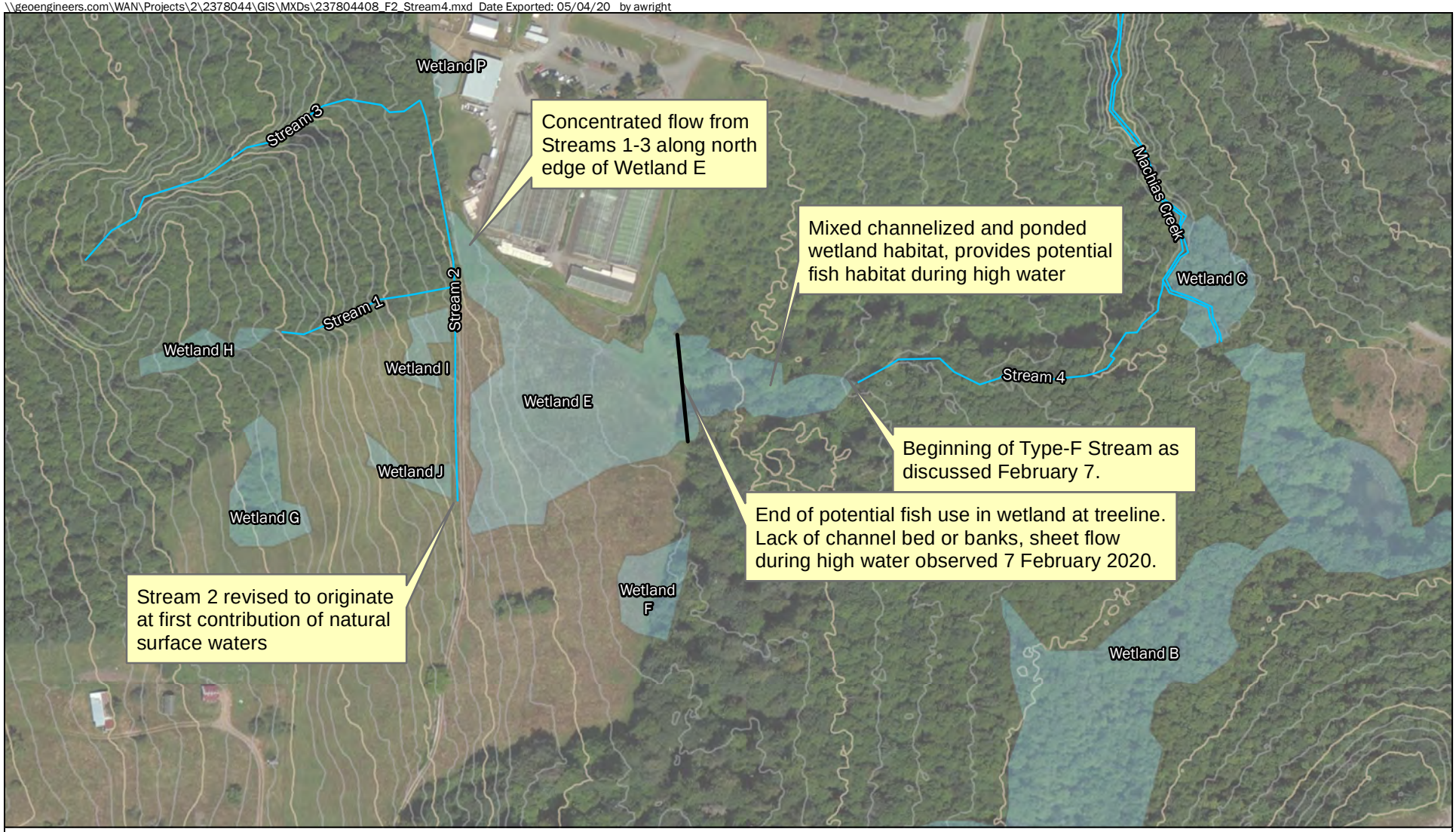

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Aerial image from ESRI Data Online.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

Legend

Delineated Streams

Delineated Wetlands

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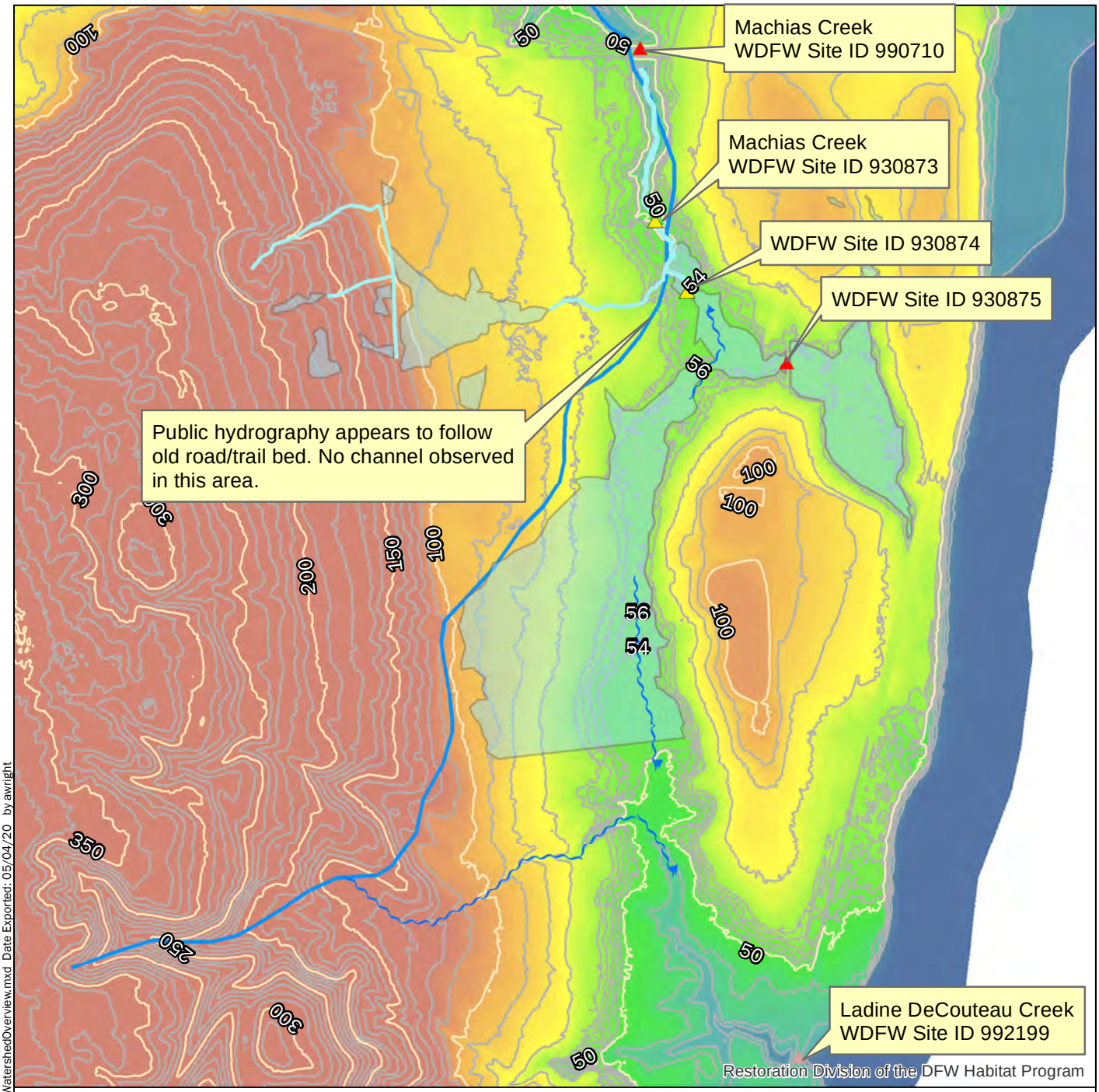
Feet

Wetlands and Streams

Port Gamble Stream Typing
Kitsap County, Washington

GeoEngineers

Figure 2



2018 Kitsap LIDAR

High : 120-350+

Low : 0-20

- Total Fish Passage Blockage
- Partial Fish Passage Blockage
- Barrier, Unknown Percent Passable
- NHD Flowline (Machias Creek)
- Estimated Drainage
- Delineated Wetlands
- Delineated Streams

N W E S

1,000 0 1,000

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. 2-ft contours included between 50-ft and 60-ft elevations to illustrate wetland topography

Data Source: 2018 LIDAR from DNR Portal. Hydrography from USGS. Fish Passage Barriers from WDFW

Projection: Horizontal: Washington State Plane South NAD83 HARN
Vertical: NAVD88 (GEOID03)

Machias Creek Watershed Overview

Port Gamble Stream Assessment
Kitsap County, Washington

GeoEngineers

Figure 3

\\geoengineers.com\WAN\Projects\2\2378044\GIS\MXDs\237804408_F3_WatershedOverview.mxd Date Exported: 05/04/20 by awright

APPENDIX A
Site Photographs

Photograph 1. Machias Creek mainstem, viewed looking upstream from WDFW Site ID #930873.

Photograph 2. Machias Creek just below confluence of Stream 4 and Wetland C, viewed looking downstream.

Site Photographs	
Port Gamble Stream Assessment Kitsap County, Washington	
GeoEngineers	Figure A-1

02378-044-07 Date Exported: 01/10/2020

Photograph 3. Stream 4 step-pool habitat in lower portion of channel.

Photograph 4. Stream 4 low-gradient meander roughly midway between Machias Creek confluence and Wetland E.

Site Photographs

Port Gamble Stream Assessment
Kitsap County, Washington

GeoEngineers

Figure A-2

02378-044-07 Date Exported: 01/10/2020

Photograph 5. Typical open upland forest Stream 4 riparian buffer.

Photograph 6. Stream 4 transitions to wetland sheet-flow at treeline within Wetland E.

Site Photographs	
Port Gamble Stream Assessment Kitsap County, Washington	
GeoEngineers	Figure A-3

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APPENDIX F

Floodplain Habitat Assessment

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April 23, 2020

Olympic Property Group, LLC
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Attention: Linda Berry-Maraist

Subject: Floodplain Habitat Assessment
Port Gamble Biological Permitting
Kitsap County Washington
File No. 2378-044-08

GeoEngineers, Inc. (GeoEngineers) was contracted by Pope Resources (Pope) to prepare this Floodplain Habitat Assessment report for the Port Gamble Mill Site (Mill Site), located on three parcels (Parcel No. 052702-3-001-2001, 082702-2001 and 062702-4002-2007) within Kitsap County, Washington. The project site is located along the shores of Port Gamble Bay and Hood Canal (Figure 1, Vicinity Map). Pope is intending a planned redevelopment of the Port Gamble town site. However, only the area of the Mill Site redevelopment will be assessed within this report.

This report discusses the effects to floodplain habitat and species listed under the Endangered Species Act (ESA) from the proposed project along the shoreline of Hood Canal and Port Gamble Bay. The purpose of this Floodplain Habitat Assessment is to present a description of project effects and project-specific species and habitat information pertinent to the consultation process for ESA compliance. GeoEngineers has prepared two Biological Assessment (BA) reports (GeoEngineers 2018a and 2018b) for this project and will be referenced throughout the letter report. The 2018 BA reports also contain the essential fish habitat (EFH) assessment for the project and should be referenced for more information.

PROJECT PERMITTING BACKGROUND

The Mill Site redevelopment is subject to two separate proposals. One proposal is being called “Alternative 1” and the second is “Alternative 2”. Alternative 1 consists of a fully developed Mill Site with residential, commercial and educational facilities. Alternative 2 includes a combination of re-development and conservation areas achieved by property transfer. Since the timeframe for the permit submittal for the re-development are occurring concurrently, two separate BA reports (GeoEngineers 2018a and 2018b) were prepared to address the two development plans (Alternative 1 and Alternative 2).

DESCRIPTION OF ACTION

Project Location and Site Description

The project is located in Kitsap County within the community of Port Gamble, Washington at the mouth of Port Gamble Bay within Sections 5 and 8 of Township 27 North, Range 2 East of the Willamette Meridian (Figure 1). The Project Area is located adjacent to Hood Canal and Port Gamble Bay and is in the Port Gamble sub-basin. The project site is in Hydraulic Unit Code (HUC) 171100180801 (Kitsap NW) and is within Water Resource Inventory Area (WRIA) 15, Kitsap.

The Mill Site is located in the northeast portion of the Project Area and is approximately 30 acres in size. It is bordered to the north, east and south by marine areas associated with Port Gamble Bay and Hood Canal, and to the west and south by a steep slope up to the Port Gamble town site. The mill was originally developed in the 1850s (Ecology 2017) and is no longer in use. Pope /Olympic Property Group, LLC (Olympic) completed a cleanup of Port Gamble Bay in early 2017 and during the 2-year project, removed 8,592 piling, 1.3 acres of over-water structures and docks, dredged 110,000 cubic yards of wood waste and sediments, placed 200,000 tons of clean cap materials and in total cleaned up over 106 acres of Port Gamble Bay. Currently (post cleanup), only an environmental lab, a kayak business, small utility buildings and concrete slabs used for previous industrial buildings remain. Much of the Mill Site remains unused or under-utilized at this time.

Terrestrial areas within the Mill Site have been cleared and retain little in the way of native vegetation or habitat value. Existing vegetation is sparse and limited primarily to the perimeter of the property. Surface conditions include a mix of pavement, gravel and compacted earth. The shoreline has been altered and armored throughout the Mill Site in the last 160 years to accommodate construction, expansion and maintenance. Appendix A, Site Photographs contains site photographs taken of the Mill Site.

Project Description

Pope is intending a planned redevelopment of the Port Gamble town site which includes the Mill Site. The project layout and final configuration is still being refined but a conceptual site plan for the Mill Site area has been developed. Alternative 1 will build out the Mill Site with commercial, mixed use and residential uses. Alternative 2 focuses much of the allowable development activity internally and somewhat central in the Mill Site. For more detailed information regarding the project description and differences between the two alternatives, see the BA reports (GeoEngineers 2018a and 2018b).

Alternative 1 assumes site redevelopment reflecting the full amount of development allowed under current zoning. This alternative reflects infill development on the Mill Site and includes approximately 78 dwelling units, 121,000 square feet of commercial uses, 15,000 square feet of restaurant and a 100-room hotel/visitor accommodation hotel. Alternative 1 does not propose education/industrial uses as part of the development. The Mill Site would be developed with both commercial and residential uses in buildings up to 35 feet in height. In addition, a 50-foot shoreline buffer with a 5-foot building setback is proposed. This proposal includes approximately 10 acres of landscaped/lawn area, 7 acres of critical areas and buffers and 0.77 acres of open space.

Alternative 2 assumes site redevelopment reflecting a lesser amount of development than the total allowed under current site zoning. Development consistent with this alternative would be dependent on others purchasing development rights or a portion of the Mill Site for open space uses. Development of the Mill Site includes approximately 39 dwelling units, 15,000 square feet of restaurant, a 100-room

hotel/visitor accommodation hotel and no commercial, retail, industrial or educational development. This proposal includes approximately 7 acres of landscaped/lawn area, 7 acres of critical areas and buffers and 12 acres of open space.

As part of both alternative proposals, the entire Mill Site will receive fill to raise the elevation 5 to 8 feet to bring the site out of the 100-year coastal floodplain and to achieve positive drainage. There will be no in-water work proposed as part of this project. However, the project does include installation and maintenance of outfalls along the shoreline of Port Gamble Bay and Hood Canal below ordinary high water mark (OHWM); it is assumed that this work can be accomplished in the dry during low tides and there will be no in-water work. Machinery used for the outfall work, if needed, would be staged from upland areas. Alternative 1 will include outfalls to both Port Gamble Bay and Hood Canal and Alternative 2 includes outfalls to only Hood Canal.

Development Considerations

IMPERVIOUS SURFACES

Impervious surface in the form of roads and structures will be added to the site. However, since the entire site is estimated to currently have 80 percent impervious surfaces, it is assumed that final development will significantly reduce the amount of impervious surfaces on the site (exact figures have not been calculated).

STORMWATER RUNOFF TREATMENT

Currently, stormwater on the Mill Site sheet flows to Port Gamble Bay/Hood Canal, filters through the Mill Site to Port Gamble Bay or is captured in catch basins and then discharges into either Hood Canal or Port Gamble Bay with little to no treatment. There is no existing stormwater treatment facility. During the cleanup, one of the existing outfalls was plugged, the existing asphalt was perforated and a berm was installed along the edge of the cleanup area. As a result of the cleanup effort, stormwater within the Mill Site is filtered through the Mill Site before discharging into Port Gamble Bay. As part of the proposed plan, all stormwater runoff will be directed to rain gardens or filter vaults located on the Mill Site. The rain gardens (or filter vaults) will provide the required treatment, which will then be collected in an under-drain stormwater conveyance system. The stormwater conveyance system will then direct treated stormwater to outfalls on the site, which will discharge into Hood Canal and Port Gamble Bay. Therefore, water quality should be improved as a result of this development because untreated stormwater will now be treated prior to release into Hood Canal and Port Gamble Bay.

NOISE

During site visits to the Mill Site in August and November 2012 and May 2013, various activities were observed that included the use of large machinery such as a backhoe and log cutting machine. However, since that time Pope has completed cleanup activities on the Mill Site and there is no longer machinery or buildings associated with the old lumber mill. Based on the site being situated in a commercial area as well as current conditions including wind and wave noise, baseline noise levels for the Mill Site were estimated to be 60 decibels (dbA) measured at 50 feet (WSDOT 2020). Therefore, long-term noise levels are expected to not change at the Mill Site as a result of this proposal.

HABITAT ALTERATION

The Mill Site currently has no setback from the OHWM of the Port Gamble Bay. In several areas within the Mill Site, pavement abuts the OHWM of Port Gamble Bay. Consequently, there is little to no vegetation along the shoreline. The cleanup removed some of the riprap and bulkheads that line the shoreline; however, there is still little vegetation along the shore. Vegetation that does exist along the shoreline is dominated by non-native invasive species. The proposed project will decrease impervious surfaces and

increase vegetation within the Mill Site. In addition, a 50-foot shoreline buffer and a 5-foot building setback will be established.

FLOODPLAIN ALTERNATION

Currently the Mill Site is partially located within a special hazard flood zone (Zone AE) and is within the 100-year coastal floodplain. As a result of this project (both Alternatives 1 and 2), the Mill Site will be filled to increase the Mill Site elevation by 5 to 8 feet. Effects from these actions will be insignificant because raising the elevation will not cause an increase in water velocity and flood rise is not expected to have any impact on listed species use in Port Gamble Bay or Hood Canal. In addition, the areas that will be filled to raise the elevation are partially composed of impervious surfaces so there is little active floodplain habitat.

Construction Timing

Construction timing will be market dependent but could begin within a few years after the plan is approved and will take years to complete the final proposed development. All work (outfall installation and maintenance) below the OHWM will be conducted within the fish work window for the Project Area.

PROJECT ACTION AREA

There will be no in-water work proposed as part of this project; work conducted below the OHWM will be conducted in the dry during low tides using hand tools and accessing from the top of the bank. No heavy machinery will be on the beach. Noise levels at the Mill Site should not change as a result of implementation of the proposed development plan; however, increases in temporary construction noise is expected to extend 379 feet from the project footprint. In addition, reduction in impervious surfaces and an increase of vegetated areas along the Mill Site are expected as a result of the development. There will be no in-water work proposed as part of the project. Therefore, the Action Area for the project will consist of the development footprint and 379 feet to the north, east and south into Port Gamble Bay and Hood Canal (Figure 2, Action Area). For more information on the analysis for the identified Project Action Area, see the BA reports prepared for the project (GeoEngineers 2018a and 2018b).

SPECIES INFORMATION AND ENVIRONMENTAL BASELINE

Species listed under the ESA fall under the jurisdiction of one of two federal agencies: The U.S. Department of Interior-U.S. Fish and Wildlife Service (USDI-USFWS) for terrestrial and freshwater species and the National Oceanographic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NOAA Fisheries) for marine species. A list of listed species and designated critical habitat, that is potentially within the Project Area, was obtained from the USDI-USFWS (2018). We also obtained lists of listed species and designated critical habitat for marine species in Hood Canal and Puget Sound from NOAA Fisheries (2016). See the 2018 BA reports for the life history and species lists information (GeoEngineers 2018a and 2018b).

According to the Washington Department of Fish and Wildlife (WDFW) Priority Habitat and Species (PHS) web mapper, there are no Threatened and Endangered (T&E) species located immediately within the area assessed for this project (WDFW 2020). Priority habitats within the Project Area consist of wetland habitat and streams. Breeding areas for Pacific sand lance (*Ammodytes hexapterus*), surf smelt (*Hypomesus*

pretiosus) and pacific herring (*Clupea pallasi*), which are state priority species, are mapped along the shoreline of Port Gamble Bay and Hood Canal (WDFW 2020).

Listed fish species that could be present within the marine waters of the Project Area include: Bull Trout (*Salvelinus confluentus*), Dolly Varden (*Salvelinus malma*), Hood Canal Summer-run chum (*Oncorhynchus keta*), Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*), Puget Sound Steelhead (*Oncorhynchus mykiss*), Bocaccio (*Sebastes paucispinis*) and Yelloweye rockfish (*Sebastes ruberrimus*). All of these species may be found within the Action Area during periods of migration, foraging, rearing or spawning. Other ESA-listed animals that may be present within the Action Area include Southern Resident killer whale (*Orcinus orca*) and marbled murrelet (*Brachyramphus marmoratus*). A summary of listed species and critical habitat status found in the Action Area is listed in Table 1.

TABLE 1. ESA LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Species	ESA Status	Critical Habitat Status
Puget Sound Chinook	Threatened	Designated, **present** in project Action Area
Hood Canal summer chum	Threatened	Designated, **present** in project Action Area
Puget Sound steelhead trout	Threatened	Designated, **absent** in the project Action Area
Coastal-Puget Sound bull trout	Threatened	Designated, **absent** in project Action Area
Southern resident killer whale	Endangered	Designated, **present** in project Action Area
Yelloweye rockfish	Threatened	Designed, **present** in project Action Area
Bocaccio	Endangered	Designated, **present** in project Action Area
Marbled murrelet	Threatened	Designated, **absent** in project Action Area

Other ESA-listed species that may occur in Kitsap County and/or Puget Sound but are not expected to occur in the Action Area are listed below. The terrestrial Action Area is the project footprint and there are no listed terrestrial species within this range. The other aquatic species are as follows.

- **Dolly Varden (*Salvelinus malma*)** Dolly Varden are listed as proposed by the USFWS based on similarity of appearance to bull trout. None of the effects of this project would discriminate ESA species based on appearance; therefore, effects of the project on Dolly Varden are covered in this document through discussion of bull trout. Dolly Varden are not addressed in the remainder of this document.
- **Streaked Horned Lark (*Eremophila alpestris strigata*)** and associated critical habitat. There have been no recent sightings of streaked horned larks within the Project Area (WDFW 2020). This species typically utilizes open spaces dominated by grasses and other herbaceous vegetation (USFWS Species Fact Sheet for Streaked horned larks). Habitat within the Project Area does not meet this criterion. Therefore, streaked horned larks are not expected to be within the Project Area.
- **Yellow-Billed Cuckoos (*Coccyzus americanus*)** Yellow-billed cuckoos are associated with open deciduous woodlands and deciduous forests that are at least 25 acres in size (NatureServe 2019). There have been no recent sightings of yellow-billed cuckoos which are associated with deciduous forests and brushy areas. These birds are not expected to be within the Project Area.
- **Humpback whale (*Megaptera novaeangliae*)** Humpback whales are found in coastal waters sometimes frequenting inshore habitats such as bays. There is no designated critical habitat for the

humpback whale. The project vicinity is located adjacent to marine waters; however, humpback whales are not likely to occur in the Action Area.

Critical habitat is defined in Section 3 of the ESA as: (1) the specific areas within the geographical area occupied by a species at the time it is listed in accordance with the ESA with those physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by a species at the time it is listed upon determining that such areas are essential for the conservation of the species. The Project Area includes designated critical habitat for rockfish, Puget Sound Chinook salmon, Hood Canal summer chum and Southern Resident killer whale.

Puget Sound Chinook Salmon

Occurrence in the Action Area

The Puget Sound Evolutionarily Significant Units (ESU) for Chinook salmon includes those stocks in Puget Sound westward to the Elwha River. Chinook are mapped within Gamble Creek, approximately 2.5 miles south of the Project Area. Therefore, it is likely that Chinook are located along the shoreline surrounding the Project Area. Although Chinook salmon are not mapped as utilizing immediately adjacent streams, the Project Area is located along the Port Gamble Bay shoreline and Hood Canal and it is assumed that Chinook salmon are present within the Action Area.

Critical Habitat

Critical habitat has been designated for Puget Sound Chinook salmon in Washington, including Kitsap County (70 FR 52630). Designated habitat includes freshwater, estuarine, and marine waters; marine is applicable to the aquatic Action Area for this project.

Primary constituent elements (PCE) related to freshwater and marine habitat consist of spawning sites with water quantity and quality conditions and substrate that will support spawning, incubation and larval development. PCEs also include areas with: (1) freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development; (2) freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility, water quality and forage supporting juvenile development, and natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels and undercut banks; (3) freshwater migration corridors free of obstructions with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival; (4) estuarine areas free of obstruction with water quality, water quantity and salinity conditions supporting juvenile and adult physiological transitions between fresh and saltwater, natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels, and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation; (5) nearshore marine areas free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and (6) offshore marine areas with water quality conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation.

There are no streams immediately adjacent to the project site that contain Chinook salmon. However, due to the location of the project (along the shorelines of Port Gamble and Hood Canal), PCEs within the Action Area include numbers 4, 5 and 6.

Hood Canal Summer Chum

Occurrence in the Action Area

Hood Canal summer chum are known to spawn in Hood Canal streams, approximately 16 miles southwest of the Project Area and critical habitat is mapped along the shores of Hood Canal. Although summer chum salmon are not mapped as utilizing streams adjacent to the project site, the Project Area is located along the shorelines of Hood Canal. Therefore, it is assumed that Hood Canal summer chum salmon may be present within the Action Area.

Critical Habitat

Critical habitat has been designated for Hood Canal summer chum salmon in Washington, including Kitsap County (70 FR 52630). Designated habitat includes freshwater, estuarine, and marine waters within Hood Canal.

PCEs related to freshwater and marine habitat consist of spawning sites with water quantity and quality conditions and substrate that will support spawning, incubation and larval development. PCEs also include areas with: (1) freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, incubation and larval development; (2) freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility, water quality and forage supporting juvenile development, and natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels and undercut banks; (3) freshwater migration corridors free of obstructions with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival; (4) estuarine areas free of obstruction with water quality, water quantity and salinity conditions supporting juvenile and adult physiological transitions between freshwater and saltwater, natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels, and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation; (5) nearshore marine areas free of obstruction with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels and (6) offshore marine areas with water quality conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation.

Streams adjacent and discharging within Port Gamble Bay are not mapped as supporting summer chum. However, due to the location of the project (along the shoreline of Hood Canal), PCEs within the Action Area include numbers 4, 5 and 6.

Puget Sound Steelhead

Occurrence in the Action Area

The Puget Sound steelhead distinct population segment (DPS) includes winter- and summer-run steelhead in the river basins of the Strait of Juan de Fuca, Puget Sound and Hood Canal, Washington, bounded to the west by the Elwha River and to the north by the Nooksack River and Dakota Creek, both

of which are included in the DPS. Steelhead are known to be present within Martha John Creek, approximately 2.3 miles southeast of the Project Area. Although Puget Sound steelhead are not mapped within adjacent streams, the Project Area is located along the shoreline of Port Gamble Bay and Hood Canal. Therefore, it is assumed that Puget Sound steelhead may be present within the Action Area.

Critical Habitat

Streams within and adjacent to the project site do not support steelhead and although critical habitat has been designated, it is not within the Project Action Area (81 FR 9252). PCEs for steelhead are not present in the Action Area. Therefore, PCEs for this species are not discussed further.

Coastal Puget Sound Bull Trout

Occurrence in the Action Area

Coastal Puget Sound bull trout are not mapped as utilizing streams adjacent to the project site. However, the Project Area is located along the shorelines of Port Gamble Bay and Hood Canal. Therefore, it is assumed that Coastal Puget Sound bull trout may be present within the Action Area.

Critical Habitat

Critical habitat for Coastal-Puget Sound bull trout (70 FR 56212) includes the western shorelines of Hood Canal. The project site is not within the Puget Sound critical habitat unit (70 FR 56212). Streams within and adjacent to the project site do not support bull trout and although critical habitat has been designated, it is not within the Project Action Area. PCEs for Bull Trout are not present in the Action Area. Therefore, PCEs for this species are not discussed further.

Rockfishes

Habitat information in this section is summarized from the information presented in the proposed listing (74 FR 18516) and final rule (75 FR 22275) published in the Federal Register. In general, adult rockfish are benthic but may also venture into mid-water pelagic habitats in deeper water. Most species are associated with rocky bottoms and outcrops and feed on bottom and mid-water dwelling invertebrates and small fishes. Rockfish are generally slow-growing, long-lived and late-maturing. Rockfish larvae are more common than adults in shallow water and are generally associated with rocky reefs, kelp canopies and artificial structures, such as piers. Juveniles feed primarily on zooplankton.

Bocaccio Rockfish

Adults of this species are most commonly found at depths ranging from 160 to 820 feet but are known to sometimes inhabit waters as shallow as 40 feet in depth. This species is most common around the Point Defiance and Tacoma Narrows area. Larvae are pelagic at first, settle on the bottom within 3.5 to 5.5 months after birth and move to deeper waters within several weeks after settling.

Yelloweye Rockfish

Yelloweye rockfish adults are most commonly found in much deeper waters from 300 to 590 feet depth and are not known to occupy habitats less than 80 feet in depth. This species is highly associated with rocky, high-relief areas and is more common in the North Puget Sound. After the pelagic period, juveniles settle into high relief zones, crevices and sponge gardens in shallow areas before moving into deeper waters.

Occurrence in the Action Area

The Action Area includes all areas affected by construction-related noise and habitat alteration. The water depth within the Action Area is, therefore, anticipated to be shallow and substrates at the project site are expected to be comprised of sand, silt and mud with small amounts of gravel. Habitat conditions described above generally do not match what is considered to be suitable habitat for any of the ESA listed rockfish species. These species generally occur in rocky areas or areas with hard substrates. Adults are typically found at depths much greater than those found within the Action Area. Pelagic larvae could be found within the Action Area. However, occurrence of juvenile yelloweye within the Action Area is considered highly improbable.

Critical Habitat

Critical habitat for these species of rockfish has been finalized within the nearshore habitat of Port Gamble Bay within the Project Area (79 FR 68042). The PCEs have been grouped depending on species and life stage.

Specific PCEs that have been identified for proposed adult Bocaccio, and adult and juvenile yelloweye rockfish critical habitat include: (1) quantity, quality and availability of prey species to support individual growth, survival, reproduction and feeding opportunities; (2) water quality and sufficient levels of dissolved oxygen to support growth, survival, reproduction and feeding opportunities; and (3) the type and amount of structure and rugosity that supports feeding opportunities and predator avoidance. All three of these PCEs have the potential to be within the Action Area of the project.

Specific PCEs that have been identified for proposed juvenile Bocaccio critical habitat include: (1) quantity, quality and availability of prey species to support individual growth, survival, reproduction and feeding opportunities; and (2) water quality and sufficient levels of dissolved oxygen to support growth, survival, reproduction and feeding opportunities. These two PCEs have the potential to be within the Action Area of the project.

Southern Resident Killer Whale

Occurrence in the Action Area

The Southern Resident killer whale was listed as an endangered species under the ESA (70 FR 69903). Killer whales have been sighted in Hood Canal mainly during the fall and winter months (http://www.westcoast.fisheries.noaa.gov/publications/protected_species/marine_mammals/killer_whales/occurrencemap.pdf). Killer whales are known to follow salmonids in Puget Sound for prey. The presence of killer whales near Port Gamble Bay during the fall months can likely be attributed to the whales following salmon runs to stream systems located in Hood Canal.

Killer whales prefer deeper water and follow salmonids in the Puget Sound as their primary source of prey (Jensen 2006). Critical habitat has been designated for the killer whale and includes nearshore and offshore marine areas of the Puget Sound, including Port Gamble Bay (71 FR 69054). Although it is highly unlikely that the Southern Resident killer whale will be in Port Gamble Bay in the Action Area during construction, they may be in the vicinity and their prey (in various life stages) are likely to occur in Port Gamble Bay.

Critical Habitat

Specific PCEs that have been identified for killer whale critical habitat include: (1) Water quality to support growth and development; (2) Prey species of sufficient quantity, quality and availability to support individual growth, reproduction and development as well as overall population growth; (3) Passage conditions to allow for migration, resting and foraging. Habitat at the project site or within the Action Area generally does not provide these PCEs and, therefore, is not considered suitable for killer whales.

Marbled Murrelet

Occurrence in the Action Area

Marbled murrelets could fly over the Project Area during transit to inland nesting sites. According to data collected by the US Forest Service (USFS) throughout Washington, detections of murrelets while in transit to inland forest sites peak during July (Naslund and O'Donnell 1995). These data show that, during summer 1990 and 1991, most observations occurred between June 25 and August 11. GeoEngineers has prepared an opinion letter on suitable habitat for marbled murrelets within the Project Area (GeoEngineers 2011). This letter concluded that marbled murrelet nesting habitat is not likely to be found within the terrestrial portion of the project but could be found within the marine areas of the Action Area. The occurrence of marbled murrelets in the marine portions of the Action Area is possible, though not particularly likely because of the high level of human development and activity that currently exist on and adjacent to the Mill Site.

Critical Habitat

Designated critical habitat for marbled murrelets include large continuous blocks of nesting habitat (i.e., old growth forest) located proximally to marine foraging habitat but does not include any marine areas (61 FR 26255). The USFWS determined that nesting habitat, not marine foraging areas, was limiting population growth of marbled murrelets. Terrestrial habitats within the Action Area are urban and do not include any suitable nesting habitat. Consequently, there is no designated critical habitat for marbled murrelets in the Action Area. There is no critical habitat for marbled murrelets within the Project Area and therefore, critical habitat is not further discussed.

ENVIRONMENTAL SETTING

Port Gamble Bay estuary and nearshore areas are important salmonid migration corridors and rearing habitat (May and Peterson 2003). The nearshore estuary refugia area includes the Gamble Creek estuary (approximately 2.5 miles south of the project site) and the surrounding nearshore areas (approximately 1 mile south of the project site and directly across Port Gamble) according to the 2003 Kitsap Salmonid Refugia Report (May and Peterson 2003). Juvenile salmonids utilize the estuary for rearing and migration. This nearshore area includes gravel beaches, mud flats, sand spits and the estuaries of numerous small streams that provide important nursery habitat for multiple species of salmonids (May and Peterson 2003). Although a good portion of the shoreline in this area has been developed, including the Port Gamble Mill Site area, a recent 10-year partnership between Kitsap County and Pope resulted in conserving approximately 3,500 acres of forest including 1.5 acres of undeveloped shoreline directly south of the Port Gamble Mill Site and Master Plan. In addition, there remains other patches of natural forested and nearshore areas.

Project Area Conditions

The Mill Site is bordered to the north, east and south by marine areas associated with Port Gamble Bay and Hood Canal, and to the west and south by a steep slope up to the town site. The mill was originally developed in the 1850s (Ecology 2017) and is no longer in use. Pope/Olympic completed the cleanup of Port Gamble Bay in early 2017 and during the 2-year project, removed 8,592 piling, 1.3 acres of over-water structures and docks, dredged 110,000 cubic yards of wood waste and sediments, placed 200,000 tons of clean cap materials and in total cleaned up over 106 acres of Port Gamble Bay. Currently (post cleanup), only an environmental lab, a kayak business, small utility buildings, and concrete slabs use for previous industrial buildings remain. Much of the Mill Site remains temporarily unused or under-utilized at this time.

Terrestrial areas within the Mill Site have been cleared and retain little native vegetation or habitat value. Existing vegetation is sparse, dominated by non-native invasive species and limited primarily to the perimeter of the property. Surface conditions include a mix of pavement, gravel and compacted earth. Appendix A contains site photographs.

Shoreline Conditions

Shoreline conditions differ from the cleaned-up area to areas north of the cleanup. The northern areas contain concrete bulkheads and riprap and concrete chunks along the shoreline. The shoreline areas within the southern cleaned-up portion of the site, largely consist of protective armor rock and restored cobble beaches.

Vegetation Conditions

The steep hill on the west side of the property contains forested habitat with a thick understory. Vegetation consists of bigleaf maple (*Acer macrophyllum*), Douglas fir (*Pseudotsuga menziesii*), red alder (*Alnus rubra*), Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), oceanspray (*Holodiscus discolor*), queen Anne's lace (*Daucus carota*) and Canada thistle (*Cirsium arvense*).

Along the shoreline, vegetation occurred sporadically between armoring and along the upper edges in the northern area of the Mill Site. The vegetation mainly consisted of Himalayan blackberry and scotch broom (*Cytisus scoparius*) with some young red alder, queen Anne's lace, fireweed (*Chamerion angustifolium*), pickleweed (*Salicornia virginica*) and Puget Sound gumweed (*Grindelia integrifolia*). There was no vegetation along the southern area where cleanup activities took place.

Nearshore Habitat Conditions Adjacent to the Project Site

The nearshore area within the project site has been heavily developed. The Salmonid Limiting Factors Report has surveyed the area between Point Julia (northeastern entrance to Port Gamble) and Teekalet Bluff (Project Area is within this range) and documented 8 docks, 1 jetty, 1 boat launch and 13 sets of stairs that access shoreline areas (Kuttel, Jr. 2003). The jetty, made of large pieces of riprap, is located north of the project site and extends into Hood Canal.

Within the nearshore habitat adjacent to the project site, GeoEngineers biologists commonly observed the following: Crabs (*Cancridae family*), harbor seal (*Phoca vitulina*), sand dollar (*Dendraster excentricus*), a variety of barnacles, a variety of sea stars and seawrack (*Zosterra marina*).

Wildlife Habitat Conditions

Bald eagles (*Haliaeetus leucocephalus*), great blue heron (*Ardea herodias*) and mountain quail (*Oreortyx pictus*) have been observed and are mapped within the general vicinity (WDFW 2020). None of these species are federally listed; however, a heron management plan has been prepared for the Port Gamble redevelopment project (Tetra Tech 2017). The only mapped priority habitat adjacent to the Project Area consists of the estuarine zone within Port Gamble Bay.

Within the waters of Port Gamble Bay, herring, sandlance and surf smelt spawning areas have been documented (WDFW 2020). Subtidal Geoduck and Hardshell subtidal clams have been documented directly adjacent to the Mill Site with Hardshell intertidal clams documented southeast of the Mill Site (WDFW 2020).

There are occurrences of bald eagles, great blue heron, mountain quail, northern flickers and osprey within the Project Area. Evidence of deer (*Odocoileus hemionus columbianus*) was observed along the shoreline and there is a potential for other mammals such as black bears (*Ursus americanus*) and coyotes (*Canis latrans*) to utilize the shoreline.

EFFECTS OF THE ACTION

The project may have both direct and indirect effects on habitats and species at the site. Direct effects are those that occur during the course of construction and immediately upon conclusion of project activities. Indirect effects are long-term effects that could result from changes initiated as a result of the project but that may only become apparent through an extended timeframe as natural and/or anthropogenic processes continue to occur at the site. Direct and indirect effects are discussed separately in the following sections. Both Alternatives 1 and 2 are expected to have similar direct and indirect effects based on the existing site conditions and proposed conditions.

Direct Effects

Direct effects discussed below are broken into during construction, (temporary effects) and post construction (permanent effects). During construction means as the site is developed. Post construction means after the site has been developed as indicated on the Alternative 1 and Alternative 2 site plans. The following direct effects are anticipated for the project:

Noise

DURING CONSTRUCTION (TEMPORARY EFFECTS)

Noise levels at the Mill Site should not change as a result of implementation of the proposed development plan; however, temporary construction noise is expected to extend 379 feet from the project footprint.

Habitat Alteration

DURING CONSTRUCTION (TEMPORARY EFFECTS)

Currently, there is little to no vegetation on site and most of the site is covered with impervious surfaces. There should be no effects to habitat on the Mill Site during construction activities because there is little habitat available.

POST CONSTRUCTION (I.E. PERMANENT EFFECTS)

The Mill Site currently has no shoreline buffer or setback from the OHWM of the Port Gamble Bay. In several areas within the Mill Site, pavement currently abuts the OHWM of Port Gamble Bay. Consequently,

there is little to no vegetation along the shoreline. Currently, cobble, riprap and concrete bulkheads line the shoreline surrounding the project site. After development occurs, it is assumed there will be native vegetation installed along the shoreline as part of the development and a decrease in impervious surfaces. In addition, a 50-foot shoreline buffer and a 5-foot building setback will be established.

Increasing vegetation in the shoreline floodplain area and decreasing the amount of impervious surfaces is expected to have beneficial effects on listed species that may use the Project Area after construction/development.

Water Quality Functions

DURING CONSTRUCTION (TEMPORARY EFFECTS)

Potential impacts to water quality, such as spilling hazardous materials or petroleum-based products associated with construction machinery, will be controlled through proper implementation of best management practices (BMPs) and are therefore not expected to have negative impacts on the environment. If sediment is mobilized, it is expected to remain within background levels approximately 150 feet from the construction area. Any potential impacts are expected to be temporary and minor and will be partially controlled through proper implementation of the temporary erosion and sediment control (TESC) Plan.

As part of the proposal, the entire site will be receiving fill to bring the elevation up between 5 to 8 feet higher in order to elevate the site out of the floodplain and to achieve positive drainage. Potential impacts from erosion into the adjacent marine waters will be controlled through proper implementation of BMPs and are therefore not expected to have negative impacts on the environment.

POST CONSTRUCTION (I.E. PERMANENT EFFECTS)

Currently, stormwater is discharged directly to Port Gamble Bay and Hood Canal with little to no treatment. The Alternative 1 plan will collect all stormwater runoff and direct it to rain gardens or filter vaults and other treatment options that will be located on the Mill Site. The treatment options installed will provide the required treatment, which will then be collected in an under-drain stormwater conveyance system. The storm conveyance system will then direct the treated stormwater to outfalls. Depending on the alternative, a portion of the treated stormwater will be discharged into Hood Canal and/or a portion of the treated stormwater will be discharged into Port Gamble Bay from the outfalls. Alternative 1 will include outfalls to both Port Gamble Bay and Hood Canal and Alternative 2 includes outfalls to only Hood Canal. This will result in improved water quality functions as a result of the proposal.

Hydrologic Functions

DURING CONSTRUCTION (TEMPORARY EFFECTS)

There should be no temporary effects to hydrologic functions on the Mill Site during construction activities.

POST CONSTRUCTION (I.E. PERMANENT EFFECTS)

Impervious surface in the form of roads and structures will be added to the site. However, since the entire site is estimated to currently have 80 percent impervious surfaces, it is assumed that final development will actually reduce the amount of impervious surfaces on the site (exact figures have not been calculated).

Floodplain Habitat

POST CONSTRUCTION (I.E. PERMANENT EFFECTS)

The Mill Site, for both alternatives, will be filled to increase the elevation 5 to 8 feet. Effects from these actions will be insignificant because raising the elevation will not cause an increase in water velocity and flood rise is not expected to have any impact on listed species use in Port Gamble Bay or Hood Canal.

Delayed Consequences (Indirect Effects)

The delayed consequences discussed below are considered post construction effects. The following delayed consequences are anticipated for the project.

Altered Shoreline Dynamics

The project is not expected to result in significant alterations to the shoreline dynamics because there will be no in-water work as a part of this project and no structures are being proposed below the OHWM as part of this proposal. Therefore, existing conditions below and adjacent to the OHWM of the project shoreline will not change as a result of the project.

Noise

Based on the site being situated in a commercial area as well as current conditions including wind and wave noise, noise levels for the Mill Site were estimated to be 60 dbA measured at 50 feet (WSDOT 2020). It is expected that in-air noise levels for the proposed development of the project site will also be approximately 60 dBA measured at 50 feet from the project site because it will be an urban area with commercial and residential uses (WSDOT 2020). Therefore, noise levels are not expected to change at the Mill Site as a result of this proposal.

Additional People Living and Working along the Shoreline

People currently work at the Mill Site during the work week at the lab and kayak business. In addition, visitors to Port Gamble were identified along the shoreline during the site visits. The shoreline in this area is regularly used for recreational purposes and therefore an increase in people living and working along the shoreline of both Hood Canal and Port Gamble Bay is not expected to have a significant impact on shoreline habitat in the Project Area.

Effects on Environmental Baseline

NOAA Fisheries matrix of pathways and indicators to address environmental baseline conditions for listed species under their jurisdiction was not included within this report because there are no stormwater impacts and there are no permanent impacts that will result from this project. Overall, the proposed project will improve elements of the existing environmental baseline and will not degrade habitat in the Action Area due to providing a buffer setback along the shoreline.

Overall, the proposed project will not adversely affect elements of the existing environmental baseline and will not degrade habitat in the Action Area that bull trout may use. Bull trout are not known to be present in the waters of western WRIA 15 (Kuttel, Jr. 2003). Bull trout are typically found in mountain cold-water streams and the rainfall-dominated streams of west WRIA 15 do not provide this type of habitat (Kuttel Jr. 2003). However, bull trout are assessed within this report and it is assumed that bull

trout may be present within the Action Area because the project site extends into the marine waters of Hood Canal and Port Gamble Bay.

Determination of Effects on Listed Species

Based on the project effects presented in the preceding section, we have proposed the following effect determinations for each species that may occur in the Action Area. Effect determinations take into account all the possible project effects; these are discussed below.

Effect determinations for all salmonid and trout species are based on the same premises and analyses, and are, therefore, presented together below.

The project **may affect** bull trout, Chinook salmon, steelhead and Hood Canal summer chum because:

- Water quality may be temporarily impacted during construction activities.
- Work below the OHWM will be completed in the dry to maintain and install outfalls.

The project **is not likely to adversely affect** bull trout, Chinook salmon, steelhead and Hood Canal summer chum because:

- Work to install and maintain the outfalls will be accomplished in the dry during low tides and there will be no in-water work.
- There will be no fish handling as a result of the project.
- Alteration of fish habitat will have a net beneficial effect on this species due to implementation of a buffer with vegetation where there is currently no buffer.
- Work below the OHWM will be conducted during the appropriate fish work window.
- The project will utilize BMPs and there will be no impacts to water quantity or quality as a result of the project.
- The project site is functionally disconnected from the floodplain, and the project is not expected to have any impact on flood flow levels or velocity.
- Other impacts are either temporary in nature or will not affect aquatic species.

Bocaccio and Yelloweye Rockfish

The project **may affect** Bocaccio and Yelloweye rockfish because:

- Work below the OHWM will be completed in the dry to maintain and install outfalls.
- Water quality may be temporarily impacted during construction activities.

The project is **not likely to adversely affect** Bocaccio and Yelloweye rockfish because:

- Work to install and maintain the outfalls will be accomplished in the dry during low tides and there will be no in-water work.
- Alteration of fish habitat will have a net beneficial effect on this species as a result of habitat enhancement (replanting disturbed vegetated areas).
- Other impacts are either temporary in nature or will not affect aquatic species.

Southern Resident Killer Whale

The project **may affect** Southern Resident killer whale because:

- Water quality may be temporarily impacted during construction activities.
- Work below the OHWM will be completed in the dry to maintain and install outfalls.

The project **is not likely to adversely affect** Southern Resident killer whale because:

- Work to install and maintain the outfalls will be accomplished in the dry during low tides and there will be no in-water work.
- Alteration of habitat will have a net beneficial effect on this species due to implementation of a buffer where there is currently no buffer.
- Other impacts are either temporary in nature or will not affect aquatic species.

Marbled Murrelet

The project **may affect** marbled murrelet because:

- Noise from construction activities may disrupt normal behavior of marbled murrelets if they are located in Hood Canal or Port Gamble Bay.

The project **is not likely to adversely affect** marbled murrelet because:

- There is no suitable marine foraging habitat in the vicinity of the project.
- The marine areas within the Action Area are characterized by high levels of human activity including recreational and fishing vessel traffic; murrelets are more likely to be found in open water nearshore environments further away.
- There is no suitable nesting habitat within the Action Area. Terrestrial habitats within the Action Area are industrial.
- No construction activities will occur near suitable habitat for marbled murrelets.
- Therefore, impacts to marbled murrelets from project activities will be at levels that are insignificant and discountable.

Determination of Effects on Critical Habitat

Designated Critical Habitat for Chinook Salmon and Hood Canal Summer Chum Salmon

The project **may affect** critical habitat for Chinook and Hood Canal summer chum salmon because:

- The project is located adjacent to the near-shore marine environments of Port Gamble Bay and Hood Canal, which is designated as critical habitat for these species.

The project is **not likely to adversely affect** designated critical habitat for chinook and Hood Canal summer chum salmon because:

- Potential habitat impacts within the proposed critical habitat area will not negatively affect PCEs.
- The project will not negatively affect the quality of the habitat at or around the project site.

- The project will not obstruct migration corridors.

Designated Critical Habitat for the Two Species of Rockfish

The project **may affect** critical habitat for the two species of rockfish because:

- The project is located adjacent to the near-shore marine environments of Port Gamble Bay and Hood Canal, which is designated as critical habitat for the two species of rockfish.

The project is **not likely to adversely affect** designated critical habitat for the two species of rockfish because:

- Potential habitat impacts within the proposed critical habitat area will not negatively affect PCEs.
- The project will not negatively affect the quality of the habitat at or around the project site.

Designated Critical Habitat for Southern Resident Killer Whale

The project **may affect** critical habitat for Southern Resident killer whales because:

- The project is located adjacent to the near-shore marine environments of Port Gamble Bay and Hood Canal, which is designated as critical habitat for Southern Resident killer whales.

The project is **not likely to adversely affect** designated critical habitat for Southern Resident killer whales because:

- Potential habitat impacts within the proposed critical habitat area will not negatively affect PCEs.
- The project will not negatively affect the quality of the habitat at or around the project site.
- The project will not obstruct migration corridors.

CONCLUSIONS

GeoEngineers was contracted by Pope Resources to prepare this Floodplain Habitat Assessment report for Alternatives 1 and 2 for the Mill Site of the Port Gamble Redevelopment Plan. The project is located on three parcels (Parcel No. 052702-3-001-2001, 082702-2001 and 062702-4002-2007) within Kitsap County, Washington. The project site is located along the shores of Port Gamble Bay and Hood Canal.

Within the Action Area, ESA-listed fish species include: Puget Sound Chinook salmon, Hood Canal summer chum, Coastal-Puget Sound bull trout, Puget Sound steelhead, bocaccio rockfish and yelloweye rockfish. Other ESA-listed animals that may be present within the Action Area include marbled murrelet and the Southern Resident killer whale. The Project Area contains designated critical habitat for Puget Sound Chinook salmon, Hood Canal summer chum, the two species of rockfish and Southern Resident killer whale. There are no other listed terrestrial species and no known listed plant species identified in the Project Area. The effect determination for this project is "*may affect, not likely to adversely affect*" listed Chinook, summer chum, steelhead, bull trout, bocaccio rockfish, yelloweye rockfish, Southern Resident killer whale and marbled murrelet that may be present in the Project Area. The effect determination for critical habitat within the Action Area of the project is, "*may affect, not likely to adversely affect.*" Over the long-term, the project activities will result in:

- No change in noise levels as the site will go from industrial use to residential and commercial uses.
- Increased water quality functions along the shorelines as impervious surfaces will be reduced and stormwater will be treated before being discharged into Port Gamble Bay and Hood Canal.
- Increase habitat functions because vegetation will be installed in areas that currently has no vegetation cover.
- The project will utilize BMPs and there will be no impacts to water quantity or quality as a result of the project.

LIMITATIONS

We have prepared this report for Olympic Property Group, LLC. to support permitting efforts for the Port Gamble Redevelopment Project. Client may distribute copies of this report to their authorized agents and regulatory agencies as may be required for the project.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices in the field of fisheries science in this area at the time this report was prepared. The conclusions, recommendations and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

REFERENCES

61 FR 26255-26320. 50 CFR Part 17. Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Marbled Murrelet; Final Rule. Federal Register, Vol. 62, No. 102. 1996.

70 FR 52630-52853. 2005. 50 CFR Part 226. Endangered and Threatened Species; Designation of Critical Habitat for 12 Evolutionary Significant Units of West Coast Salmon and Steelhead in Washington, Oregon and Idaho. Federal Register, Vol. 70, No. 170. 2005.

70 FR 56212-56311. 2005. 50 CFR Part 17. United States Fish and Wildlife Service. Endangered and Threatened and Wildlife and Plants; Designation of Critical Habitat for Bull Trout. Federal Register, Vol. 70, No. 185. 2005.

70 FR 69903-69912. 50 CFR Part 224. National Oceanic and Atmospheric Administration. Endangered and Threatened Wildlife and Plants: Endangered Status for Southern Resident Killer Whales. Federal Register, Vol. 70, No. 222. 2005.

71 FR 69054-69070. 50 CFR Part 226. Endangered and Threatened Species; Designation of Critical Habitat for Southern Resident Killer Whale. Federal Register, Vol. 71, No. 229. November 29, 2006.

74 FR 18516-18542. 2009. Endangered and Threatened Wildlife and Plants: Proposed Endangered, Threatened, and Not Warranted Status for Distinct Population Segments of Rockfish in Puget Sound. NMFS, NOAA, U.S. Department of Commerce. Federal Register, Vol. 74, No. 77. April 23, 2009.

75 FR 22275-22290. 2010. Endangered and Threatened Wildlife and Plants: Threatened Status for the Puget Sound/Georgia Basin Distinct Population Segments of Yelloweye and Canary Rockfish and Endangered Status for the Puget Sound/Georgia Basin Distinct Population Segment of Bocaccio Rockfish. NMFS, NOAA, U.S. Department of Commerce. Federal Register, Vol. 75, No. 81. April 28, 2010.

79 FR 68042-68087. 2014. Endangered and Threatened Species; Designation of Critical Habitat for the Puget Sound/Georgia Basin Distinct population Segments of Yelloweye Rockfish, Canary Rockfish and Bocaccio; Final Rule. Department of Commerce, National Oceanic and Atmospheric Administration. Federal Register, Vol. 79, No. 219. November 13, 2014.

81 FR 9252-9325. 2016. Endangered and Threatened Species; Designation of Critical Habitat for Lower Columbia River Coho Salmon and Puget Sound Steelhead. Department of Commerce, National Oceanic and Atmospheric Administration. Federal Register, Vol. 81, No. 36. February 24, 2016.

GeoEngineers, Inc. 2018a. “Biological Assessment Port Gamble Redevelopment Plan, Alternative 1, Kitsap County, Washington.” Prepared for Pope Resources. GEI File No. 2378-044-07. August 14, 2018.

GeoEngineers, Inc. 2018b. “Biological Assessment Port Gamble Redevelopment Plan, Alternative 2, Kitsap County, Washington.” Prepared for Pope Resources. GEI File No. 2378-044-07. August 14, 2018.

GeoEngineers, Inc. 2011. "Opinion Letter – Amended, Marbled Murrelet Suitable Habitat, Port Gamble, Washington." GEI File No. 9079-006-05. Prepared August 29, 2011.

Jensen, M. 2006. Personnel Communication. United States Fish and Wildlife Service. March 3, 2006.

Kuttel, Jr., Michael. 2003. Salmonid Habitat Limiting Factors Water Resource Inventory Areas 15 (West), Kitsap Basin and 14 (North), Kennedy-GoldsBorough Basin. Washington State Conservation Commission. 2003.

May, Christopher and Gretchen Peterson. 2003. Landscape Assessment and Conservation Prioritization of Freshwater and Nearshore Salmonid Habitat in Kitsap County. 2003 Kitsap Salmonid Refugia Report. Prepared for Kitsap County. Available at: http://www.kitsapgov.com/dcd/nr/refugia/kitsap_refugia_report_2003.pdf.

Naslund, N.L. and B.P. O'Donnell. 1995. Daily Patterns of Marbled Murrelet Activity at Inland Sites. Chapter 12 in Ralph, C.J., G.L. Hunt, Jr., M.G. Raphael, and F. Piatt (eds.) Ecology and Conservation of the Marbled Murrelet. USFS (United States Forest Service). General Technical Report PSW-GTR-152. USFS, Department of Agriculture, Albany, CA. Available at http://www.fs.fed.us/psw/publications/documents/psw_gtr152/psw_gtr152_chap12.pdf.

NatureServe. 2019. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.0. NatureServe, Arlington, Virginia. http://www.natureserve.org/explorer/index.htm.

National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries). 2016. "Species Lists." Available at: http://www.westcoast.fisheries.noaa.gov/protected_species/species_list/species_lists.html.

Tetra Tech. 2017. Port Gamble Heron Management Plan Draft, Port Gamble Redevelopment Master Plan, Kitsap County, Washington. Prepared for Stoel Rives, LLP. December 2017.

United States Department of Fish and Wildlife Service (USFWS)." Species Fact Sheet, Streaked Horned Lark Eremophila alpestris strigata." Available at: http://www.fws.gov/wafwo/species/Fact%20sheets/streakedhornedlarkfinal.pdf.

United States Department of the Interior, U.S. Fish and Wildlife Service (USDI-USFWS). 2018. Official Species List. Consultation Code 01EWFW00-2018-SLI-0481.

Washington State Department of Ecology (Ecology). 2017. Port Gamble Bay and Mill Site. Available at: https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=3444.

Washington State Department of Fish and Wildlife (WDFW). 2020. Priority Habitat and Species (PHS) Mapping Application. Available at: http://apps.wdfw.wa.gov/phsontheweb/.

Washington State Department of Transportation (WSDOT). 2020. Biological Assessment Manual. Available at: https://www.wsdot.wa.gov/environment/environment-technical/environment-disciplines/fish-wildlife/BA-preparation-manual.

Sincerely,
GeoEngineers, Inc.

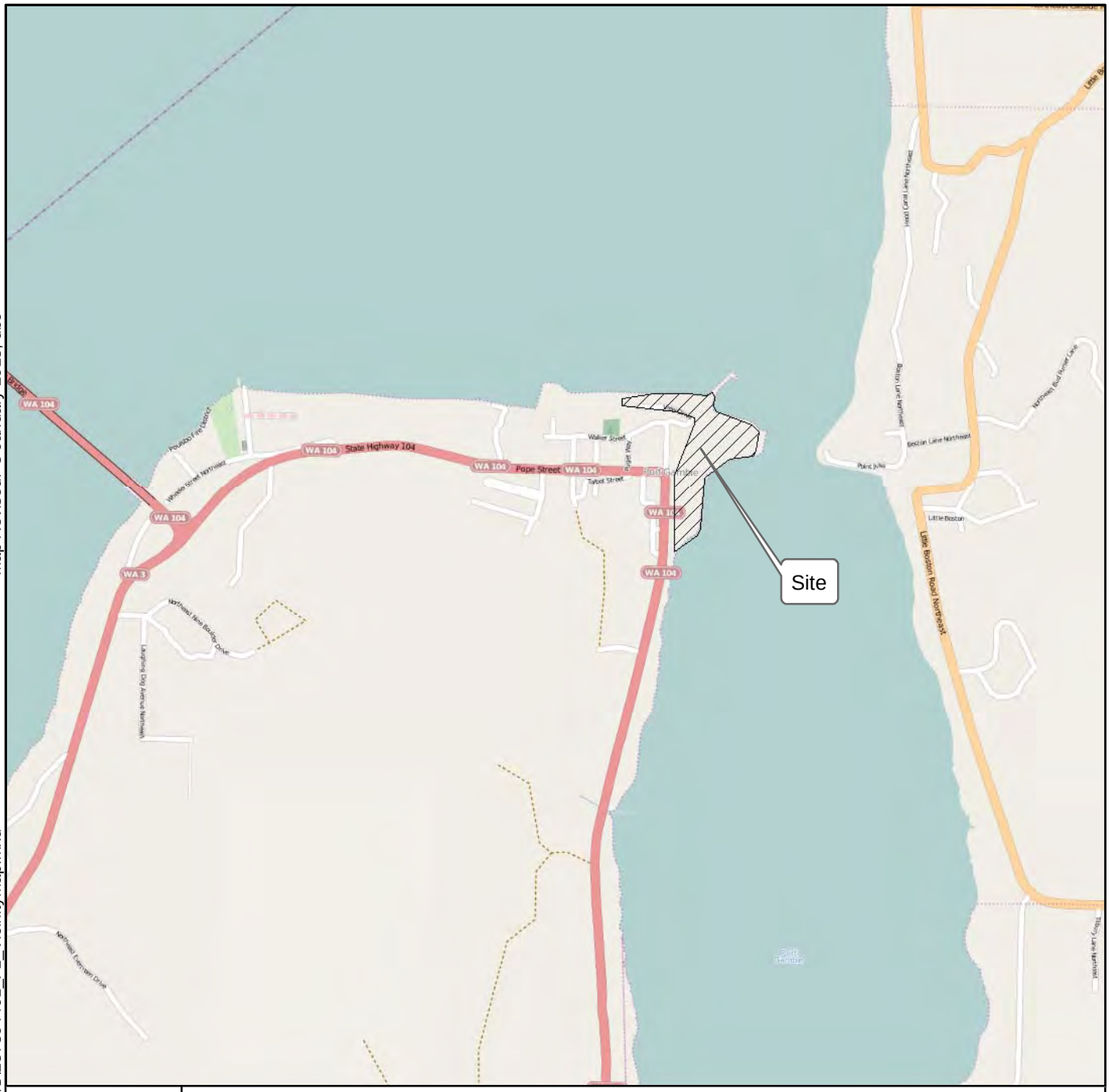
Jennifer L. Dadisman, PWS
Biologist

Joseph O. Callaghan, MS, PWS
Principal

JLD:JOC:leh:tlm

Attachments:
Figure 1. Vicinity Map
Figure 2. Action Area
Appendix A. Site Photographs

One electronic copy submitted



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Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.

Data Sources: Open Street Map, ESRI, DeLorme, NAVTEQ

Transverse Mercator, Zone 10 N North, North American Datum 1983
North arrow oriented to grid north

Vicinity Map

Port Gamble Redevelopment Plan
Kitsap County, Washington

GeoEngineers

Figure 1

Map Revised: 3 January 2013, dbc

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Office: Tacoma

Legend

Project Area

Action Area

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Notes:

1. The locations of all features shown are approximate.
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Data Source: Aerial from ESRI, streams from NHD.

Projection: NAD 1983 StatePlane Washington South FIPS 4602 Feet

Action Area

Port Gamble Redevelopment Plan
Kitsap County, Washington

GeoEngineers

Figure 2

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APPENDIX A
Site Photographs

Photograph 1. Looking north from the central area of the Mill Site, looking towards the lab (red building in the picture). The shoreline is on the right side of the photograph.

Photograph 2. Looking north along the shoreline in the northern Mill Site area. The shoreline in this area is covered in riprap, concrete and asphalt chunks and has a small vegetated buffer.

Photograph 3. Looking east at the jetty that separates Hood Canal and Port Gamble Bay.

Photograph 4. Looking westerly from near the jetty, towards the Mill Site access and Port Gamble townsite.

Site Photographs

Port Gamble Redevelopment Plan
Kitsap County, Washington

GeoEngineers

Figure A-1

2378-044-08 Date Exported: 03/12/2020

Photograph 5. From near the central portion of the Mill Site, north end of the clean up area, looking westerly. The photograph looks across the cleaned-up mill area towards the steep slope and Port Gamble town. Two bald eagles were sitting on the site.

Photograph 6. Shoreline conditions in the north end of the cleanup area.

Photograph 7. Shoreline conditions in the south end of the cleanup area.

Photograph 8. Shoreline conditions in the south end of the cleanup area.

Site Photographs

Port Gamble Redevelopment Plan
Kitsap County, Washington

GeoEngineers

Figure A-2

2378-044-08 Date Exported: 03/12/2020

Photograph 9. North end of the Mill Site, adjacent to the lab, looking west at the vegetated steep slope.

Photograph 10. South end of the Mill Site, looking west at the vegetated steep slope.

Photograph 11. Typical shoreline post clean-up with sparse invasive species, armor rock and cobbled beach.

Photograph 12. Looking north across the south end of the cleanup site.

Site Photographs

Port Gamble Redevelopment Plan
Kitsap County, Washington

GeoEngineers

Figure A-3

2378-044-08 Date Exported: 03/12/2020