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Ecology Grant #G1000054

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City of Sequim

Shoreline Master Program

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CHAPTER 1 - INTRODUCTION

1.1 Purpose

Washington's Shoreline Management Act (SMA) was passed by the State Legislature in 1971 and adopted by a public referendum, now codified as RCW 90.58. The Act was created in response to a growing concern that "inherent harm" from "uncoordinated and piecemeal development" was causing serious permanent damage to the State's shorelines. The legislature intended the Act to set forth a clear, "planned, rational, and concerted effort" to address these concerns. The Act is intended to identify appropriate land uses and activities that will provide public access and enhance and conserve shoreline functions and values.

The SMA established a cooperative shoreline management program between local government and the State. Local governments have the primary responsibility for initiating the planning and administration of the local Shoreline Master Program (SMP). The Department of Ecology is responsible for supporting and assisting local governments and insuring compliance with the SMA and its provisions, primarily WAC Sections 173-26 – State Master Program Approval/Amendment Procedures and Master Program Guidelines and 173-27-Shoreline Management Permit and Enforcement Procedures.

The SMP is a comprehensive use plan for local shoreline areas that includes desired goals and policies consistent with SMA policy (RCW 90.58.020); maps, diagrams and charts or other descriptive material and text; use and development regulations; and administrative procedures for the shoreline permitting process. The Ecology SMP guidelines (WAC 173-26) establish general goals and policies, and standards and criteria for regulations. The SMP is based on State guidelines, but tailored to the specific conditions and needs of individual communities. The SMP is also meant to be a comprehensive vision of how the shoreline area will be used and developed over time. Once the local SMP is approved by the Department of Ecology, the SMP becomes a part of the State's overall Shoreline Master Program.

The Shoreline Master Program is a regulatory document supported by related materials. The SMP as a regulatory instrument includes Appendix A – "Shoreline Management Program, Critical and Environmentally Sensitive Areas Protection" (Critical Areas Regulations) with the exception of Section 18.80.080. Supporting materials associated with the SMP are in Appendix B – City of Sequim Inventory & Characterization Report" and Appendix C, "City of Sequim Restoration Plan," and Appendix D, "City of Sequim SMP Cumulative Impact Analysis".

1.2 Key Concepts

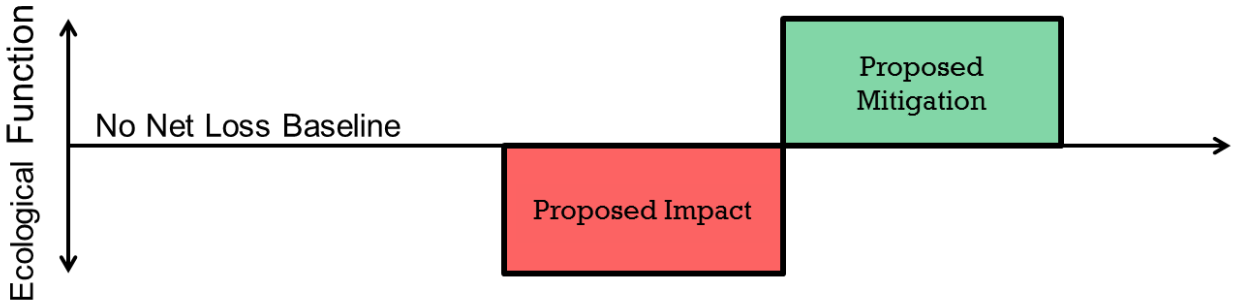
The SMA policy is found in RCW 90.58.020; this provision prioritizes shoreline uses that are deemed to be in "the overall best interest of the state and the people generally." To this end, the SMA has three broad, overarching policies:

- Preferred shoreline uses, which includes those that control or prevent environmental pollution and damage or are unique to or dependent upon use;
- Promote public access for a "substantial" number of people; and
- Protect shoreline natural resources and functions.

The SMA's policies prefer "water-oriented uses", which are those uses that are particularly dependent upon or related to the water to support their use, such as marinas and fishing activities, and those uses that promote "water enjoyment" to the general public, such as through view access.

The policies also provide the framework for the state shoreline guidelines (WAC 173-26), updated and adopted in 2003, which emphasize the protection and restoration of shoreline natural resources. The guidelines refer to the protection of shoreline ecological processes (such as hydrology and sediment transport) and shoreline ecological functions (provided by water quality, vegetation, and habitat). A major concept in the protection of ecological functions is termed "no net loss."

"No net loss" is the concept that where environmental impacts will occur, efforts must be made to mitigate or off-set those impacts to maintain the status quo for environmental processes and functions. In sum, the environmental conditions should remain the same was when the SMP went into effect. The illustration below summarizes this concept.



Achieving no net loss of environmental functions and promoting preferred uses are the goals when developing and implementing shoreline regulations.

Water-oriented uses, no net loss, and other significant terms related to the Shoreline Management Act and the City's SMP are officially defined and in included in Chapter 3 of this document.

1.3 Shoreline Jurisdiction

Under the Shoreline Management Act (SMA), RCW 90.58, the shoreline area regulated by the City's Shoreline Master Program must include all shorelines of statewide significance, shorelines of the state, and their adjacent shorelands. The portion of Puget Sound seaward from the line of extreme low tide and submerged lands below the extreme low tide mark extending to mid-channel are defined as shorelines of the "statewide significance".

"Shorelines of the state" are generally described as all marine shorelines and shorelines of all other streams or rivers having a mean annual flow of 20 cubic feet per second (cfs) or greater and lakes with a surface area greater than 20 acres. Adjacent shorelands are defined as the upland area a minimum of 200 feet of the ordinary high water mark (OWHM), as well as any associated wetlands within its municipal jurisdiction. (RCW 90.58.030).

“Associated wetlands” means those wetlands that are in proximity to and influence or are influenced by tidal waters or a lake or stream subject to the SMA (WAC 173-22-030 [1]). These are typically identified as wetlands that physically extend into the shoreline jurisdiction, or wetlands that are functionally related to the shoreline jurisdiction through surface water connection and/or other factors. Ecology guidance states that an entire wetland is associated if any part of the wetland lies within the area 200 feet from the ordinary high water mark (OHWM) of a state shoreline.

The City’s shoreline jurisdiction includes all the submerged lands from the mid-channel to the adjacent shorelands located within 200 feet of the OWHM. The City does not have any streams or rivers that meet the 20 cfs requirement, though the portion of Johnson Creek tidally influenced by Sequim Bay falls within the shoreline jurisdiction. They City’s shoreline jurisdiction also includes “shorelines of statewide significance, which are those submerged lands extending from extreme low tide to mid-channel. One associated wetland falls within the City’s shoreline jurisdiction.

The wetland commonly known as “Pitship Marsh” is within 200 feet of the OHWM and hydrologically connected to Sequim Bay; as such, the entire wetland falls within the city’s shoreline jurisdiction. Similarly, the wetland in Washington Harbor along the inner portion of South Spit near PNNL/Battelle is an “associated wetland”, but is not yet within the City’s jurisdiction because it lies within the City’s Urban Growth Area (UGA). The City’s regulations have no effect in the UGA until annexed into the City.

The illustration below, Figure 1, identifies the City’s shoreline jurisdiction, which also extends to the mid-point in Sequim Bay.

Figure 1-1 Shoreline

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1.4 Critical Areas in Shoreline Jurisdiction

The term “critical areas” refers to those areas designated as “environmentally critical areas” by Chapter 18.80 of the Sequim Municipal Code (SMC) under the authority of the Washington Growth Management Act (GMA) (RCW 36.70A). Designated environmentally critical areas in Sequim include wetlands, streams, geologically hazardous areas, ravines, bluffs, critical aquifer recharge areas, fish and wildlife habitat conservation areas, and flood hazard areas.

In 2003, the state legislature amended the SMA and GMA to integrate provisions for critical areas management into local shoreline master programs. Critical areas located within shoreline jurisdiction must receive the same level of protection in the SMP as critical areas protected under the GMA. Since 2003, there had been significant confusion about critical areas and shorelines due to ambiguous language in the integrated provisions. Case law reflected this confusion. In an effort to provide clarity, the critical areas integration provisions were again amended in 2010; these new amendments make clear that once adopted, critical areas within shoreline jurisdiction are regulated by the City’s Shoreline Master Program. The SMP incorporates many of the substantive requirements in SMC 18.80 directly. However, it is important to note that are procedural differences between SMC 18.80 and the SMP. Please refer to Chapter 4 for SMP policies related to critical areas and Chapter 6 for regulations.

1.5 Compliance and Relationship to Other Regulations

All use, development, or activity within the City’s shoreline jurisdiction must be consistent with this SMP. This standard applies even if the use, development, or activity is considered “exempt” under this SMP. For this reason, the City’s SMP has a permit system based on Shoreline Management Act (SMA) and the associated Washington Administrative Code regulations (WACs). There are permits for exemptions, substantial development, conditional uses, and variances. A detailed explanation of these permits is found in Chapter 7 – Administrative Procedures.

Uses and developments regulated by this SMP may also be subject to other provisions of the Sequim Municipal Code, the City of Sequim Comprehensive Plan, the Washington State Environmental Policy Act (RCW 43.21C and WAC 197-11), and other local, state and federal laws. Some examples of other laws and regulations include, but are not limited to, the Clean Water Act (CWA), the Endangered Species Act (ESA), and Hydraulic Project Approval (HPA) under the Hydraulic Code (RCW 77.55). Project proponents within the City’s shoreline jurisdiction are responsible for complying with all applicable laws prior to commencing any use, development or activity. Where this SMP makes reference to any RCW, WAC, or other state or federal law or regulation, the most recent amendment shall apply. In the event this SMP conflicts with other applicable City policies or regulations, the more restrictive provisions shall prevail.

1.6 Public Outreach

The City’s SMP update process employed a variety of public outreach strategies. For example, City staff developed an email distribution list where information regarding public comment opportunities and draft maps, designations, policies, and regulations for informal

review and comment were sent out to list members. The distribution list included state agencies, local tribes, local businesses and developers, property owners, and environmental groups. The distribution list was formed in mid-2010 and continued throughout the update process.

In addition, the City's newsletter and website highlighted the SMP update process and encouraged public comment at various times throughout the process. City staff also used the newsletter, website, email distribution list, as well as the local newspapers (*Peninsula Daily News* and *Sequim Gazette)* to promote public discussion forums.

Figure 1-2 Public Notice Sign – West Sequim Bay Road

City staff held four public forums in 2011, one each in January, March, April, and December, to invite public discussion on the draft Inventory and Characterization Report, environmental designations, and the draft SMP. The City also put up a 16-square foot public notice sign in a high traffic area along the shoreline, highlighting the City's request for public input on the Shoreline Master Program. Other public comment opportunities also included nine (9) Planning Commission and five (5) City Council meetings, with the Planning Commission's public meeting held August 21, 2012 and the City Council's public hearing on September 10, 2012 and November 13, 2012.

The public input obtained from the forums and Planning Commission meetings yielded a number of comments that helped guide the development of the SMP. Following is a summary of public comments received (not including public agency comments).

Figure 1-3 City Council Public Hearing Sign

- Add definition of 'boating facilities'
- Where is the guidance and criteria for economic viability considerations
- Colors on Environmental Designation map somewhat confusing
- Include presence of road/utilities in rationale on Pitship Marsh Urban Conservancy designation
- Clarify what "full utilization' means before allowing commercial expansion
- Make research and development subject to a CUP in the Urban designation
- Consider making 'research aquaculture' subject to a CUP
- Reduce residential height to 24+- feet to be consistent with surrounding homes
- What does a 'substantial number' of homes mean, relating to view blockage

- Review native tree retention (6.1.2) – trees all over Wayne property, well over 6-8 inch retention requirement
- Prohibition of release of stormwater onto shorelands (currently done?)
- Look at hard armoring (new and existing) restrictions relating to public improvements
- Clarify dredging regulations to accommodate marina expansion

In most cases, these comments are reflected in the SMP. For example, within the "Shoreline Residential" environments, the maximum building height is restricted to 26 feet. This is less than what is allowed under Shoreline Management regulations or the City of Sequim Municipal Code (SMC). This standard was based on public comments received at the forums.

In addition, the City received comments from the Strait of Juan de Fuca Ecosystem Recovery Network (Strait ERN) (which incorporated comments from the Jamestown S'Klallam Tribe), Port of Port Angeles, Dept. of Natural Resources, Department of Fish and Wildlife, and general comments from the Dept. of Ecology. Many of the comments from these agencies were incorporated into the draft SMP; for example, the Strait ERN requested that Figure 5-1 be revised to provide common place names to unique features such as Pitship Marsh, the John Wayne Marina and South Spit. This comment was incorporated into the SMP.

A final public hearing was held by the Council on October 28, 2013 to incorporate applicable agency comments received through the State review process on the Council adopted SMP.

CHAPTER 2 – INVENTORY AND CHARACTERIZATION SUMMARY

2.1 Background and Purpose

Cities and counties are required to prepare an inventory and characterization of the shoreline resources in their jurisdiction as part of the SMP update process. An Inventory and Characterization Report and map folio was prepared in the winter of 2010 and finalized in the November of 2012, following the City's Planning Commission and Dept. of Ecology's review. The complete report is incorporated as Appendix B of this SMP.

The purpose of the study was to conduct a baseline inventory of current conditions in the shoreline jurisdiction. The City's shoreline jurisdiction encompasses approximately two miles, half of which is in the City's Urban Growth Area. The inventory and characterization provides a basis for updating the City's SMP to comply with the SMA, Revised Code of Washington (RCW) 90.58 and its implementing guidelines, Washington Administrative Code (WAC) 173-26. The characterization identifies existing conditions, evaluates functions and values of resources in the shoreline jurisdiction, and explores opportunities for conservation and restoration of ecological functions. The findings are intended to provide a framework for updates to the City's shoreline environment designations, and shoreline management goals, policies, and development regulations. Key findings of the inventory and characterization are summarized below.

2.2 Physical and Biological

The City of Sequim lies within the rain shadow of the Olympic Mountains. The City's marine shoreline runs along Sequim Bay, south of Johnson Creek to the Washington Harbor in the north. Johnson Creek and Bell Creek drain into Sequim Bay, but only Johnson Creek is within the City's shoreline jurisdiction. Both creeks have been heavily modified and are on the Dept. of Ecology's water quality 303(d) list. Much of the land use in the shoreline jurisdiction is single family residential, though there are port facilities with a marina (John Wayne Marina) in the City's jurisdiction and marine research facilities (Pacific Northwest National Laboratories/Battelle) in the City's Urban Growth Area to the north. John Wayne Marina is located on a drift cell divergence zone; to the south of the Marina, drift cell sediment transport runs north to south. To the north of the Marina, sediment transport runs from the south to the north, creating the South Spit along Washington Harbor. Most of the beaches are no bank or low bank, though there are high bank beaches and eroding bluffs along the undeveloped portions in the PNNL/Battelle area.

2.3 Habitat and Species

The City's shorelines provide important nearshore habitats, such as estuarine (saltwater) wetlands, eelgrass meadows and kelp forests, and support a variety of marine fishes, birds, and invertebrates. Forage fish, such as herring, surf smelt, and sand lance (prey for salmonids), also spawn on local beaches. Of special interest are areas that provide habitat for species listed under the Federal Endangered Species Act, "priority" species and habitats listed by Washington State Department of Fish and Wildlife, and species of local importance, including bull trout, Chinook salmon, coho salmon, as well as bald eagles, Peregrine falcons, and great blue herons.

2.4 Land Use and Public Access

The dominant land use along the shoreline is residential, with most of the homes (57%) built before passage of the Shoreline Management Act in 1972. Twenty-eight (28) residential properties are located within the Shoreline Residential environment. Eighty-five (85%) percent (24) of these properties are developed; with only four (4) vacant properties (15%) remaining that may be developed. Most of the homes depend on on-site septic systems and wells because currently there are no City services in the area.

Water-dependent facilities such as John Wayne Marina and PNNL/Battelle marine research laboratory make up most of the other land uses along the shoreline. The Marina provides the only public access to the shoreline. Sequim Bay Resort, near John Wayne Marina, and PNNL/Battelle are areas of potential future development. Conversely, development in residential areas has been quite stable, with minimal development and few overwater structures.

Additional public access could potentially occur with development of the Wayne Enterprises property located adjacent to and SW of the John Wayne Marina. A preliminary development proposal envisions the relocation of West Sequim Bay that would create approximately 470 linear feet of public park and access along Sequim Bay. This additional public access area could potentially be used to showcase restoration techniques along the shoreline.

2.5 Conclusions

The shoreline area is characteristic of low-density, urbanized waterfront development. Most of the shoreline area is in private ownership, with the only public access opportunities located at John Wayne Marina, which is owned by the Port of Port Angeles. The Marina has a wide variety of public access, recreation opportunities, and other and water-oriented uses such as boating and fishing. Extensive private ownership limits expansion of public access opportunities. Similarly, private ownership has also limited the amount of new development along the City's shorelines, with most development being stable of the last 20 years or more. The Marina was built in the 1980s, and most of the private residences were built by then. West Sequim Bay Road has existed along the shoreline for decades. Nonetheless, these modifications have affected the natural structure and ecological function along the shoreline. Further, development on a watershed scale has affected the shoreline by increasing impervious area in uplands, resulting in increased peak flow velocities and volumes, impaired water quality, and erosion in streams that discharge to Sequim Bay. A detailed discussion of altered or degraded shoreline ecological functions in Sequim is contained in Appendix B, Shoreline Inventory and Characterization.

2.6 Opportunities

Site specific opportunities for ecological restoration are limited to due to extensive private ownership along the shoreline. However, opportunities that could be realized as development permit conditions include removing creosote pilings, replacing hard armoring with soft armoring techniques, and promoting re-vegetation with native plant species.

Regionally, restoration opportunities include coordinating with other jurisdictions on regional planning efforts and increasing access to City services to reduce the number of on-site septic systems.

CHAPTER 3 – DEFINITIONS

Accessory. A use, activity, structure, or part of a structure that is subordinate and incidental to the main activity or structure on the subject property. (SMC 18.08.020)

Act. The Washington State Shoreline Management Act, RCW 90.58. Also known as the "SMA". (WAC 173-26-020)

Agricultural activities. (1) Agricultural uses and practices for economic use, including, but not limited to: Producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie fallow in which it is plowed and tilled but left unseeded; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; conducting agricultural operations; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the shoreline than the original facility; and maintaining agricultural lands under production or cultivation. (WAC 173-26-020)

Amendment. A revision, update, addition, deletion, and/or reenactment to the City of Sequim SMP. (WAC 173-26-020).

Approval. An official action by the City of Sequim agreeing to submit a proposed SMP or amendments to the Department of Ecology for review and official action pursuant to the SMA. (WAC 173-26-020).

Appeal, closed record. An appeal of a land use action following an open record public hearing on a proposed land use action. Such an appeal is on the record established during the open record pre-decision public hearing with no new evidence or information allowed. During a closed record appeal, only appeal argument is allowed. (RCW 36.70B.020(1)).

Appurtenant structures. Development that is necessarily connected to the use and enjoyment of a single family residence and is located landward of the OHWM and/or the perimeter of a wetland. Appurtenances include a garage, deck, driveway, utilities, fences, private beach access (e.g., stairs), installation of a septic tank and drain field, and grading which does not exceed the threshold established in local SEPA or building regulations, whichever is less, and which does not involve placement of fill in any wetland, floodway, floodplain or waterward of the ordinary high water mark.

Aquaculture, Commercial. The culture or farming of fish, shellfish, or other aquatic plants and animals for commercial purposes. Aquaculture does not include the harvest of wild geoduck associated with the state managed wildstock geoduck fishery. (WAC 173-26-020 (6).

Aquaculture, Research. The culture or farming of fish, shellfish, or other aquatic plants and animals for research purposes. Research aquaculture does not include any wholesale or retail sales.

Archaeology. Means systematic, scientific study of the human past through material remains.

Archaeological Object. Means an object that comprises the physical evidence of an indigenous and subsequent culture including material remains of past human life including monuments, symbols, tools, facilities, graves, skeletal remains and technological by-products.

Archaeological Resource/Site. Means a geographic locality in Washington, including, but not limited to, submerged and submersible lands and the bed of the sea within the state's jurisdiction, that contains archaeological objects.

Average grade level. The average of the natural or existing topography of the portion of the lot, parcel, or tract of real property which will be directly under the proposed building or structure: In the case of structures to be built over water, average grade level shall be the elevation of the ordinary high water mark. Calculation of the average grade level shall be made by averaging the ground elevations at the midpoint of all exterior walls of the proposed building or structure.

Boat Launch or Boat Ramp. Boat launch or boat ramp means a slab, pad, rail, or graded slope specifically constructed and used for launching boats or other vessels.

Boating Facilities. Boating facilities include marinas, both backshore and foreshore, dry storage and wet-moorage types, covered moorage, boat launches, and marine travel lifts. Boating facility standards do not apply to docks serving four or fewer single-family residences.

Buffer The zone contiguous to a environmentally sensitive critical or shoreline area that is required for the continued maintenance, function, and/or structural stability of the critical area or shoreline. Buffer widths vary depending on the relative quality and sensitivity of the area being protected. Unlike zoning setbacks, buffer areas are intended to be left undisturbed, or may need to be enhanced to support natural processes, functions and values. The critical functions of the riparian buffer (those associated with an aquatic system) include shading, input of organic debris and coarse sediments, uptake of nutrients, stabilization of banks, interception of sediments, overflow during high water event, protection from disturbance by humans and domestic animals, maintenance of a wild habitat, and room for variation of aquatic system boundaries over time due to hydrological or climatic effects. The critical functions of terrestrial buffers include protection of slope stability, attenuation of surface water flows from stormwater runoff and precipitation, and erosion control.

Conditional use. A use, development, or substantial development which is classified as a shoreline conditional use or is not classified within the SMP. (WAC 173-26-030). In terms of shoreline permits, a greater level of scrutiny is applied to ensure that these uses can be done without adverse impacts to shoreline resources. Conditional Use permits are also reviewed by Ecology after the City's decision on the permit.

Development. A use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulk heading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to the act at any stage of water level. (RCW 90.58.030).

Development regulations. The controls placed on development or land uses by the City of Sequim, including, but not limited to, zoning ordinances, critical areas ordinances, all portions of the SMP other than goals and policies approved or adopted under chapter 90.58 RCW, planned unit development ordinances, subdivision ordinances, and binding site plan ordinances together with any amendments thereto. (WAC 173-26-020).

Dock. A floating moorage structure.

Drift cell. Also referred to as “drift sector,” or “littoral cell”, meaning a particular reach of marine shore in which littoral drift may occur without significant interruption and which contains any natural sources of such drift and also accretion shore forms created by such drift. (WAC 173-26-020). Used in SMPs for evaluation of ecological functions that could be affected by development.

Driftway. Means that portion of the marine shore process corridor, primarily the upper foreshore, through which sand and gravel are transported by littoral drift. The driftway is the essential component between the feeder bluff(s) and accretion shoreform(s) of an integral drift sector. Driftways are also characterized by intermittent, narrow berm beaches.

Ecological functions. Also referred to as “shoreline functions,” meaning the work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of the aquatic and terrestrial environments that constitute the shoreline's natural ecosystem. (WAC 173-26-020).

Ecosystem-wide processes. The suite of naturally occurring physical and geologic processes of erosion, transport, and deposition; and specific chemical processes that shape landforms within a specific shoreline ecosystem and determine both the types of habitat and the associated ecological functions. (WAC 173-26-020).

Exempt developments. Pursuant to legislatively established criteria, those development activities set forth in Chapter 7 of the Sequim SMP which are not required to obtain a Substantial Development Permit but which must otherwise comply with applicable provisions of the act and the SMP. (WAC 173-27-030).

Extreme low tide. The lowest line on the land reached by a receding tide. (RCW 90.58.030).

Fair market value. The open market bid price for conducting the work, using the equipment and facilities, and purchase of the goods, services and materials necessary to accomplish the development. This would normally equate to the cost of hiring a contractor to undertake the development from start to finish, including the cost of labor, materials, equipment and facility usage, transportation and contractor overhead and profit. The fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment or materials. (WAC 173-27-030).

Feasible. An action, such as a development project, mitigation, or preservation requirement, that meets all of the following conditions: (a) the action can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results; (b) the action provides a

reasonable likelihood of achieving its intended purpose; and (c) the action does not physically preclude achieving the project's primary intended legal use. (WAC 173-26-020).

Fill. The addition of soil, sand, rock, gravel, sediment, earth retaining structure, or other material to an area waterward of the OHWM, in wetlands, or on shorelands in a manner that raises the elevation or creates dry land. (WAC 173-26-020).

Flood plain. Synonymous with one hundred-year flood plain, meaning that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulation maps or a reasonable method which meets the objectives of the act. (WAC 173-26-020).

Geotechnical report. Also referred to as a "geotechnical analysis," meaning a scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, the affected land form and its susceptibility to mass wasting, erosion, and other geologic hazards or processes, conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative geological and hydrological impacts of the proposed development, including the potential adverse impacts to adjacent and down-current properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers or geologists who have professional expertise about the regional and local shoreline geology and processes. (WAC 173-26-020).

Grading. The movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land. (WAC 173-26-020).

Growth Management Act (GMA). The State of Washington Growth Management Act, (RCW 36.70A).

Guidelines. Those standards adopted to implement the policy of this chapter for regulation of use of the shorelines of the state prior to adoption of master programs. Such standards shall also provide criteria to local governments and the Ecology in developing master programs. (RCW 90.58.030).

Height. Distance measured from average grade level to the highest point of a structure, provided that television antennas, chimneys, and similar appurtenances shall not be used in calculating height, except where such appurtenances obstruct the view of the shoreline of a substantial number of residences on areas adjoining such shorelines. Provided further that temporary construction equipment is excluded in this calculation. (WAC 173-27-030).

Historic Preservation Professional. Means those individuals who hold a graduate degree in architectural history, art history, historic preservation, or closely related field, with coursework in American architectural history, or a bachelor's degree in architectural history, art history, historic preservation or closely related field plus one of the following:

a. At least two years of full-time experience in research, writing, or teaching in American architectural history or restoration architecture with an academic

institution, historical organization or agency, museum, or other professional institution; or

b. Substantial contribution through research and publication to the body of scholarly knowledge in the field of American architectural history.

Historic Site. Means those sites that are eligible or listed on the Washington Heritage Register, National Register of Historic Places or any locally developed historic registry formally adopted by the [jurisdiction] Council.

In-stream structure. A structure placed by humans within a stream or river waterward of the ordinary high-water mark that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-stream structures may include those for flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose. (WAC 173-26-241(g)).

Master program. The comprehensive use plan for a described area, and the use regulations together with maps, diagrams, charts, or other descriptive material and text, a statement of desired goals, and standards developed in accordance with the policies enunciated in RCW 90.58.020. "Comprehensive master program update" means a master program that fully achieves the procedural and substantive requirements of the department guidelines effective January 17, 2004, as now or hereafter amended. (RCW 90.58.030) Generally includes a Restoration Plan and a Cumulative Impacts Analysis; contents are based on a Shoreline inventory, characterization, and analysis of current ecological conditions.

May. The action is acceptable, provided it conforms to the provisions of this chapter. (WAC 173-26-020).

Must. A mandate; the action is required. (WAC 173-26-020).

Net pens/finfish. Are culturing systems that generally consist of two nets—an interior net to keep fish in and an exterior net to exclude predators. Net pens are typically anchored to the waterbody floor and suspended from the surface with a floatation structure; the netting continues above the water to a degree to stop fish from jumping out. Fish pen structures solely and directly established and managed for purposes of salmon enhancement and/or restoration are not considered net pens for purposes of this Program.

No Net Loss. Maintenance of the combined total of shoreline ecological functions, as established by the City's 2010 Inventory and Characterization, over time. The no net loss standards and provisions contained in WAC 173-26-186 and 173-26-201 require that impacts of shoreline use and/or development, whether permitted or exempt from permit requirements, be identified and mitigated so that there are no resulting impacts that cause ecological functions or processes to function below the level established by the 2010 Inventory and Characterization.

Nonconforming use or development. A shoreline use or development which was lawfully constructed or established prior to the effective date of the act or the applicable SMP, or amendments thereto, but which does not conform to present regulations or standards of the SMP. (WAC 173-27-080).

Nonwater-oriented uses. Those uses that are not water-dependent, water related or water enjoyment. (WAC 173-26-020).

Ordinary high water mark. That mark on all lakes, streams and tidal water that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the department: PROVIDED, that in any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining salt water shall be the line of mean higher high tide and the ordinary high water mark adjoining fresh water shall be the line of mean high water. (RCW 90.58.030).

Party of record. All persons, agencies or organizations who have submitted written comments in response to a notice of application, made oral comments in a formal public hearing conducted on the application, or notified local government of their desire to receive a copy of the final decision on a permit and who have provided an address for delivery of such notice by mail. (WAC 173-27-030).

Permit. Also referred to as a “Shoreline Permit”. Any shoreline substantial development, shoreline variance, shoreline conditional use permit, or revision authorized under chapter 90.58 RCW. (WAC 173-27-030).

Pier. A fixed, pile-supported structure in the water.

Figure 3-1 Pier

Professional archaeologist. Means a person who:

a. "Professional archaeologist" means a person with qualifications meeting the federal secretary of the interior's standards for a professional archaeologist. Archaeologists not meeting this standard may be conditionally employed by working under the supervision of a professional archaeologist for a period of four years provided the employee is pursuing qualifications necessary to meet the federal secretary of the interior's standards for a professional archaeologist. During this four-year period, the professional archaeologist is responsible for all findings. The four-year period is not subject to renewal.

Provisions. Policies, regulations, standards, guideline criteria or environment designations of the Sequim SMP. (WAC 173-26-020).

Public interest. The interest shared by the citizens of the state or community at large in the affairs of government, or some interest by which their rights or liabilities are affected including, but not limited to, an effect on public property or on health, safety, or general welfare resulting from a use or development. (WAC 173-27-030).

Qualified professional. Means a person with experience and training in the pertinent scientific discipline, and who is a qualified scientific expert with expertise appropriate for the relevant critical area subject in accordance with WAC 365-195-905. A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology, or related field, and have at least five years of related work experience.

1. A qualified professional for wetlands must be a professional wetland scientist or ecologist with at least two years of full-time work experience as a wetlands professional, including delineating wetlands using the state or federal manuals, preparing wetlands reports, conducting function assessments, and developing and implementing mitigation plans.

2. A qualified professional for habitat must have a degree in biology or a related degree and professional experience related to the subject species.

3. A qualified professional for a geological hazard must be a professional engineer or geologist, licensed in the state of Washington.

4. A qualified professional for critical aquifer recharge areas means a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic assessments.

5. A qualified professional arborist must be an ISA (International Society of Arboriculture) Certified Arborist.

Recreational development. Commercial and public facilities designed and used to provide recreational opportunities to the public. (WAC 173-26-241(3)(i)).

Research and Development Facilities. Structures and uses associated with research and development, public and private educational partnerships, and accessory structures or uses.

Residential development. One or more buildings, structures or portions thereof which are designed for and used to provide a place of abode for human beings, including but not limited to one and two family detached dwellings, multifamily residences, townhouses, mobile home parks, and other similar group housing, together with accessory uses and structures normally common to residential uses including but not limited to garages, sheds, or other appurtenant structures. Residential development also includes multifamily development and the creation of new residential lots through land division.

Restoration. In the context of “ecological restoration,” the reestablishment or upgrading of impaired ecological shoreline processes or functions. This may be accomplished through measures including, but not limited to, revegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not imply a requirement for

returning the shoreline area to aboriginal or pre-European settlement conditions. (WAC 173-26-020).

Shoreline Master Program. Also known as the "SMP". The comprehensive use plan for shorelines of the state, and the use regulations together with maps, diagrams, charts, or other descriptive material and text, a statement of desired goals, and standards developed in accordance with the policies enunciated in RCW 90.58.020. (WAC 173-26-020).

Shall. A mandate; the action must be done. (WAC 173-26-020).

Shorelands. Also referred to as "shoreland areas," meaning those lands extending landward for two hundred feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter; the same to be designated as to location by the department of ecology. (RCW 90.58.030)

Shoreline administrator. The shoreline administrator shall be the Planning Director or his or her designee and is responsible for administering the Sequim SMP.

Shoreline jurisdiction. All "shorelines of the state" and "shorelands" as defined in the Sequim SMP and RCW 90.58.030.

Shoreline modifications. Those actions that modify the physical configuration or qualities of the shoreline area, usually through the construction of a physical element such as a dike, breakwater, pier, weir, dredged basin, fill, bulkhead, or other shoreline structure. They can include other actions, such as clearing, grading, or application of chemicals. (WAC 173-26-020).

Shoreline Permit.
Any Substantial Development, Conditional Use, or Variance Permits.

Shorelines. All of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them; except (i) shorelines of statewide significance; (ii) shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second or less and the wetlands associated with such upstream segments; and (iii) shorelines on lakes less than twenty acres in size and wetlands associated with such small lakes. (RCW 90.58.030).

Shorelines of the state. The total of all "shorelines" and "shorelines of statewide significance" within the state. (RCW 90.58.030).

Shoreline stabilization. Actions taken to address erosion impacts to property and dwellings, businesses, or structures caused by natural processes, such as current, flood, tides, wind, or wave action. These actions include structural and nonstructural methods. Nonstructural methods include building setbacks, relocation of the structure to be protected, groundwater management, planning and regulatory measures to avoid the need for structural stabilization. (WAC 173-26-231(3)).

Should. Indicates the particular action is required unless there is a demonstrated, compelling reason, based on policy of the SMA and the Sequim SMP, against taking the action. (WAC 173-26-020).

Significant Archaeological, Historic, or Cultural Site. Is that quality in American history, architecture, engineering, and culture that is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

a. That are associated with events that have made a significant contribution to the broad patterns of our history; or

b. That are associated with the lives of significant persons in our past; or

c. That embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d. That have yielded or may be likely to yield, information important in history or prehistory.

Significant vegetation removal. The removal or alteration of trees, shrubs, and/or ground cover by clearing, grading, cutting, burning, chemical means, or other activity that causes significant ecological impacts to functions provided by such vegetation. The removal of invasive or noxious weeds does not constitute significant vegetation removal. Tree pruning, not including tree topping where it does not affect ecological functions, does not constitute significant vegetation removal. (WAC 173-26-020).

Structure. A permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner, whether installed on, above, or below the surface of the ground or water, except for vessels. (WAC 173-27-030).

Substantial development. Any development of which the total cost or fair market value exceeds five thousand seven hundred eighteen dollars, or any development which materially interferes with the normal public use of the water or shorelines of the state. The dollar threshold established in this subsection (3)(e) must be adjusted for inflation by the office of financial management every five years, beginning July 1, 2007, based upon changes in the consumer price index during that time period. “Consumer price index” means, for any calendar year, that year's annual average consumer price index, Seattle, Washington area, for urban wage earners and clerical workers, all items, compiled by the bureau of labor and statistics, United States department of labor. The office of financial management must calculate the new dollar threshold and transmit it to the office of the code reviser for publication in the Washington State Register at least one month before the new dollar threshold is to take effect. (RCW 90.58.030)

Substantially degrade. To cause significant ecological impact. (WAC 173-26-020).

Topography. The natural or existing topography of the lot, parcel, or tract of real property immediately prior to any site preparation or grading, including excavation or filling. (WAC 173-27-030).

Transmit. To send from one person or place to another by mail or hand delivery. The date of transmittal for mailed items is the date that the document is certified for mailing or, for hand-delivered items, is the date of receipt at the destination. (WAC 173-27-030).

Variance. A means to grant relief from the specific bulk, dimensional or performance standards set forth in the applicable SMP and not a means to vary a use of a shoreline. (WAC 173-27-030).

Vessel. Includes ships, boats, barges, or any other floating craft which are designed and used for navigation and do not interfere with the normal public use of the water. (WAC 173-27-030).

Water-dependent use. A use or portion of a use which cannot exist in a location that is not adjacent to the water and which is dependent on the water by reason of the intrinsic nature of its operations. (WAC 173-26-020).

Water-enjoyment use. A recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use; or a use that provides for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general characteristic of the use and which through location, design, and operation ensures the public's ability to enjoy the physical and aesthetic qualities of the shoreline. In order to qualify as a water-enjoyment use, the use must be open to the general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that fosters shoreline enjoyment. (WAC 173-26-020).

Water-oriented use. A use that is water-dependent, water-related, or water-enjoyment, or a combination of such uses. (WAC 173-26-020).

Water-related use. A use or portion of a use which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location because:
1. The use has a functional requirement for a waterfront location such as the arrival or shipment of materials by water or the need for large quantities of water; or
2. The use provides a necessary service supportive of the water-dependent uses and the proximity of the use to its customers makes its services less expensive and/or more convenient. (WAC 173-26-020).

Water quality. The physical characteristics of water within shoreline jurisdiction, including water quantity, hydrological, physical, chemical, aesthetic, recreation-related, and biological characteristics. Where used in this SMP, the term "water quantity" refers only to development and uses regulated under this chapter and affecting water quantity, such as impermeable surfaces and storm water handling practices. Water quantity, for purposes of this chapter, does not mean the withdrawal of ground water or diversion of surface water pursuant to RCW 90.03.250 through 90.03.340. (WAC 173-26-020).

Watershed restoration projects. A public or private project authorized by the sponsor of a watershed restoration plan that implements the plan or a part of the plan and consists of one or more of the following activities:

1. A project for the restoration of an eroded or unstable stream bank that employs the principles of bioengineering, including limited use of rock as a stabilization only at the toe of the bank, and with primary emphasis on using native vegetation to control the erosive forces of flowing water; or

2. A project primarily designed to improve fish and wildlife habitat, remove or reduce impediments to migration of fish, or enhance the fishery resource available for use by all of the citizens of the state, provided that any structure, other than a bridge or culvert or instream habitat enhancement structure associated with the project, is less than two hundred square feet in floor area and is located above the ordinary high water mark of the stream; or

3. A project that involves less than ten miles of streamreach, in which less than twenty-five cubic yards of sand, gravel, or soil is removed, imported, disturbed or discharged, and in which no existing vegetation is removed except as minimally necessary to facilitate additional plantings. (RCW 89.48.060).

Watershed restoration plan. A plan, developed or sponsored by the department of fish and wildlife, the department of ecology, the department of natural resources, the department of transportation, a federally recognized Indian tribe acting within and pursuant to its authority, a city, a county, or a conservation district that provides a general program and implementation measures or actions for the preservation, restoration, recreation, or enhancement of the natural resources, character, and ecology of a stream, stream segment, drainage area, or watershed for which agency and public review has been conducted pursuant to chapter 43.21C RCW, the State Environmental Policy Act. (RCW 89.48.060).

CHAPTER 4 – MASTER PROGRAM GOALS AND POLICIES

The City of Sequim, by establishing the SMP, intends to control and regulate future development as it affects the shoreline area in accordance with the Shoreline Management Act, RCW 90.58. The SMP is a locally developed legal instrument for ensuring that statewide policies are addressed as waterfront lands are developed. The Shoreline Master Program regulated uses and structures in shoreline jurisdiction. The following comprehensive set of shoreline goals and policies provide the foundation and framework on which the balance of the SMP has been developed, commensurate with the intent and objectives of the SMA:

4.1 Shoreline Master Program Goals

The private sector's right to develop must not infringe upon the public's right to use and enjoy the shorelines, and the public must not trespass on private lands. The City will seek to increase opportunities for public access (view and physical) to shorelines, while preserving existing ones.

Development and redevelopment in the shoreline area should occur in a manner that recognizes the preferred uses identified in the SMA, maintains a balance between competing uses, does not impair shoreline ecological processes and functions, and results in the overall improvement of natural resources in the shoreline. An over-arching goal of the master program is to ensure that future use and development of the City's shoreline results in no net loss of shoreline ecological functions.

Recognizing that all of the City's shorelines waterward of the line of extreme low tide are designated as Shorelines of Statewide Significance (RCW 90.58.030(e)(iii), these shorelines are of value to the entire state and should be protected and managed according to the following priorities established by the SMA (RCW 90.58.020):

1. Recognize and protect the statewide interest over local interest;
2. Preserve and enhance the natural character of the shoreline;
3. Result in long-term over short-term benefit;
4. Protect the resources and ecology of Puget Sound shorelines;
5. Increase public access to publicly owned areas of the shorelines; and
6. Increase recreational opportunities for the public in the shoreline.

4.2 General Goals and Policies for Master Program Elements

The SMA of 1971 (RCW 90.58) and implementing guidelines (WAC 173-26) identify several land and water use elements to be addressed in the development of area-wide shoreline goals and policies. They include: Shoreline Use, Public Access, Recreation, Circulation, Economic Development, Archaeological and Historic Resources, and Conservation. Master programs are also encouraged to include any other elements that, because of present uses or future needs, are deemed appropriate to carry out the policy of the Act.

Shoreline Management Act policies are closely related to, but distinct from the Growth Management Act and other land use laws. The Shoreline Act was established to regulate uses and development in shoreline areas, with broad policies to ensure public access and ecological protection being attended while "reasonable, orderly development" continues, and

giving preference to uses that require waterfront locations. The GMA seeks to ensure that urban and rural development across the landscape is done coherently, with appropriate infrastructure while protecting ecological functions. Both laws promote balanced, rational, and deliberate land use planning; however, each law is differently structured and has a distinct emphasis. Under the GMA, the Critical Areas Ordinance has the primary overlap with SMP regulations (See 4.2.8 & 6.1.4).

4.2.1 Shoreline Use Element

Purpose and Intent: This element deals with the general distribution, location, and extent of the uses associated with aquatic areas, waterfront lands, and adjacent upland areas for housing, commerce, transportation, recreation, public buildings, utilities, education and natural resources, and other categories of land and water uses and activities not specified in this SMP.

GOAL

Preserve or develop shorelines in a manner that assures a balance of shoreline uses with minimal adverse effect on the quality of life, water and the environment. Recognize that land use and water management activities on adjacent uplands affect the quality of the City's shorelines.

POLICIES

1. Encourage intensive uses that are unique to or dependent upon a shoreline location to locate in already developed areas.

2. Protect the natural topography of undeveloped portions of the shoreline to prevent damage to the natural environment and public health.

3. Encourage nonresidential uses or activities that are not water-oriented uses to locate away from the shoreline.

4. Minimize sprawl and inefficient use of shoreline areas by locating new commercial development where other commercial development already exists, limiting non-water oriented uses to locations away from the shoreline.

5. Design shoreline structures that are structurally sustainable and adaptable to natural changes to shorelands over time and visually compatible with the shoreline character.

6. Locate shoreline structures in a manner that will minimize view obstruction.

7. Consider the goals, objectives and policies in this SMP in land use and water management actions on adjacent uplands and associated wetlands or streams where such use or development may have an adverse effect on designated shorelines.

8. Ensure that proposed shoreline uses do not infringe upon the rights of others or upon the rights of private ownership.

GOAL

Ensure that land uses and development within the shoreline will be compatible with adjacent land use and protect existing shoreline habitats and ecological systems.

POLICIES

1. Protect unique and fragile areas of the shoreline from upland or adjacent uses or activities that may have an adverse effect on the shoreline environment.

2. Prohibit any proposed shoreline or adjacent land use development that would have a significant adverse impact on the water quality of Sequim Bay or Johnson Creek.

3. Formal plats and short subdivisions located in or adjacent to the shoreline should comply with SMP goals and policies.

4. All development should be properly managed to avoid impacts to ecological functions and prevent cumulative impacts associated with shoreline armoring, over-water structures, storm water runoff, introduction of pollutants, and vegetation clearing.

5. Creation of new lots through land division should be designed, configured and developed to ensure that no net loss of ecological functions and processes occurs from the plat or subdivision, even when all lots are fully built-out.

6. Whenever possible, non-regulatory methods to protect, enhance, and restore shoreline ecological functions should be encouraged.

7. Permit applications for single-family residences and accessory structures in the shoreline jurisdiction should be reviewed for compliance with the SMP, even though a Substantial Development Permit may not be required.

8. Aquaculture activities should be designed, located, and operated in a manner that supports long-term beneficial use of the shoreline and protects and maintains shoreline ecological functions and processes.

9. Aquaculture should not be permitted where it would significantly interfere with navigation or other water-dependent uses.

10. Aquaculture that involves significant risk of cumulative adverse effects on water quality, sediment quality, benthic and pelagic organisms, and/or wild fish populations through potential contribution of antibiotic-resistant bacteria, or escapement of non-native species, or other adverse effects on Endangered Species Act-listed species, should not be permitted.

11. Experimental aquaculture projects in water bodies should be limited in scale and should be approved for a limited period of time, as specified by the regulatory agency. Experimental aquaculture means an aquaculture activity that uses methods or technologies that are unprecedented or unproven in Washington.

12. Commercial aquaculture operations that propagate non-native fish and shellfish species should be discouraged unless these operations are conducted in upland systems, fully

self-contained aquatic systems, or have been shown to present no risk of escapement, disease transmission, or waste-related environmental impacts.

13. Development accessory to aquaculture planting and harvesting should be located landward of shoreline buffers, unless it requires a location in, over, or adjacent to the water.

14. Cooperative arrangements between aquaculture growers and public recreation agencies are encouraged so that public use of public shorelines does not conflict with aquaculture operations.

15. When private or public aquaculture projects are proposed, the rights of the Tribes to aquatic resources within their usual and accustomed areas should be addressed through the permit review process. Direct coordination between the applicant/proponent and the Tribes is encouraged.

16. The enhancement or rehabilitation of water bodies and their adjacent habitat by public or private entities for purposes of increasing yields or production of fisheries resources should be encouraged.

GOAL

Reduce flood hazards or damage from uses, development, and shoreline modifications that may increase those hazards.

POLICIES

1. Flood hazard reduction measures should be integrated into comprehensive strategies that recognize the natural hydrogeological and biological processes of water bodies.

2. Where feasible, give preference to nonstructural flood hazard reduction measures over structural measures.

3. Flood hazard reduction provisions that apply within shoreline jurisdiction should be based upon applicable watershed management plans, comprehensive flood hazard management plans, and other comprehensive planning efforts that are consistent with this SMP.

4. Assure that flood hazard reduction measures do not result in a net loss of ecological functions associated with rivers and streams.

5. No new construction should be allowed within the limits of the one hundred-year (100-year) flood plain that significantly reduces the flood or downstream storage capacity of the streambed or increases flood hazards to upstream properties or otherwise endangers public safety. Pursuant to the provisions of this SMP and other relevant codes, exceptions may only be allowed where reasonable flood and ecological protection is provided.

4.2.2 Public Access Element

Purpose and Intent: This is an element making provisions for public access to shorelines of the state, while protecting private property rights and public safety, and identifying the need and opportunities for providing public access to shorelines of the state.

GOAL

Increase public access to shoreline areas. Public access includes the ability of the general public to reach, touch, and enjoy the water's edge. It also includes the ability to travel on the waters of the state and view the water and shoreline from adjacent locations.

POLICIES

1. Public access improvements should not result in a net loss of shoreline ecological functions.

2. Priority for access acquisition should consider future recreational accessibility, resource accessibility and desirability, availability, and relative proximity of population.

3. Shoreline development by public entities, including but not limited to local governments, state agencies, and public utility districts should include improvements or amenities to enhance or provide public access as part of each development project.

4. New subdivisions and planned unit developments should include public access opportunities as part of each project.

5. Where appropriate, utility and transportation rights of-way on the shoreline should be made available for public access and use.

6. The Port of Port Angeles should include public access planning in their Port comprehensive master planning and/or needs analysis documents.

7. Where appropriate, shoreline recreational facilities and other public access points should be connected by trails, bicycle pathways and other access links.

8. Public pedestrian easements and access points should be of a nature and scale that will be compatible with the abutting and adjacent land use as well as natural features, including aquatic life.

9. Appropriate signs should clearly indicate where public access points are located and/or how to reach publicly owned shorelines.

10. Within the shoreline environment, pedestrian and non-motorized access should be encouraged to limit adverse impacts to shoreline resources from parking or vehicular uses too close to the water.

11. Access development should respect and protect ecological and aesthetic values in the shorelines of the state.

12. Major public access improvements should be designed to meet Americans with Disabilities Act (ADA) standards, while maintaining existing shoreline habitats and ecological systems.

13. Public access should be designed to provide for public safety and to minimize potential impacts to private property and individual privacy.

None of the above policies should be construed to take precedence over the City's obligation to provide for public safety or to protect the City from unacceptable municipal liability.

GOAL
Protect the public's opportunity to enjoy the physical and aesthetic qualities of shorelines of the state, including views of the water.

POLICIES
1. Viewpoints, lookouts and vistas of shorelines and wetlands should be publicly accessible, where possible, and when private properties are adequately protected.

2. New developments should minimize visual and physical obstruction of the water from shoreline roads and upland owners.

3. Provisions such as maximum height limits, setbacks, and maintenance of view corridors should be adopted to minimize the impacts to existing views from public property or substantial numbers of residences.

4.2.3 Recreation Element

Purpose and Intent: This is an element for the preservation and expansion of water-oriented recreational opportunities through programs of acquisition/developments, and various means of less-than-fee acquisition. Water-oriented recreational uses are permitted in the shoreline area when consistent with the goals, policies and regulations of this SMP.

GOAL
Provide water dependent and shoreline-oriented recreation opportunities for City residents and maximize public recreational opportunities of the shoreline area.

POLICIES
1. Provide recreational opportunities on the publicly owned shoreline that attract people of all ages, health, family status, and financial ability.

2. Encourage the cooperation of all appropriate levels of government in the planning, designing, and financing of future recreational facilities.

3. Effective education through interpretive signage should be provided at public recreation facilities to raise the quality of visitor experiences and to provide an understanding of the resource.

4. Shoreline recreational use and development should enhance environmental qualities with minimal adverse effect on the natural resources.

5. Shoreline recreational areas should be sited and designed to facilitate adequate monitoring of activity and maintenance.

6. Bicycle path planning should be taken into consideration as opportunities for shoreline views.

7. Whenever possible, natural materials should be used in developing shoreline recreational areas.

8. The design of recreational facilities should emphasize structural forms that harmonize with the topography, reinforce use areas, and minimize damage to natural resources and shoreline ecological functions.

4.2.4 Circulation Element

Purpose and Intent: This is an element for assessing the location and extent of existing and proposed major thoroughfares, transportation routes, terminals and other public facilities, and correlating those facilities with the shoreline use elements.

GOAL

Provide safe, reasonable, and adequate circulation systems where routes will have minimal effect on fragile or unique shorelines features and existing ecological systems, while contributing to the functional and visual enhancement of the shoreline.

POLICIES

1. Design appropriate linkages between major routes and shoreline public access amenities. Provide for alternate modes of travel with some freedom of choice and encourage multiple-use corridors where compatible.

2. Design and develop public infrastructure with careful consideration of SMP policies for resource protection and public access enhancement.

3. Motorized vehicles should be prohibited on all beaches of the shoreline.

4. Non-water related parking facilities should be prohibited from locating in the shoreline area.

5. Encourage development of trails and other forms of non-motorized access to the shoreline.

4.2.5 Economic Development Element

Purpose and Intent: This is an element for the location and design of water-oriented commercial facilities, including but not limited to ports, marinas, and other water-oriented developments on shoreline locations.

GOAL

Provide long-range benefit to human economic pursuits while assuring compatibility with the environmental and physical conditions of the designated shoreline.

POLICIES

1. Priority should be given to water-oriented developments.

2. Priority shall be given to those water-oriented commercial developments that would provide an opportunity for substantial numbers of people to enjoy the shorelines.

3. Over-the-water, non-water dependent structures on the shorelines should be prohibited.

4. Shoreline developments should be designed to accommodate or enhance scenic views and amenities of the Sequim waterfront.

5. In evaluating proposals, acknowledge the critical importance of a balanced and diversified local economy for Sequim.

6. Encourage new economic development to locate in areas already developed with similar uses that are consistent with this master program.

7. Before new commercial nonwater-oriented development is permitted within shoreline jurisdiction, it is the proponent's responsibility to demonstrate that upland areas are not feasible for the intended economic activity.

4.2.6 Archeological and Historic Resources Element

Purpose and Intent: This is an element for the protection and restoration of buildings, sites, and areas having historic, cultural, educational or scientific values, including unknown archaeological resources that may be located in the shoreline area.

GOAL

Preserve, protect, and rehabilitate all buildings, sites, and areas of the shoreline that have historical, archeological, or cultural value as identified by the appropriate authorities, including affected Indian tribes, and the Dept. of Archaeology and Historic Preservation (DAHP).

POLICIES

1. All buildings, structures, districts, sites, and objects and shoreline sites within shoreline jurisdiction having archeological, historic, or cultural significance, as determined by the City, the State Department of Archeology and Historic Preservation, and any affected Indian Tribe, should be preserved.

2. The City of Sequim will work with tribal, state, federal, and local governments and special districts as appropriate to maintain an inventory of all known significant local historic, cultural, and archaeological sites while adhering to applicable state and federal laws protecting such information from public disclosure. As appropriate, such sites should be preserved, rehabilitated, or restored for study, education, or public enjoyment to the maximum possible extent.

3. Work on development and construction projects within shoreline jurisdiction that encounter new and significant archaeological, historical, scientific, or cultural discoveries should immediately stop and be suspended until such discoveries can be fully evaluated.

4. Shoreline use regulations should encourage the restoration, development and interpretation of significant historical, cultural, educational or scientific properties or shoreline areas.

5. Encourage and support educational projects and programs that foster a greater appreciation of the importance of shoreline management, maritime history and activities, and environmental conservation and cultural heritage preservation.

6. Within the shoreline jurisdiction, permits issued in documented archaeological areas should obtain a site evaluation or inspection by a professional archaeologist, in coordination with affected Indian tribes.

7. Owners of property containing previously identified historic, cultural, or archaeological sites are encouraged to make development plans known well in advance of application, so that appropriate agencies such as, the affected Tribe(s), Washington State Department of Archaeology and Historic Preservation, and others may have ample time to assess the site and make arrangements to preserve historical, cultural, and archaeological values as applicable.

8. Any proposed site development or associated site demolition work should be planned and carried out so as to avoid impacts to the protected resource. Impacts to neighboring properties and other shore uses should be limited to temporary or reasonable levels.

9. If development or demolition is proposed adjacent to an identified historic, cultural, or archaeological site, then the proposed development should be designed and operated so as to be compatible with continued protection of the historic, cultural, or archaeological site.

4.2.7 Conservation Element

Purpose and Intent: This is an element for the preservation of the natural shoreline resources, considering such characteristics as scenic vistas, parkways, water quality, vegetation, beaches and other valuable natural or aesthetic features.

GOAL

Protect, preserve, and/or enhance shoreline resources (i.e., wetlands and other fish /wildlife habitats) for their ecological functions and values, and aesthetic and scenic qualities.

POLICIES

1. Maintain or enhance shoreline vegetation to protect water quality, fish and wildlife habitat, and other ecological functions and processes.

2. Implement policies that can help reverse impacts caused by existing or past development activities that adversely affect ecological or shoreline functions, such as untreated stormwater discharges.

3. Maintain natural dynamic processes of shoreline formation and sustainability through effective stewardship, management, and use of shorelines.

4. Preserve natural vegetation by controlling plant clearing and earth grading within the shoreline jurisdiction for new and redevelopment activities consistent with safe construction practices and in a manner that ensures shoreline ecological functions, ecosystems, and natural soil systems are not compromised.

5. Ensure mutual consistency in regulations addressing water quality and stormwater quality standards within shoreline jurisdiction. Those regulations that are the most protective should apply.

6. Limit the modification of intact natural shoreline areas by regulating or prohibiting the development of structures in areas with unstable soil or slope conditions.

4.2.8 Critical Areas Element

Purpose and Intent: This element provides for protection of areas designated by the City as environmentally critical areas physically located in the shoreline jurisdiction. Critical areas are those lands especially vulnerable to development because of fragile biophysical characteristics and/or important resource values. Critical areas within shoreline jurisdiction are governed by the Shoreline Management Act (RCW 90.58) through this Program. Critical areas within the shoreline jurisdiction are regulated by the Critical Areas Regulations for the Shoreline Management Area, as contained in Section 6.1.4. Although these regulations are similar to the Critical Areas Regulations codified in Chapter 18.80 of the Sequim Municipal Code, pursuant to the requirements of the Shoreline Management Act, these regulations are distinct. Please note that certain key critical area provisions, including the Reasonable Use Exception, do not apply in the shoreline jurisdiction. In the event of regulatory conflict, those that are the most protective of shoreline ecological functions will apply

GOAL

Manage designated critical areas (i.e., wetlands, bluffs, fish and wildlife conservation areas, flood hazard areas, and streams) that are located within the City's shoreline jurisdiction to protect existing ecological functions and ecosystem-wide processes and, where possible, rehabilitate degraded ecological functions and ecosystem-wide processes to ensure no net loss of ecological functions.

POLICIES

1. Regulate development in a way that protects the public from damages due to flooding, landslides, subsidence, and erosion and prevents adverse impacts to ground and surface water quality, wetlands, tidelands, streams, stream corridors, and fish and wildlife habitat.

2. Integrate the full spectrum of planning and regulatory measures, including the comprehensive plan, inter-local watershed plans, and City of Sequim critical area regulations, and federal, state, and tribal programs.

3. Encourage activities in critical areas that restore degraded ecological functions and ecosystem-wide processes.

4. In addressing issues related to critical areas, use scientific and technical information as described in WAC 173-26-201 (2)(a), pursuant to RCW 90.58.100.

Chapter 5 Shoreline Environmental Designations

Shoreline environmental designations identify the specific management and development policies and regulations that apply to a particular geographical portion of the shoreline. Each environmental designation reflects the type of development that has or should take place in a given area, based upon existing development patterns, physical and biological characteristics of the shoreline environment, potential for restoration, and community aspirations.

The City of Sequim has established six environmental designations: “urban”, “urban conservancy”, “shoreline residential”, “research district”, “natural”, and “aquatic”, as identified in Figure 5-1. Each designation sets out the classification criteria, management policies, and regulations associated with that designation. Allowed uses in each designation should be consistent with the City’s Comprehensive Plan. These environmental designations apply to areas of the shoreline that have similar ecological conditions and similar land uses or potential development patterns. These designations will be identified on the City’s shoreline designation map.

From time to time as new or improved information becomes available, the City may modify the shoreline designation map consistent with state guidelines to more accurately represent, clarify, or interpret the true limits of the shorelines defined in this chapter. A substantive change to the map triggers a master program amendment process.

Areas found to be within shoreline jurisdiction that are not mapped and/or designated are automatically assigned the “Urban Conservancy” designation until re-designated through a master program amendment process.

Figure 5-1 - Environmental Designation Map

Table 5-1 Environmental Designations

Area Description	Recommended Environmental Designation	Rationale
1. Base of South Spit, west inside Washington Harbor to Urban Growth Area boundary	Urban Conservancy	This area is adjacent to a large estuarine lagoon inhabited by a variety of wildlife. An existing road through the area and associated hard armoring was recognized as a significant determinant for designation assignment.
2. That portion of the Urban Growth Area zoned by the City as "Research and Development Park" containing Landslide Hazards	Natural	This area is characterized by unstable, "feeder" bluffs and is largely undisturbed.
3. Southern and western portion of Urban Growth Area zoned by the City as "Research and Development Park" to base of South Spit, excluding area containing Landslide Hazards	Research District	This area is already characterized by a water-dependent research facility, and the property owner's plan to continue and expand that use. There is currently ~600' of hard armoring and a large parking area/impervious surfaces in the area. In addition, this area is one identified as an area of future growth. This area was also identified as having moderately high ecological conditions.
4. Northern end of John Wayne Marina to northern City limits just south of Forrest Rd., which includes the Urban Growth Area	Shoreline Residential	This area is already characterized by residential uses.
5. ~200 feet south from centerline of Whitefeather Way to northern end of John Wayne Marina	Urban	This area is currently zoned commercial and public facilities. The current major land use in this area is John Wayne Marina. Future commercial development is also planned in this region.
6. ~200 feet from southern boundary of Pitship Marsh to ~200 feet south from centerline of Whitefeather Way	Urban Conservancy	This area is comprised of an estuarine marsh, which provides habitat for a variety of wildlife and is adjacent to forage fish spawning grounds. An existing road through the area and associated hard armoring was recognized as a significant determinant for designation assignment.
7. From the Urban Growth Area southern boundary on W. Sequim Bay Rd., south of Pitship Marsh to ~200' from southern boundary of Pitship Marsh	Shoreline Residential	This area is already characterized by residential uses.
All marine waters and submerged lands waterward of ordinary high water mark	Aquatic	Aquatic designations are appropriate for waters and submerged lands waterward of the ordinary high water mark. Jurisdiction extends to mid-channel of Sequim Bay.

Environmental Designations

Urban

Purpose
Urban designations provide for high intensity water-oriented commercial, transportation, and industrial uses while protecting existing ecological functions and restoring previously degraded ecological functions.

Management Policies
1. Urban uses are prioritized as follows:
    a. first priority is for water-dependent uses.
    b. second priority is for water-related and water-enjoyment uses.
    c. non water-oriented are allowed under certain conditions:
        i. water-oriented needs for existing and planned development have been met, and
        ii. non water-oriented uses are part of mixed-use development and limited to situations in which the uses do not conflict with or limit water-oriented opportunities.

2. Full utilization of existing urban areas should be achieved before further expansion of intensive development is allowed. Expansion in existing urban areas should occur within existing building footprints and/or impervious surfaces to the extent feasible.

3. Policies and regulations shall assure no net loss of shoreline ecological functions as a result of new development. Where applicable, new development shall include environmental cleanup and restoration of the shoreline to comply in accordance with any relevant state and federal law.

4. Aesthetic objectives should be implemented by means such as sign control regulations, appropriate development siting, screening and architectural standards, and maintenance of natural vegetative buffers.

5. Commercial facilities should be designed to allow and maximize and enhance pedestrian waterfront activities and access, with an emphasis in developing visual and physical access, consistent with public safety.

6. Development standards and regulations shall be created and interpreted to provide for no net loss of ecological functions.

Designation Criteria
Urban environmental designations are applied to shoreline areas that currently support high-intensity uses related to commerce, transportation or navigation, or are suitable and planned for high-intensity water-oriented uses. Land use in this environment is characterized as an area incorporating commercial development with an underlying zoning for commercial use. This environment contains commercial urban uses that are

already in place with roads and structures. The urban environmental includes the John Wayne Marina and the Wayne Enterprises RV Park.

The City of Sequim 1996 SMP (adopted by the City) designated this area “Urban”. The proposed new SMP continues this designation. This designation was requested to be retained by the two largest landowners within this designation – the Port of Port Angeles and Wayne Enterprises.

Boundary description

The limits of shoreline jurisdiction, extending approximately 200 feet south of the centerline of Whitefeather Way, parcel number 033027430100, to the north end of property owned by the Port of Port Angeles, parcel number 033027420200, as shown in Figures 5-3, 5-4 and 5-11. This area includes John Wayne Marina and those portions of the Sequim Bay Resort RV Park within shoreline jurisdiction.

Figure 5-2 Urban Environment

Figure 5-3 Urban Environment

Figure 5-4 Urban Environment

Research District

Purpose

Research District designation provides for research and development uses associated with environment, biotechnology, energy efficiency, marine and coastal security, and public and private educational partnerships. Protection or enhancement of existing ecological resources is a recognized objective of this designation.

Management Policies

1. Research District uses are prioritized as follows:

    a. first priority is for water-dependent uses.

    b. second priority is for water-related uses.

    c. non-water related uses are allowed if all of the following are met:

        i. the uses relate to or support those uses already established within the District;

        ii. the uses are available only to serve as incidental and accessory uses;

        iii. the uses are not of a general commercial nature, i.e., not open to the general public;

iv. the uses cannot be reasonably located in upland areas.

2. Development, including utility corridor placement, within the Research District environmental designation should be subject to increased environmental review.

3. Uses located within the Research District should be less intensive than those allowed within the upland areas, but may include density bonuses or other similar incentives for electing to develop upland areas.

4. Development standards and regulations shall be created and interpreted to provide for no net loss of ecological functions.

Designation Criteria

Figure 5-5 Research District Environment

Research District environmental designation is applied to shoreline areas where research and development uses related to environment, biotechnology, energy efficiency, marine and coastal security, or public and private educational partnerships currently exist or are suitable and planned to exist. Current land use in this environment includes the Pacific Northwest National Laboratories (PNNL)/Battelle Marine Research Facilities located in the northern portion of this designated area. South of the existing PNNL/Battelle facilities, the Research District only is designated for the last 40 feet of the 200 feet from the ordinary high water mark (OHWM). This area is designated for a "Research and Development Park under the City's Comprehensive Plan. The current Clallam County SMP designation for this area is "Rural". Clallam County's proposed designation as part of their SMP update for this area is the "Shoreline-Residential Conservancy" designation, which also could allow marine research facilities.

The area's largest landowner requested a designation that would recognize the PNNL/Battelle research facilities on the site and the potential for the construction of additional research facilities. This area was not addressed in Sequim's 1996 SMP update.

Boundary description

The limits of shoreline jurisdiction, extending from the southern edge of parcel number 0330275000700000 to northern edge of the parking lot in parcel number 033022230150. This area excludes land identified as "Natural" in Figures 5-1, 5-6, 5-7, 5-8 and 5-12. This area includes property owned by Pacific Northwest National

Laboratories/Battelle (PNNL/Battelle). Approximate boundaries of this environment are shown in the aforementioned figures.

Figure 5-6 Research District & Natural Environments

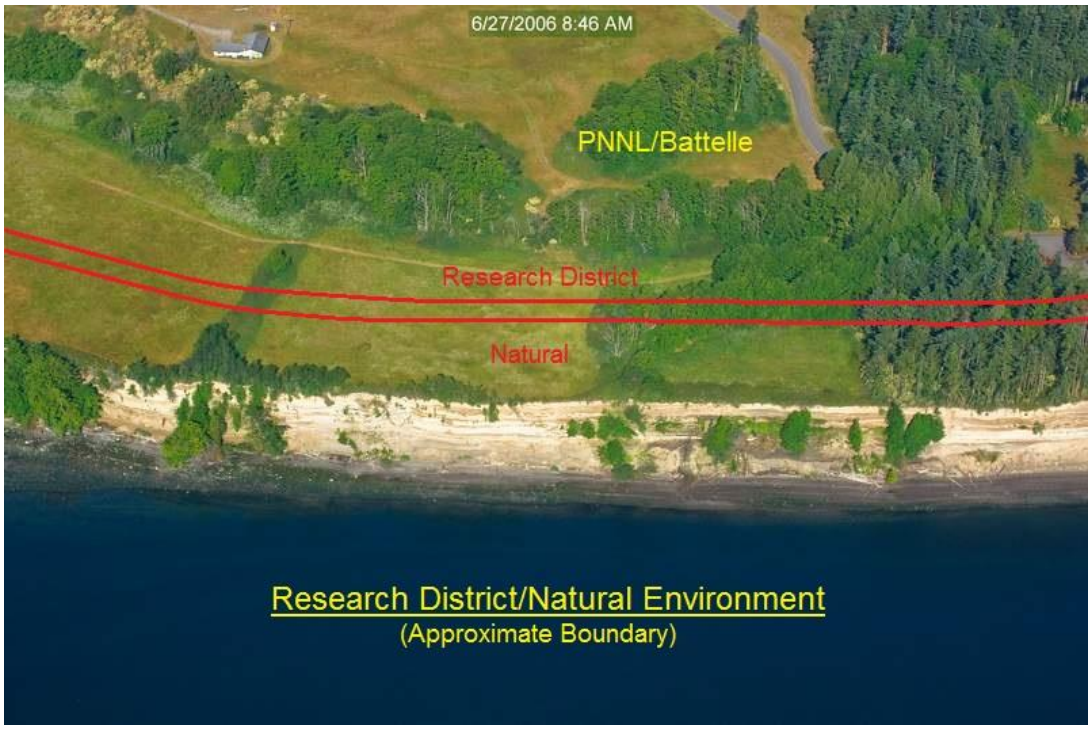


Figure 5-7 Research District & Natural Environments

Figure 5-8 Research District & Natural Environments

Urban Conservancy

Purpose

Urban conservancy designation protects and restores ecological functions of open space, flood plain and other sensitive lands where they exist in urban and developed settings, while allowing a limited variety of compatible uses.

Management Policies

1. Uses that preserve the natural character of the area or promote preservation of open space, flood plain or sensitive lands either directly or over the long term should be the primary allowed uses.

2. Uses that result in restoration of ecological functions should be allowed if the use is otherwise compatible with the purpose of the environment and the setting.

3. Standards should be established for shoreline stabilization measures, vegetation conservation, water quality, and shoreline modifications within the "urban conservancy" designation. These standards shall ensure that new development does not result in a net loss of shoreline ecological functions or further degrade other shoreline values.

4. Public access and public recreation objectives should be implemented whenever feasible and significant ecological impacts can be mitigated.

5. Water-dependent uses should be given the highest priority. Water-oriented uses should be given priority over nonwater-oriented uses.

Designation Criteria

Urban conservancy designation is appropriate for development within urban growth areas or municipalities that is compatible with maintaining or restoring ecological functions and that are generally unsuitable for water-dependent uses and that meet any of the following:

- The areas are suitable for water-related or water-enjoyment uses;
- The areas are open space, flood plain or other sensitive areas that should not be more intensively developed;
- The areas have potential for ecological restoration;
- The areas retain important ecological functions, even though partially developed; or
- The areas have the potential for development that is compatible with ecological restoration.

Figure 5-9 Urban Conservancy Environment – Washington Harbor Rd.

This environment includes areas that have natural characteristics, but includes manmade improvements including roads and shoreline bulkheads. With these manmade improvements, which will not likely be removed in the long-term (such as roads), these areas received the "Urban Conservancy" designation, which provides protections nearly equal to the natural environment designation, but with greater protection than the urban environment designation. In the case of Pitship Marsh and the wetland by the South Spit, additional protections are provided by Critical Areas regulations referenced in Chapter 6.1.4 and attached as Appendix A.

Figure 5-10 Urban Conservancy Environment – W. Sequim Bay Rd.

Sequim's 1996 SMP had the southern area designated as "Conservancy". The northern area was designated with the County "rural" designation. Clallam County's proposed revised SMP designates the southern area for the "Shoreline-Residential Conservancy" designation and the northern area for the "Natural" designation.

Boundary Description

1. The limits of shoreline jurisdiction, extending from the southern edge of parcel number 033027430100, extending to approximately 200 feet south of the centerline of Whitefeather Way. This area includes the saltwater estuarine known as "Pitship Marsh" as shown in Figures 5-1, and 5-11.

Figure 5-11 Urban Conservancy, Urban, & Shoreline Residential Environments

2. The limits of shoreline jurisdiction, extending from the northern edge of PNNL/Battelle's parking lot on parcel number 033022230150 to the western edge of the City's Urban Growth Area, parcel number 033022230150. This area includes all of South Spit and the inner portion of Washington Harbor within the City's Urban Growth Area, as shown in Figure 5-1 and Figure 5-12.

Figure 5-12 Urban Conservancy & Research District Environments

Shoreline Residential

Purpose

Shoreline residential accommodates residential development and associated structures that are consistent with the Shoreline Management Act (RCW 90.58) and that provide appropriate public access and recreational uses.

Management Policies

1. Standards for density or minimum frontage width, setbacks, lot coverage limitations, buffers, shoreline stabilization, vegetation conservation, critical area protection, and water quality shall be set to assure no net loss of shoreline ecological functions, taking into account the environmental limitations and sensitivity of the shoreline area, the level of infrastructure and services available, and other comprehensive planning considerations.

2. Multifamily and multi-lot residential and recreational developments should provide public access and joint use for community recreational facilities.

3. Access, utilities, and public services should be available and adequate to serve existing needs and/or planned future development.

4. Commercial development should be limited to home occupation/business and other similar limited commercial development, uses, and activities.

Designation Criteria

The Shoreline Residential designation is appropriate for those areas predominantly comprised of current residential development or planned and platted for residential development. Eighty-five (85%) of the lots in this area have been developed. Only 15% of the lots are vacant. These lots carry an underlying single-family residential zoning designation with a Comprehensive Plan designation for residential use.

The 1996 Sequim SMP designated these areas for the "Suburban" environment. The current Clallam County designation is "rural". Clallam County's proposed designation for parcels in the County is the "Shoreline-Residential Conservancy" designation.

Boundary Description

1. The limits of shoreline jurisdiction for parcel numbers 033027430200, 033027430150, and 033034119000, as shown in Figures 5-1, 5-11.

2. The limits of shoreline jurisdiction, extending from the southern edge of parcel number 0330274201150000 to the northern edge of parcel number 0330275000670000, as shown in Figures 5-1, 5-8, 5-14, 5-15, and 5-16.

Figure 5-13 Shoreline Residential Environments

Figure 5-14 Shoreline Residential & Urban Environments

Figure 5-15 Shoreline Residential Environment

Figure 5-16 Shoreline Residential Environment

Natural

Purpose

The purpose of the "natural" environment is to protect those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions intolerant of human use. These systems require that only very low intensity uses be allowed in order to maintain the ecological functions and ecosystem-wide processes. Consistent with the policies of the designation, local government should include planning for restoration of degraded shorelines within this environment.

Management Policies

1. Any use that would substantially degrade the ecological functions or natural character of the shoreline area should not be allowed.

2. The following new uses should not be allowed in the "natural" environment:

    - Commercial uses.
    - Industrial uses.
    - Nonwater-oriented recreation.
    - Roads, utility corridors, and parking areas that can be located outside of "natural" designated shorelines.

3. Agricultural uses of a very low intensity nature may be consistent with the natural environment when such use is subject to appropriate limitations or conditions to assure that the use does not expand or alter practices in a manner inconsistent with the purpose of the designation.

4. Scientific, historical, cultural, educational research uses, and low-intensity water-oriented recreational access uses may be allowed provided that no significant ecological impact on the area will result.

5. New development or significant vegetation removal that would reduce the capability of vegetation to perform normal ecological functions should not be allowed.

Designation Criteria

A "natural" environment designation should be assigned to shoreline areas if any of the following characteristics apply:

1. The shoreline is ecologically intact and therefore currently performing an important, irreplaceable function or ecosystem-wide process that would be damaged by human activity;

2. The shoreline is considered to represent ecosystems and geologic types that are of particular scientific and educational interest; or

3. The shoreline is unable to support new development or uses without significant adverse impacts to ecological functions or risk to human safety.

Such shoreline areas include largely undisturbed portions of shoreline areas such as wetlands, estuaries, unstable bluffs, coastal dunes, spits, and ecologically intact shoreline habitats. Shorelines inside or outside urban growth areas may be designated as "natural."

The current Clallam County environment designation for this area is “rural”. The proposed Clallam County designation for this area is the “Shoreline-Residential Conservancy” designation.

Boundary Description

Extending approximately 1,800 feet north to south, approximately 160 feet wide. This area includes the erosion hazard areas as identified on Clallam County Maps (See Appendix B – City of Sequim Inventory and Characterization Report) and in Figures 5-1, 5-6, 5-7, and 5-8.

Aquatic

Purpose
Aquatic designations protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high-water mark.

Management Policies
1. New overwater structures should be allowed only for water-dependent uses, public access, or ecological restoration and limited in size to the minimum necessary to support the structure’s intended use.

2. Shared or multi-use overwater structures should be encouraged.

3. Uses and structures within the aquatic designation should be designed and located to minimize interference with surface navigation, allow for safe and unobstructed passage for fish and wildlife, and consider impacts to public views.

4. Shoreline uses and modifications should be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions. Existing limitations are based on State water quality and heath standards and are reflected in the Shoreline Uses/Activities Matrix in Chapter 6.

5. Uses that adversely affect critical saltwater habitats should not be allowed unless necessary to achieve the goals outlined in RCW 90.58.020 and the impacts are mitigated as described in WAC 173-26-201(2)(e) to assure no net loss of ecological functions.

Designation Criteria
Aquatic designations are appropriate for lands waterward of the ordinary high-water mark.

Boundary Description
All intertidal or subtidal lands within the City of Sequim city limits and Urban Growth Areas, waterward of the ordinary high-water mark, except those areas inside the John Wayne Marina breakwater, as shown in Figure 5-2.

CHAPTER 6 - DEVELOPMENT STANDARDS AND USE REGULATIONS

All proposed uses and development occurring within shoreline jurisdiction must conform to Chapter 90.58 of the Revised Code of Washington, the Shoreline Management Act, and this master program regardless of whether a permit is required.

Shoreline uses and activities are specific common uses and types of development that typically locate in the shoreline area. Use regulations are implementation tools intended to carry out the policies of this SMP and the SMA. They represent the major criteria to be used in evaluating proposed developments and alterations to the shoreline environment with their ultimate influence, to a large extent, dependent on how well they are enforced. The following general development standards and use regulations represent the criteria upon which evaluations of and approvals for proposed shoreline developments shall be based. Use regulations are to be used in conjunction with the SMP element policies and the applicable environmental designation.

Shoreline uses and activities not specifically identified, and for which policies and specific regulations have not been developed, shall be evaluated on a case-by-case basis and are required to: (1) meet the intent of the goals and objectives of this SMP; (2) comply with the SMA of 1971 as amended; (3) be consistent with management policies and character of the shoreline environment in which they propose to locate; and (4) secure a Shoreline Conditional Use Permit.

Any shoreline planning areas within the City that have not been mapped and designated within Figure 5-1 shall be designated Urban Conservancy and will be managed and regulated under the identified goals, policies, and regulations of the Urban Conservancy designation.

The following table indicates the allowable uses and shoreline modifications; where there is a conflict between the chart and the written provisions in Chapters 4, 5, or 6 of this master program, the written provisions shall apply. The tables are coded according to the following legend:

P = May be permitted
C = May be permitted as a conditional use only
X = Prohibited; the use is not eligible for a variance or conditional use permit
* = Shoreline use/modification allowed if permitted in the adjacent upland shoreline environment

Shoreline uses are allowed only if the underlying zoning allows for that use.

Table 6.1 - Shoreline Uses/Activities Matrix

Use/Activity	Urban	Urban Conservancy	Research District	Shoreline Residential	Natural	Aquatic
Agriculture	X	X	X	X	X	X
Boating facilities and marinas						
Public	C	X	X	X	X	*
Private	X	X	X	X	X	X
Commercial						
Water-oriented	P	X	X	X	X	*
Non-water oriented	C	X	X	X	X	X
Aquaculture						
Commercial	P	X	~~X~~	X	X	P
Net pens/Finfish	C	X	X	X	X	C
Research	C	X	C	X	X	C
Land Based	C	X	C	X	X	X
Geoducks	C		C			C
Forest Management	X	X	X	X	X	X
Mining	X	X	X	X	X	X
Parking						
Accessory	P	P	P	P	C	X
Primary	X	X	X	X	X	X
Recreation						
Water-oriented	P	P	P	P	P	P
Non-water oriented	C	X	X	X	X	*
Residential						
Single family	P	X	X	P	X	X
Multi-family	P	X	X	C	X	X
Research and Development Facilities	X	X	P	X	C	C
Signs	P/C	C	P/C	X	X	X
Solid Waste Disposal Facilities	X	X	X	X	X	X
Transportation	P	P	P	P	X	X
Utilities	P	P	P	P	C	C
MODIFICATIONS						
Boat launches/ramps	P	X	C	X	X	*
Dredging	C	C	C	C	X	C
Fill	C	C	C	C	C	*
Hazardous Waste Clean-Up	P	P	P	P	P	P
Piers and docks	P	X	P	P	X	*
Shoreline stabilization						
Bulkheads	P	P	P	P	X	X
Beach/ecosystem restoration	P	P	P	P	P	P
Bioengineering	P	P	P	P	C	C
Revetments/Riprap	C	C	C	C	X	X
Breakwaters	C	X	X	X	X	*
Jetties/Groins	X	X	X	X	X	X

6.1 General Shoreline Development and Performance Standards

The following general development and performance standards apply to all uses and activities in all shoreline environments.

6.1.1 Building height, marine buffers, and building setbacks.

1. In all shoreline environments development must comply with applicable buffers and setbacks established by this chapter of the SMP;

   Pursuant to Section 6.1.4 of this Chapter, buffers for designated critical areas physically located in shoreline jurisdiction shall apply to uses and development located in shoreline jurisdiction. The minimum buffers from the marine ordinary high water mark (OHWM) and building setbacks from the buffers are listed in Table 6.2 below.

Table 6.2 – Setbacks

	Urban Environment	**Urban Conservancy Environment**	**Research District Environment**	**Shoreline Residential Environment**	**Natural Environment**
Buffer from Marine OHWM	75 ft.	75 ft.	75 ft.	75 ft.	100 ft.
Building Setback from Buffer	10 ft.	10 ft.	10 ft.	10 ft.	10 ft.

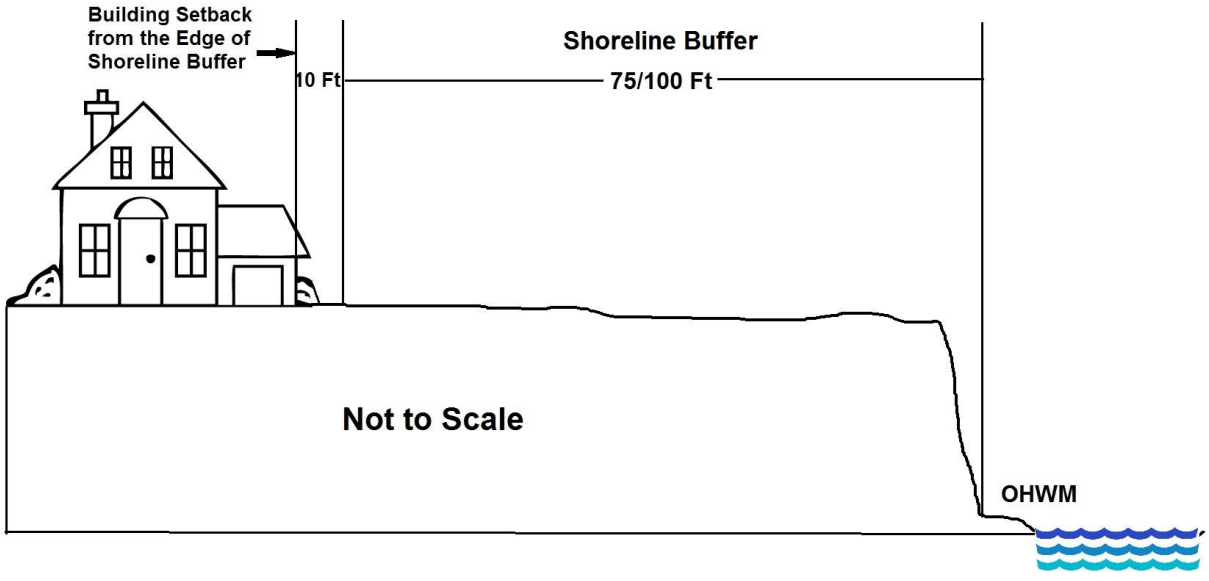


Figure 6-1 Building Setback from a Shoreline Buffer

2. A minimum building setback of 10 feet from the landward edge of the buffer must be maintained in all shoreline environments (See Figure 6-1).

3. The maximum building height in all shoreline environments for all uses shall not exceed the height limitation of the underlying zone (See Sequim Municipal Code (SMC) 18.44). Where the underlying zoning allows heights greater than 35 feet, increased heights shall be allowed only where the increase serves the overriding considerations of the public interest. Where no height limitation is specified or where a building will obstruct the view of a substantial number of residences, the maximum building height shall be 35 feet as measured by the average grade level. Building height in the Shoreline Residential environment shall be limited to 26 feet.

4. The maximum density or building lot coverage is that density or coverage allowed by the underlying zoning classification (See Sequim Municipal Code (SMC) 18.44).

5. Adjustment of buffers or setbacks may be allowed upon obtaining a Variance Permit that can provide relief from the dimensional requirements of this program. A variance may only be granted when all of the criteria listed at WAC 173-27-170 are met. A variance is intended to allow only a minimum degree of variation from setback or other standards, just enough to afford relief and to allow a reasonable use of a property. The minimum necessary standards must assure no net loss of shoreline ecological functions, based upon the City's 2010 Shoreline Inventory and Characterization.

6.1.2 Vegetation Conservation

1. Land within shoreline buffer areas extending landward from marine ordinary high water mark, as described in Section 6.1.1(2), and critical area buffers shall be considered vegetation conservation areas (See Figure 6-2). Native shoreline vegetation shall be preserved to the maximum extent feasible within the vegetation conservation area. Native trees and shrubs shall be preserved to maintain and provide shoreline ecological functions such as habitat, shade, and slope stabilization.

2. The following minimum standards for vegetation conservation shall apply:

    a. All native trees in the vegetation conservation area over six inches in diameter at four feet above average grade shall be retained. Trees determined by a certified arborist to be hazardous or diseased may be removed. Nondestructive pruning for tree maintenance or view or aesthetic purposes is not affected by this regulation.

    b. Replacement of non-native vegetation with native species shall be done in a manner that will not leave soil bare or vulnerable to erosion.

    c. The Shoreline Administrator may allow removal of vegetation exceeding that described above where an applicant agrees to replacement plantings

that are demonstrated to provide greater benefit to shoreline ecological functions than would be provided by strict application of this section, based upon the findings from the 2010 Shoreline Inventory and Characterization.

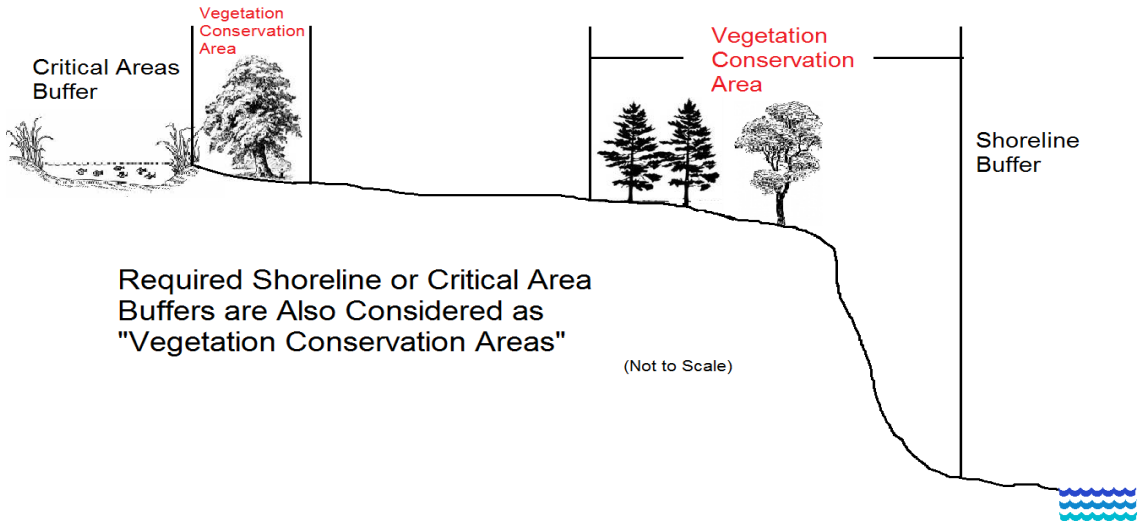


Figure 6-2 Vegetation Conservation Areas

d. Removal of invasive plant species shall be restricted to hand removal except where no reasonable alternative to herbicides exist and weed control is demonstrated to be in the public's interest. The use of herbicides or other methods of Invasive plant species removal may be considered, provided that a "Plant Removal Plan" is prepared by a qualified professional. All removed plant material shall be taken away from the site and properly discarded. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species. Re-vegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

   Herbicide use for weed control for existing landscaping in exiting development shall not require a "Plant Removal Plan". Property owners shall follow manufacturer's instructions.

6.1.3 Environmental Impact Mitigation

1. All shoreline development and uses shall occur in a manner that results in no net loss of shoreline ecological functions. This shall be done through site and design review. In cases where impacts to shoreline ecological functions from allowed development and uses are unavoidable, those impacts shall be mitigated, according to the provisions of this section, to ensure no net loss of shoreline ecological functions.

2. To the extent Washington's State Environmental Policy Act of 1971 (SEPA), Chapter 43.21C RCW, is applicable, the analysis of environmental impacts from

proposed shoreline uses or developments shall be conducted consistent with the rules implementing SEPA (SMC 16.04 and WAC 197-11).

3. Where required, mitigation measures shall be applied in the following sequence of steps listed in order of priority.

    a. Avoiding the impact altogether by not taking a certain action or parts of an action;
    b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
    c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
    d. Reducing or eliminating the impact over time by preservation and maintenance operations;
    e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
    f. Monitoring the impact and the compensation projects and taking appropriate corrective measures.

4. In determining appropriate mitigation measures applicable to shoreline development, lower priority measures shall be applied only where higher priority measures are determined to be infeasible or inapplicable.

5. Required mitigation shall not be in excess of that necessary to assure that proposed uses or development will result in no net loss of shoreline ecological functions.

6. Mitigation actions shall not have a significant adverse impact on other shoreline functions fostered by the policies of the Shoreline Management Act.

7. When compensatory measures are appropriate pursuant to the priority of mitigation sequencing above, preferential consideration shall be given to measures that replace the impacted functions directly and in the immediate vicinity of the impact. However, alternative compensatory mitigation within the watershed that addresses limiting factors or identified critical needs for shoreline resource conservation based on watershed or comprehensive resource management plans applicable to the area of impact may be authorized. Authorization of compensatory mitigation measures may require appropriate safeguards, terms or conditions as necessary to ensure no net loss of ecological functions.

6.1.4 Critical Areas Development and Performance Standards

Subject to the exceptions listed below in this section of the SMP, the provisions of the Sequim Critical Areas Regulations (**SMC 18.80, Ordinance No. 2011-028, adopted and revised by City Council on November 13, 2012 and attached as Appendix A)** shall apply to any use, alteration, or development where designated critical areas are physically located within the shoreline jurisdiction, in addition to a

shoreline permit or written statement of exemption. Designated critical areas (per Appendix A) located in the shoreline include streams and wetlands, geologically hazardous areas (which include; erosion, landslide, and seismic hazard areas), ravine sidewalls and bluffs, fish and wildlife conservation areas, flood hazard areas, and critical aquifer recharge areas.

The SMP includes a means to ensure that reasonable use of the property is not precluded, or significantly interfered with, by the strict application of SMP bulk, dimensional or performance standards. A shoreline variance process is provided pursuant to RCW 90.58 and WAC 173-27-170.

The provisions of Critical and Environmentally Sensitive Areas Protection, Section 18.80.080 (A) Development Exceptions (aka Reasonable Use Exceptions) are not applied within shoreline jurisdiction. In the event an applicant wishes to make reasonable use project adjustments from standards in the SMP, all the criteria at Section 7.3.3 of the SMP must be met.

In the event development or performance standards in the Critical Areas Regulations (SMC 18.80, Appendix A) are inconsistent with standards and requirements in the SMP, the more restrictive standard shall govern (See Figures 6-3 and 6-4). The standards in Appendix A shall only apply to Critical Areas within SMP jurisdiction. Changes to the Critical Areas regulations that apply to Critical areas not subject to the SMP shall not apply to Critical Areas within the SMP. SMP Critical Areas regulations contained in Appendix A are revised through the SMP revision process.

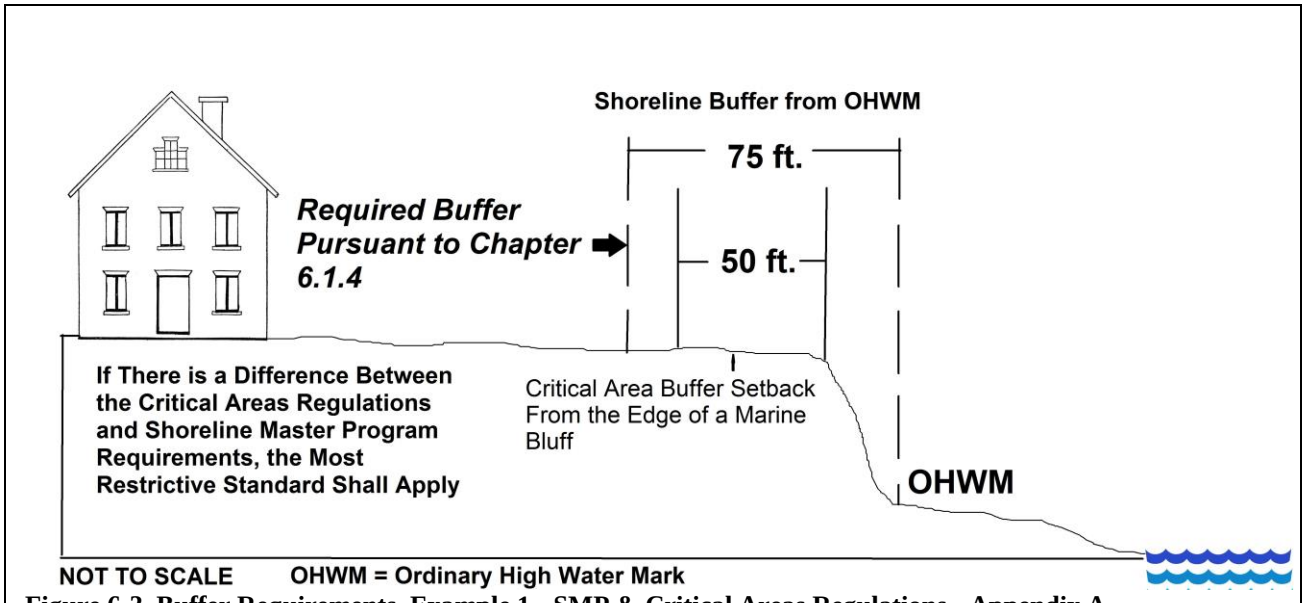


Figure 6-3 Buffer Requirements, Example 1 - SMP & Critical Areas Regulations - Appendix A

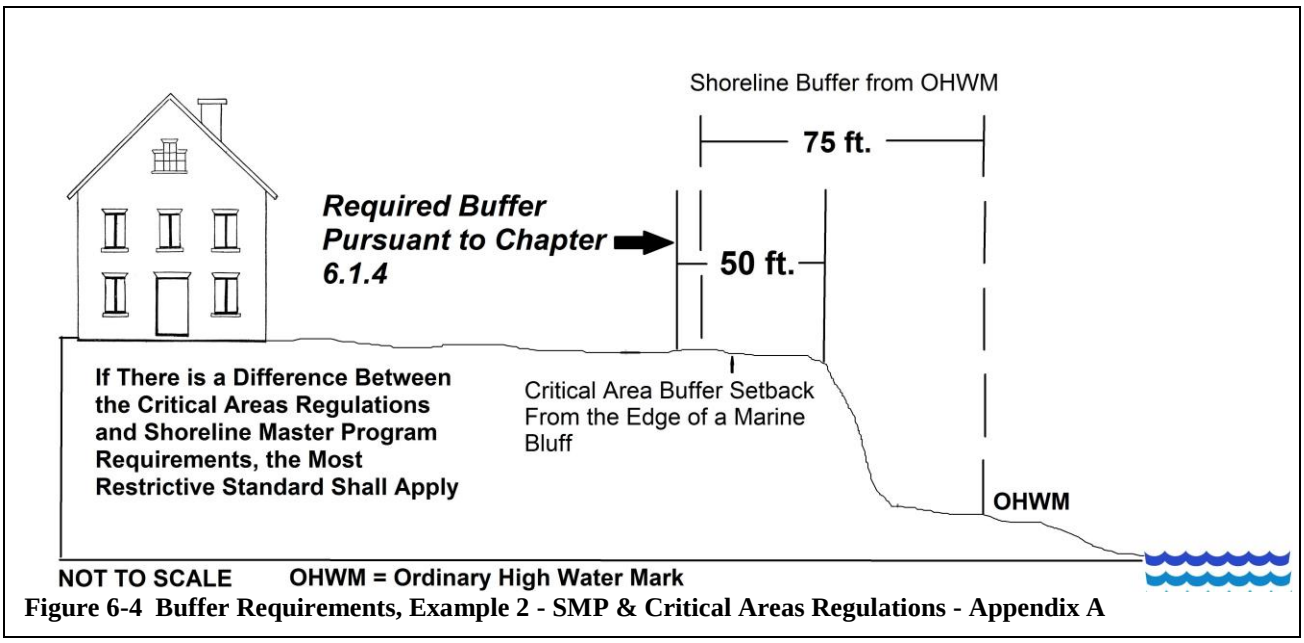


Figure 6-4 Buffer Requirements, Example 2 - SMP & Critical Areas Regulations - Appendix A

6.1.5 Water Quality, Stormwater, and Nonpoint Pollution

1. Shoreline development and use shall incorporate measures to protect and maintain surface and ground water quantity and quality in accordance with all applicable laws.

2. Shoreline development shall be designed in conformance with the City's Surface Water Management Program.

3. All materials that may come in contact with water shall be composed of non-toxic materials, such as untreated wood, concrete, approved plastic composites or steel, that will not adversely affect water quality or aquatic plants or animals. Materials used for decking or other structural components shall be approved by applicable state agencies for contact with water to avoid discharge of pollutants from wave splash, rain, or runoff. Wood treated with creosote, copper chromium arsenic or pentachlorophenol is prohibited in shoreline water bodies.

4. Within the City's shoreline jurisdiction, solid and liquid wastes and untreated effluents shall not be allowed to enter any groundwater or surface water or to be discharged onto shorelands. The release of oil or other petroleum products, chemicals, or hazardous materials onto shorelands or into the water is prohibited.

5. The City shall determine if surface water pollution has occurred or is occurring within the shoreline jurisdiction by:

    a. Utilizing the federal Environmental Protection Agency quality criteria for freshwater bodies and the state Department of Ecology water quality standards for surface waters of the state listed in chapter 173-201A WAC; or

b. Requesting investigations by other agencies having regulatory authority regarding surface water pollution.
c. The City reserves the right to pursue other appropriate civil actions under state and federal law, including a citizen suit under the federal Clean Water Act.

6. When the City or the investigating agency determines surface water quality pollution has occurred within shoreline jurisdiction, notice shall be provided to the alleged source of pollutants identifying the specific surface water quality problem and requesting that the problem be remedied. The City may pursue city, state and/or federal enforcement actions when any surface water pollution is verified.

7. Low Impact Development techniques shall be considered and implemented where feasible.

6.1.6 Archaeological, Historic, and Cultural Resources

The following provisions are to be implemented only for the purpose of the protection and restoration of buildings, sites, and areas having historic, cultural, scientific, or educational values.

Known Historic, Cultural, or Archaeological Sites

1. All applications for a shoreline development permit, a building permit, a clearing and grading permit, a demolition permit, or a statement of exemption for shoreline development shall be reviewed for a determination of whether the site(s) in question:

   A. Is on property within 500 feet of a site known to contain historic, cultural, or archaeological resource(s); or

   B. Is in an area mapped as having the potential for the presence of archaeological, historic, or cultural resources to be present.

   All applications meeting these criteria shall require a cultural resource site survey or assessment, unless this requirement is waived or modified by the DAHP. Any required site assessment shall be conducted by a professional archaeologist or historic preservation professional, as applicable, to determine the presence of historic or significant archaeological resources. Buildings or structures over 40 years in age shall be inventoried in a DAHP Historic Property Inventory Database entry and archaeological sites shall be recorded on DAHP Archaeological Site Inventory Forms. The fee for the services of the professional archaeologist or historic preservationist shall be paid by the applicant.

2. If the cultural resource site assessment identifies the presence of archaeological, significant historic or cultural resources, appropriate recommendations shall be prepared by a professional archaeologist or historic preservation professional, as part of the survey or assessment. The fee for the services of the professional

archaeologist or historic preservation professional shall be paid by the applicant. In the preparation of such plans, the professional archaeologist or historic preservation professional shall solicit comments from the Washington State Department of Archaeology and Historic Preservation, and the affected Tribe(s). Comments received from these reviewers shall be incorporated into the conclusions and recommended conditions of the survey or assessment to the maximum extent practicable.

3. The administrator shall consult with the Washington State Department of Archaeology and Historic Preservation and affected Tribe(s) prior to approval and acceptance of the survey or assessment.

4. Based upon consultation with DAHP and affected Tribe(s), the administrator may reject or request revision of the conclusions reached in a survey or assessment when the administrator can demonstrate that the assessment is inaccurate or does not fully address the historic or archaeological resource management concerns involved.

5. In granting shoreline permits or shoreline exemptions for such development, the City may attach conditions of approval to require consultation with the Washington State Department of Archaeology and Historic Preservation, affected Tribe(s), and any local historic preservation authority, to assure that historic or archaeological resources are properly protected, or for appropriate agencies to contact property owners regarding purchase or other long-term arrangements. Provisions for the protection and preservation of historic or archaeological sites, structures, buildings, districts, objects, or areas shall be incorporated to the maximum extent practicable.

Inadvertent Discovery

6. Whenever historic, cultural, or archaeological sites or artifacts are discovered in the process of development on shorelines, work on that portion of the development site shall be stopped immediately and the find reported as soon as possible to the Administrator or DAHP.

7. The Administrator shall then notify the Washington State Department of Archaeology and Historic Preservation, affected Tribe(s), any local historic preservation authority, and any other appropriate agencies and upon consultation with DAHP, shall require that an immediate site assessment be conducted by a professional archaeologist or historic preservation professional, as applicable, pursuant to subsection one (1) through five (5)_ of this section to determine the extent of damage to the resource. The site assessment shall be distributed to the Washington State Department of Archaeology and Historic Preservation, the affected Tribe(s), and local historic preservation authority for a 15-day review period. If the above listed agencies or governments have failed to respond within the applicable review period following receipt of the site assessment, such stopped work may resume.

8. If human remains are encountered, all activity must cease and the area must be protected and the find reported to local law enforcement and the County coroner or medical examiner.

6.1.7 Public Access

1. Public access shall be incorporated into all development proposals on public lands, all public and private commercial and research uses/developments, and all residential subdivisions of greater than four (4) lots when the following conditions exist:

    a. The development would generate demand for one or more forms of public shoreline access; or
    b. The development would eliminate, restrict, or otherwise impair existing legal access opportunities or rights.

2. For development proposals identified under (1) above, public access shall not be required in areas where the applicant demonstrates that one or more of the following provisions apply:

    a. Unavoidable health or safety hazards to the public exist that cannot be prevented by any practical means;
    b. Inherent security requirements of the use cannot be satisfied through the application of alternative design features or other solutions;
    c. The cost of providing the access, easement, alternative amenity, or mitigating the impacts of public access is unreasonably disproportionate to the total long term cost of the proposed development;
    d. Significant environmental impacts would result from the public access that cannot be mitigated; or
    e. Significant undue and unavoidable conflict between any access provisions and the proposed use and/or adjacent uses would occur and cannot be mitigated.

3. Public access shall consist of a dedication of land or a physical improvement in the form of a walkway, trail, bikeway, corridor, viewpoint, park, or other area serving as a means of view and/or physical approach to shorelines of the state and may include interpretive centers and displays.

4. Public access locations shall be clearly marked with visible signage.

5. Public access provided by shoreline street ends, public utilities, and rights-of-way shall not be diminished (RCW 36.87.130).

6. Requirements or conditions for public access shall be consistent with all relevant constitutional and other legal limitations on regulation of private property.

6.2 Shoreline Modifications

Shoreline modifications are generally related to construction of a physical element such as a dike, breakwater, dredged basin, or fill, but they can include other actions such as clearing, grading, application of chemicals, or significant vegetation removal. Shoreline modifications usually are undertaken in support of or in preparation for shoreline use. Given that protecting ecological functions is a primary goal of the Shoreline

Management Act, the City should take active measures to ensure that shoreline modifications individually and cumulatively do not result in a net loss of ecological functions. This includes reducing the adverse effects of shoreline modifications and, as much as possible, limiting shoreline modifications in number and extent.

Shoreline modifications should be limited to those modifications appropriate to the specific type of shoreline and environmental conditions for which they are proposed.
If shoreline modification is approved, all feasible measures to protect shoreline ecological functions and processes should be incorporated. The City should plan for the enhancement of impaired ecological functions wherever feasible and appropriate while accommodating permitted uses.

6.2.1 Bulkheads, Revetments, and Other Shoreline Stabilization

Bulkheads, riprap, seawalls, or other shoreline stabilization structures are erected parallel to and near the ordinary high water mark for the purpose of protecting adjacent upland structures from the erosive action of waves or currents. While shoreline stabilization structures may protect the uplands, they do not protect the adjacent beaches, and in many cases are actually detrimental to the beaches by speeding up the erosion of the sand in front of the structures. Hard shore armoring refers to traditional designs for shoreline stabilization, including constructed steel, timber, rock, concrete, or boulder riprap. Soft shore armoring refers to alternative bank protection methods such as bioengineering or biotechnical bank stabilization, which may include use of anchored drift logs, vegetation plantings, and import of beach sediment and/or gravel (also referred to as beach nourishment).

The Shoreline Administrator may approve bulkheads or other shoreline stabilization proposals when he/she determines that naturally occurring movement of the shoreline threatens existing structures, public improvements, unique natural resources, or the only feasible access to property and that the proposed stabilization complies with the criteria and standards in this section. For purposes of this, "replacement" means the construction of a new structure to perform a shoreline stabilization function of an existing structure which can no longer adequately serve its purpose. Additions to or increases in size of existing shoreline stabilization measures shall be considered new structures.

1. New development will be located and designed to avoid the need for future shoreline stabilization to the extent feasible. New development that would require shoreline stabilization which causes significant impacts to adjacent or down-current properties and shoreline areas shall not be allowed.

2. Subdivision of land must be regulated to assure that the lots created will not require shoreline stabilization in order for reasonable development to occur.

3. New development on steep slopes or bluffs shall be set back to ensure that shoreline stabilization is unlikely to be necessary during the life of the structure, as demonstrated by a geotechnical analysis.

4. New hard shore armoring stabilization measures shall not be allowed except when necessity is demonstrated in the following manner:

    a. To protect existing primary structures: New or enlarged structural shoreline stabilization measures for an existing primary structure, including residences, should not be allowed unless there is conclusive evidence, documented by a geotechnical analysis, that the structure is in danger from shoreline erosion caused by tidal action, currents, or waves. Normal sloughing, erosion of steep bluffs, or shoreline erosion itself, without a scientific or geotechnical analysis, is not demonstration of need. The geotechnical analysis should evaluate on-site drainage issues and address drainage problems away from the shoreline edge before considering hard shore armoring techniques for shoreline stabilization.

    b. In support of new nonwater-dependent development, including single-family residences, when all of the conditions below apply:

        i. The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.

        ii. Nonstructural measures, such as placing the development further from the shoreline, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

        iii. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report. The damage must be caused by natural processes, such as tidal action, currents, and waves.

    c. In support of water-dependent development when all of the conditions below apply:

        i. The erosion is not being caused by upland conditions, such as the loss of vegetation and drainage.

        ii. Nonstructural measures, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

        iii. The need to protect primary structures from damage due to erosion is demonstrated through a geotechnical report.

    d. To protect projects for the restoration of ecological functions or hazardous substance remediation projects pursuant to RCW 70.105D when nonstructural measures, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient.

5. An existing shoreline stabilization structure may be replaced with a similar structure if there is a demonstrated need to protect principal uses or structures

from erosion caused by currents, tidal action, or waves. Approved replacement structures are subject to the following provisions:

a. The replacement structure shall be designed, located, sized, and constructed to assure no net loss of ecological functions.

b. Replacement walls or bulkheads shall not encroach waterward of the ordinary high-water mark or existing structure unless the residence was occupied prior to January 1, 1992, and there are overriding safety or environmental concerns. In such cases, the replacement structure shall abut the existing shoreline stabilization structure.

c. Where a net loss of ecological functions associated with critical saltwater habitats would occur by leaving the existing structure, remove it as part of the replacement measure.

d. Soft shore stabilization measures that provide restoration of shoreline ecological functions may be permitted waterward of the ordinary high-water mark.

e. For purposes of this section, standards on shoreline stabilization measures, "replacement" means the construction of a new structure to perform a shoreline stabilization function of an existing structure which can no longer adequately serve its purpose. Additions to or increases in size of existing shoreline stabilization measures shall be considered new structures.

6. Geotechnical reports pursuant to this section that address the need to prevent potential damage to a primary structure shall address the necessity for shoreline stabilization by estimating time frames and rates of erosion and report on the urgency associated with the specific situation. As a general matter, hard armoring solutions should not be authorized except when a report confirms that there is a significant possibility that a primary structure will be damaged within three years as a result of shoreline erosion in the absence of such hard armoring measures, or where waiting until the need for armoring is so great that it would foreclose on the opportunity to utilize measures that avoid or minimize impacts to ecological functions. Where the geotechnical report confirms a need to prevent potential damage to a primary structure, but the need is not as immediate as three years, the report may still be used to justify more immediate authorization to protect against erosion using soft shore stabilization measures.

7. When any shoreline stabilization measures are demonstrated to be necessary, pursuant to above provisions, the City's 2010 Shoreline Inventory and Characterization shall be used to assist in the implementation of the following additional standards:

a. Limit the size of stabilization measures to the minimum necessary. Use measures designed to assure no net loss of shoreline ecological functions. Soft shore stabilization approaches that absorb and dissipate wave energy

shall be used unless demonstrated not to be sufficient to protect primary structures, dwellings, and businesses.

b. Ensure that publicly financed or subsidized shoreline erosion control measures do not restrict appropriate public access to the shoreline except where such access is determined to be infeasible because of incompatible uses, safety, security, or harm to ecological functions. When feasible, incorporate ecological restoration and public access improvements to the project.

c. Mitigate new erosion control measures, including replacement structures, on feeder bluffs or other actions that affect beach sediment-producing areas to avoid and, if that is not possible, to minimize adverse impacts to natural sediment transport processes.

d. All new or replacement shoreline stabilization and flood protection measures shall be designed and constructed so that down-current banks will not be adversely affected.

e. Shoreline stabilization measures, including riprap, shall be designed and constructed in a manner consistent with the Department of Fish and Wildlife, Corps of Engineers and/or other engineering and design specifications deemed appropriate by the Shoreline Administrator.

f. Bulkheads shall be permitted only where they provide protection to upland areas or facilities.

g. Bulkheads shall not be used for creating new land directly or indirectly.

h. Adequate toe protection shall be provided to ensure bulkhead stability.

i. Bulkheads shall be designed to permit the passage of surface or ground water without causing ponding or saturation.

j. To receive permit approval for bulkhead construction, the applicant shall agree to grant adjacent property owners the right to tie in adjacent bulkheads.

8. Shoreline vegetation shall be protected and restored along or near marine and freshwater shorelines to protect and restore the ecological functions and ecosystem-wide processes and to protect human safety and property.

9. Cut-and-fill slopes and backfill areas shall be re-vegetated with native grasses, shrubs and/or trees.

10. Shoreline protection activities are prohibited in areas where their presence may necessitate new or increased shoreline protection on the same or other affected properties where no previous need for protection existed.

11. Shoreline modification may be allowed for environmental restoration purposes or if the City determines, with objective evidence, that those actions will lead to a net increase in shoreline ecological functions.

6.2.2 Breakwaters

Breakwaters are protective structures built offshore to protect harbor areas, moorings or beaches from wave action. Breakwaters can be of rigid (rock or rubble), open-pile or floating construction. All types reduce or eliminate wave action but rigid breakwaters also obstruct the flow of sand and can starve beaches. Floating breakwaters do not generally have this effect. A rigid breakwater exists at John Wayne Marina.

1. New breakwaters or expansion of existing rigid breakwaters shall be considered only in the Aquatic shoreline environment and adjacent Urban shoreline environment and shall require a Shoreline Conditional Use Permit.

2. New or expanded breakwaters shall be allowed only to support water-dependent uses, public access, shoreline stabilization or other specific public purposes consistent with the provisions of this SMP.

3. All new or expanded breakwaters shall be designed and constructed so that down-current banks will not be adversely affected. Breakwaters shall be designed and constructed in a manner consistent with the Department of Fish and Wildlife, Corps of Engineers and/or other engineering and design specifications deemed appropriate by the Shoreline Administrator.

4. If existing breakwaters need to be rebuilt, replacement breakwaters shall be designed to minimize adverse effects to critical areas and provide mitigation for unavoidable impacts per the provisions of this SMP for environmental impact mitigation (Section 6.1.3).

5. All new or expanded breakwaters must protect critical areas and implement appropriate mitigation in accordance with this SMP.

6. New breakwaters associated with protection or restoration projects are permitted in all shoreline environments.

6.2.3 Piers, Docks, Mooring Buoys, Floats, Trams, and Launches

1. New piers and docks or expansion of existing piers and docks may be allowed in Urban, Research District, Shoreline Residential, and Aquatic environments when associated with water-dependent uses and/or public access, subject to a Conditional Use Permit.

2. New piers, docks, and launches are prohibited in the Urban Conservancy environment.

3. New boat launches and boat lifts are prohibited in the Shoreline Residential environment.

4. New launches in the Research District are subject to a Conditional Use Permit.

5. Tires are prohibited as part of any above or below water structures or where the tire(s) could potentially come into contact with the water, e.g., fenders, flotation, hinges.

6. The maximum length of new or expanded piers or docks for private or recreational use shall be the shortest length necessary to accomplish mooring based on conditions at the site. A dock shall not exceed the length of docks on adjacent properties, nor extend farther than 300 feet waterward as measured from the mean higher-high water mark. For moorage in shallow areas where these parameters prevent an effective dock, a buoy shall be used instead.

7. New docks, docks, and floats must have unobstructed grating over a minimum of 50% of the surface area. Floating docks less than five feet wide must have unobstructed grating over a minimum of 30% of the surface area. All grating material must have a minimum of 60% functional open space. Grating requirements may be met if the combination of grated surface area and grating open space are equal to or better than the above requirements.

Figure 6-5 Pier/Dock Grating

8. Piers or docks shall be a maximum width of six (6) feet.

9. Float dimensions: For a single-use residential structure, float width may not exceed 8 feet and float length may not exceed 30 feet.

   For a shared joint-use residential structure, float width may not exceed 8 feet and float length may not exceed 60 feet.

10. Repair, maintenance, rehabilitation, or replacement of existing piers and docks shall be allowed within the Urban, Research District, Shoreline Residential, and Aquatic environments, with adherence to the following standards:

    a. A permit to construct a pier or dock must be obtained from the Corps of Engineers.

    b. Pier and dock construction shall be restricted to the minimum size necessary to meet the needs of the proposed use.

    c. Replacement of piers, docks and other moorages shall only be authorized after demonstrating that:

i. Piers and docks shall be designed and constructed to avoid, or if that is not possible, to minimize and mitigate the impacts to ecological functions, critical areas resources such as eelgrass beds and fish habitats and processes such as currents and littoral drift, in accordance with guidance provided by WAC 173-26-221(2)(c) (iii) and (iv).

ii. Impact minimization shall include the use of construction materials, such as non-toxic wood, steel, or concrete, approved by applicable state agencies.

iii. The effect such structures have on navigation, water circulation, recreational and commercial boating, sediment movement and littoral drift and shoreline access have been minimized or mitigated.

d. No creosote, chromate copper arsenate, or pentachlorophenol treated wood, or other comparatively toxic compounds may be used as part of the replacement decking, pilings, or other components of any in-water structures. Treated wood may only be used for above water structural framing and may not be used as decking, pilings, or other uses. Existing treated wood within the maintained area must be replaced with alternative materials such as untreated wood, steel, concrete, or recycled plastic, or encased in a manner that prevents metals, hydrocarbons, and other toxins from leaching out.

e. Open pile pier construction shall be required where there is significant littoral drift, where scenic values will not be impaired and where minimal alteration to the shoreline and minimal damage to aquatic resource can be assured.

f. Floating pier construction shall be required in those areas where scenic values are high.

g. Piers or docks that are abandoned or structurally unsafe shall be abated and promptly removed or repaired by the owner. All repairs must be consistent with these provisions.

h. Existing tires must be replaced with inert or encapsulated materials, such as plastic or encased foam.

11. Within the Shoreline Residential environment, joint moorage with four or fewer slips is allowed and encouraged. A covenant executed between all property owners sharing the joint moorage shall be submitted to the City. The covenant must address the agreement for the joint use of common lot lines, run with the land, and be filed with the Clallam County Auditor as a covenant with the land.

12. Storage of fuel, oils, and other toxic materials is prohibited on docks, piers and floats.

13. Buoys must be visible under normal daylight conditions at a minimum of 100 yards and have reflectors for night-time visibility.

14. Buoys shall use neutral buoyancy rope, mid-line float, helical anchors, or other state-approved designs that have minimal adverse effects on aquatic ecosystems.

15. Buoys shall be located to:

    a. Avoid critical saltwater habitat areas; and

    b. Prevent obstruction to navigation.

16. Buoys shall be clearly marked and labeled with the owner's name, contact information and permit number(s).

17. Docks, piers, and floats accessory to residential development/use shall only be allowed when:

    a. Ecological impacts are mitigated in accordance with this SMP; and

    b. The moorage platform is designed for access to private watercraft.

18. Only one dock or pier and one float may be permitted on a single lot owned for residential use or private recreational use. Only one buoy may be permitted per single lot and only when a dock, pier, or float does not already exist.

19. Trams within the Shoreline Residential environment may be allowed when they achieve all of the following:

    a. Located on stable buffs or slopes as determined by a qualified professional;

    b. Scale and scope will be compatible with the natural surroundings;

    c. Natural vegetation will be retained as much as possible, and any damaged vegetation will be promptly re-planted or otherwise mitigated;

    d. All cables, landings, or other components will be completely located above the ordinary high water mark;

    e. Landings must meet required shoreline building setbacks.

    Joint use trams are encouraged where they can be placed on the property line.

20. Boat launches shall be designed and constructed using methods/technology that minimizes adverse environmental impacts. Rail and track systems are preferred over concrete ramps or similar facilities.

21. Preferred ramp designs, in order of priority, are as follows:

    a. Open grid designs with minimum coverage of beach substrate.

    b. Seasonal ramps that can be removed and stored upland.

    c. Structures with segmented pads and flexible connections that leave space for natural beach substrate and can adapt to changes in beach profile.

6.2.4 Jetties and Groins

1. Jetties and groins are prohibited in all shoreline environments for non-restoration or protection projects. Jetties and groins are a permitted use for protection or restoration projects pursuant to WAC 173-26-231(3)(d).

6.2.5 Dredging

1. Dredging activities, including disposal of dredge material, in any shoreline environment require a Conditional Use Permit and must comply with all federal and state regulations.

2. Dredging activities are allowed in the Shoreline Residential and Urban Conservancy shoreline environments only where necessary to protect public safety.

3. Dredging activities are allowed in the Urban environment where necessary for assuring safe and efficient accommodation of existing navigational uses, and then only when significant ecological impacts are minimized and when mitigation is provided. Maintenance dredging of established navigation channels and basins should be restricted to maintaining previously dredged and/or existing authorized location, depth, and width.

4. Dredging of bottom materials for the single purpose of obtaining fill material is prohibited.

5. Dredging and excavation in critical areas and in the Natural designation is prohibited.

6. Where allowed, dredging operations must be scheduled so as to not damage shoreline ecological functions or processes.

7. When dredge spoils have suitable organic and physical properties, dredging operators shall recycle dredged material into areas of the City suitable for those materials. Disposal of dredge material on shorelands shall be discouraged.

8. Dredging for fill may be allowed when associated with a Model Toxics Control Act (MTCA) or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) habitat restoration or other significant restoration effort with an approved Conditional Use Permit. Placement of fill must be waterward of the OHWM.

9. New development shall be sited or designed to avoid or, if not possible, to minimize the need for new and maintenance dredging.

6.2.6 Fill

1. Fill activities shall only be allowed in association with allowed (permitted) water dependent use developments. Fill associated with non-water dependent uses shall be prohibited.

2. Fill needed to support the following water dependent uses may be allowed in all shoreline environments waterward of the ordinary high water mark through a Shoreline Conditional Use Permit:

    a. Public access;

    b. Maintenance, non-expanding alteration, or repair of transportation facilities currently located within the shoreline;

    c. Mitigation actions;

    d. Environmental, ecological, or watershed restoration projects;

    e. Beach nourishment or enhancement projects, as developed by a qualified professional; and

    f. Soft shore bank stabilization projects.

3. Permitted fill activities must comply with the following standards:

    a. Demonstration that alternatives to fill are not feasible;

    b. Demonstration that fill materials shall be of such quality that it will not adversely affect water quality;

    c. Demonstration that fill shall be deposited so as to minimize disruption of normal surface and ground water passage. Earth material which has no more than a minor amount of organic material and has no rock or similar irreducible material with a maximum dimension greater than eight inches shall be used;

    d. Demonstration that fill shall allow surface water penetration into the ground water supply, where such conditions exist prior to the fill; and

e. Demonstration that landfill timing will minimize damage to water quality and aquatic life.

4. Fill, except for beach nourishment, shall be prohibited in areas of high shoreline erosion potential.

5. For allowed fill activities, the ground surface shall be prepared to receive fill by removing any unsuitable materials such as oversized rock, concrete slabs, tree stumps, brush, etc.

6. Fill activities shall be designed to blend physically and visually with existing topography whenever possible. Perimeter banks shall be sloped no steeper than 1 foot vertical for every 3 feet horizontal unless a specific engineering or geotechnical analysis has been provided and the Shoreline Administrator determines that the fill blends with existing topography.

7. Fill located waterward of the ordinary high water mark, except for beach nourishment, shall be allowed only after full consideration is given to total water surface reduction, impediment to water flow and circulation, reduction of water quality and destruction of habitat.

8. Fill within the one hundred-year (100-year) flood plain requires demonstration that the fill will not reduce the flood plain water storage capacity or in any way increase flood hazard so as to endanger public safety.
9. An erosion and sediment control (ESC) plan shall be provided for all proposed fill activities.

10. Fill shall be located, designed, and constructed to protect shoreline ecological functions and ecosystem-wide processes, including channel migration within stream sub-estuaries.

6.2.7 Land Clearing and Grading

1. Land clearing and grading activities shall only be allowed in association with an allowed (permitted) shoreline development, subject to the Vegetation Conservation provisions of this SMP (Section 6.1.2).

2. Land clearing and grading activities shall adhere to the following provisions:

    a. Slope. No slope of cut or fill surfaces shall be steeper than 2:1 unless approved by the Shoreline Administrator;

    b. Erosion/Sedimentation Control. All land clearing and grading shall be accomplished in a manner that minimizes erosion. All disturbed areas, including faces of cuts and fill slopes, shall be prepared and maintained to control erosion/sedimentation in accordance with the specifications of the surface water design manual. Prior to undertaking any land clearing or

grading, the applicant shall submit for approval by the Shoreline Administrator, an erosion/sedimentation control (ESC) plan. The ESC plan shall set forth the specific measures from the surface water design manual to be utilized by the proposed project during (from beginning until the end) and following the construction.

c. All land clearing and grading shall be consistent with the approved ESC plan;

d. Excavations to Water-producing Depth. All excavations must be made to a water-producing depth or grade to permit natural drainage. The excavations made to a water-producing depth shall be reclaimed in the following manner:

   i. Depth of the excavation must not be less than two feet measured below the low water mark.

   ii. All banks shall be sloped to the water line no steeper than 2:1.

   iii. In no event shall the term “water producing depth” be construed to allow stagnant or standing water to collect or remain in the excavations.

e. Bench Terrace. Benches at least 10 feet in width shall be back sloped and shall be established at no more than 10-foot vertical intervals to control surface drainage and debris. Swales or ditches on benches shall have a maximum gradient of one percent;

f. Drainage. Provisions shall be made to prevent surface water or seepage from damaging the cut face of excavations or the sloping face of a fill and to carry surface waters that are or might be concentrated as a result of a fill or excavation to a natural watercourse or other means as approved by the code official. All development activities shall make provisions for drainage pursuant to the requirements of the surface water design manual.

3. All land clearing and grading practices in shoreline areas shall be conducted so there is no net loss of shoreline ecological functions.

4. All land clearing and grading shall be limited to the minimum necessary to accomplish the authorized use.

5. Tree removal in steep slope and fragile areas shall be allowed for hazard trees, as determined in writing by a certified arborist. Nondestructive pruning for tree maintenance or view or aesthetic purposes is not affected by this regulation.

6. All cut fill and side cast slopes shall be planted or seeded with appropriate ground cover or otherwise treated to prevent erosion of the slope.

7. All ruts and erodible soil conditions caused by brush cutting or any land clearing and grading operations should prevent the invasion of water or planted with appropriate ground cover.

8. Whenever seeding, planting or other soil stabilizing measures are specified as part of a shoreline development proposal, it shall be performed as soon as practical.

6.3 Shoreline Uses

Shoreline uses refers to specific common uses and types of development to the extent they occur within shoreline jurisdiction. While shoreline modifications refer to specific structures, actions, or alterations that generally support a specific use (e.g., dredging to accommodate a marina), shoreline uses are the primary use of land that is within shoreline jurisdiction (e.g., residential, recreation, commercial, etc.). All uses and development must be consistent with the provisions of the environment designation in which they are located (see Table 6-1) and the general regulations of this master program.

Figure 6-6 - Funicular

6.3.1 Prohibited Uses

The following uses are prohibited in all shoreline environments:

1. Agricultural activities;
2. Forest management practices;
3. Mining;
4. Solid waste disposal facilities;
5. Covered moorage;
6. Living aboard moored or anchored vessels located outside of John Wayne Marina;
7. Funiculars; and
8. Primary parking facilities.

6.3.2 Non-Conforming Uses and Developments/Exception

Provisions contained in the Sequim Zoning Code for Nonconforming Conditions, Uses, and Structures (SMC 18.64), except for 18.64.030, Nonconforming Use of Land, are incorporated into this SMP as though fully set forth here.

1. All references to zones or zoning classifications in SMC 18.64 shall be construed as referring to shoreline environment designations established by this SMP. The provisions of this section shall also apply, along with those provisions of SMC

Chapter 18.64, which were incorporated by reference. Where any provisions set forth in SMC 18.64 and these provisions conflict, these provisions shall control.

2. Legally established uses and developments that do not conform to the regulations of the master program, may continue as legal nonconforming uses. Such uses shall not be enlarged or expanded.

3. A nonconforming structure which is moved any distance and placed within the City's shoreline jurisdiction must be brought into conformance with the SMP and the SMA.

4. If a nonconforming use is discontinued for twelve consecutive months or for twelve months during any two-year period, the nonconforming rights shall expire and any subsequent use shall be conforming.

5. Undeveloped lots, tracts, parcels, sites, or divisions of land located landward of the ordinary high water mark that were lawfully established prior to the effective date of the Act, but that do not conform to the present lot size standards, may be developed if the development conforms to all other land use regulations and this SMP.

6. Uses authorized through a Conditional Use Permit pursuant to this section shall be considered conforming uses for purposes of this section.

Exception:

1. Residential structures and appurtenant structures that were legally established and are used for a conforming use, but that do not meet the standards for setbacks, buffers, yards, area, bulk, height, or density shall be considered a conforming structure.

2. Redevelopment, expansion, change with the class of occupancy, or replacement of the residential structure is allowed if it is consistent with the City's SMP, including requirements for no net loss of shoreline ecological functions. Any redevelopment, expansion, or replacement must not further encroach waterward into the buffer.

3. For the purposes of this section, "appurtenant structures" means garages, sheds, and other legally established structures, but does not include bulkheads and other shoreline modifications or overwater structures.

6.3.3 Aquaculture

1. Commercial aquaculture is allowed only in the Urban, and Aquatic environments.

2. Noncommercial fishing, clamming, and taking of other marine resources within the shoreline of the City of Sequim shall be allowed only in accordance with

rules and regulations established by the Washington State Department of Fish and Wildlife, the Washington State Department of Health, and any other applicable regulating agency.

3. Research aquaculture is allowed as a Conditional Use in the Urban, Research District, and Aquatic environments.

4. Net pens/Finfish is only allowed in the Urban and Aquatic environments as a Conditional Use.

5. Aquaculture uses and developments shall be allowed when consistent with policies and regulations of this Program.

6. When a shoreline permit is issued for a new aquaculture use or development, that permit shall apply to the initial siting, construction, and/or planting or stocking of the facility or farm. If the initial approval is a shoreline substantial development permit, it shall be valid for a period of five (5) years with a possible extension of one (1) year. If the initial approval is a conditional use permit, it shall be valid for the period specified in the permit.

7. Ongoing maintenance, harvest, replanting, restocking of, or changing the species cultivated in any existing or permitted aquaculture operation is not considered new use/development, and shall not require a new permit, unless or until:

    a. The physical extent of the facility or farm is expanded by more than twenty-five percent (25%) or more than twenty-five percent (25%) of the facility/farm changes operational/cultivation methods compared to the conditions that existed as of the effective date of this Program or any amendment thereto. If the amount of expansion or change in cultivation method exceeds twenty-five percent (25%) in any ten (10) year period, the entire operation shall be considered new aquaculture and shall be subject to applicable permit requirements of this section; or

    b. The facility proposes to cultivate species not previously cultivated in Washington.

8. Aquaculture uses and activities involving hatching, seeding, planting, cultivating, raising and/or harvesting of planted or naturally occurring shellfish shall not be considered development, and shall not require a shoreline substantial development permit, unless:

    a. The activity substantially interferes with normal public use of surface waters; or

    b. The activity involves placement of any structures; or

c. The activity involves dredging using mechanical equipment such as clamshell, dipper, or scraper; or

d. The activity involves filling of tidelands or bedlands.

9. Activities shall not be considered to substantially interfere with normal public use of surface waters, unless:

a. They occur in, or directly adjacent to, public tidelands; and

b. They involve the use of floating ropes, markers, barges, floats, or similar apparatus on a regular basis and in a manner that substantially obstructs public access, or passage from public facilities such as parks or boat ramps; or they exclude the public from more than one (1) acre of surface water on an ongoing or permanent basis.

10. Aquaculture activities not listed or meeting the criteria above shall require a shoreline substantial development permit or conditional use permit, and shall be subject to all of the following regulations:

a. Subtidal, intertidal, floating, and upland structures and apparatus associated with aquaculture use shall be located, designed, and maintained to avoid adverse effects on ecological functions and processes.

b. Upland structures accessory to aquaculture use that do not require a waterside location or have a functional relationship to the water shall be located landward of shoreline and/or critical area buffers required in Section 6.1.4.

c. Overwater work shelters and sleeping quarters accessory to aquaculture use/development shall be prohibited.

d. Floating/hanging aquaculture structures and associated equipment shall not exceed six (6) feet in height above the water's surface. The Administrator may approve hoists and similar structures greater than six (6) feet in height when there is a clear demonstration of need. The six (6) foot height limit shall not apply to vessels.

e. Floating/hanging aquaculture facilities and associated equipment, except navigation aids, shall use colors and materials that blend into the surrounding environment in order to minimize visual impacts.

f. Aquaculture use and development shall not materially interfere with navigation, or access to adjacent waterfront properties, public recreation areas, or Tribal harvest areas. Mitigation shall be provided to offset such impacts where there is high probability that adverse impact would occur. This provision shall not be interpreted to mean that an operator is required

to provide access across owned or leased tidelands at low tide for adjacent upland owners.

g. Aquaculture uses and developments, except finfish aquaculture, shall be located at least six hundred (600) feet from any National Wildlife Refuge, seal and sea lion haulouts, seabird nesting colonies, or other areas identified as critical feeding or migration areas for birds and mammals. Finfish facilities, including net pens, shall be located one thousand five hundred (1,500) feet or more from such areas. The Administrator may approve lesser distances based upon written documentation that U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, and affected Tribes support the proposed location.

h. Aquaculture use and development shall be sited so that shading and other adverse impacts to existing red/brown macroalgae (kelp) and eelgrass beds are minimized.

i. Aquaculture uses and developments that require attaching structures to the bed or bottomlands shall use anchors, such as helical anchors, that minimize disturbance to substrate.

j. Where aquaculture use and development are authorized to use public facilities, such as boat launches or docks, the Administrator shall reserve the right to require the project proponent to pay a portion of the maintenance costs and any required improvements commensurate with the project proponent's use.

k. Aquaculture use and development shall employ non-lethal, non-harmful measures to control birds and mammals. Control methods shall comply with existing federal and state law.

l. Non-navigational directional lighting associated with aquaculture use and development shall be used wherever possible and area lighting shall be avoided and minimized to the extent necessary to conduct safe operations. Non-navigational lighting shall not adversely affect vessel traffic.

m. Aquaculture waste materials and by-products shall be disposed of in a manner that will ensure strict compliance with all applicable governmental waste disposal standards, including but not limited to the Federal Clean Water Act, Section 401, and the Washington State Water Pollution Control Act (RCW 90.48).

n. For experimental finfish aquaculture use/development, and for other proposed finfish aquaculture activities subject to a shoreline substantial development permit or a conditional use permit, the Administrator will require, at the project proponent's expense, baseline and periodic surveys, assessments, and operational monitoring by a qualified.

consultant to determine the success of the project and/or the magnitude of any adverse impacts. City permits for such activities shall include specific performance measures and provisions for adjustment or termination of the project at any time if monitoring indicates significant, adverse environmental impacts that cannot be adequately mitigated.

o. Finfish aquaculture use or development approved on an experimental basis shall not exceed two (2) acres in area (except land-based projects and anchorage for floating systems) and three (3) years in duration; provided that the City may issue a new permit to continue an experimental project as many times as is deemed necessary and appropriate by the Administrator.

p. Any finfish operation/facility that uses or releases herbicides, pesticides, antibiotics, fertilizers, non-indigenous species, parasites, viruses, pharmaceuticals, genetically modified organisms, feed, or other materials known to be harmful into surrounding waters shall demonstrate all significant impacts have been mitigated. When state or federal agencies/permits require the project proponent to prepare records/reports on the use of such chemicals/materials, copies shall be provided to the City.

q. In the event of a significant fish kill at the site of any finfish operation/facility, the owner/operator shall submit a timely report to the County Public Health Department and Department of Community Development stating the date and extent of the loss, cause of death, and detailed remedial action to prevent reoccurrence.

r. Upland finfish aquaculture activities, including net pens, may be allowed with a conditional use permit subject to the policies and regulations of this Program, provided that any adverse environmental impacts, facility siting, and use compatibility issues are demonstrated to be adequately mitigated.

7. Prior to approving a permit for a new aquaculture use or development, the Administrator may require a visual analysis prepared by the applicant/proponent describing effects on nearby uses and aesthetic qualities of the shoreline. The analysis shall demonstrate that adverse impacts on the character of those areas are effectively mitigated.

8. Prior to issuing a permit for any proposed aquaculture use or development, the Administrator may require copies of permit applications and/or studies required by state and federal agencies to ensure provisions of this Program are met, including, but not limited to, the following information:

a. Anticipated harvest cycles and potential plans for future expansion or change in species grown or harvest practices.

b. Number, types, and dimensions of structures, apparatus, or equipment.

c. Predator control methods.

d. Anticipated levels of noise, light, and odor and plans for minimizing their impacts.

e. Potential impacts to animals, plants, and water quality due to the discharge of wastewater from any upland development.

f. Proof of application for an aquatic lands lease from the Washington State Department of Natural Resources or proof of lease or ownership if bedlands are privately owned.

g. Department of Health Shellfish Certification Number.

h. Department of Fish and Wildlife commercial aquatic farm or non-commercial, personal consumption designation.

i. Proof of application for any permits required by the U.S. Army Corps of Engineers, Department of Health, or other agency.

j. Proof of application for any state and federal permits/approvals including any required federal consultation under Section 7 of the Endangered Species Act (16 U.S.C. § 1531 et seq.).

6.3.4 Commercial

Uses and activities associated with commercial development that are identified as separate use activities in this program, such as Marinas, Piers and Docks, Signs, Utilities, etc., are subject to the regulations established for those uses in addition to the standards for commercial development.

1. Commercial development is prohibited in the Urban Conservancy, Research District, Natural, and Shoreline Residential designations.

2. Home occupations/businesses appropriately licensed by the City of Sequim shall not be considered “commercial” for the purposes of this master program.

3. Water-oriented commercial development is allowed in the Aquatic shoreline environment only if permitted in the adjacent shoreline environment.

4. New non water-oriented commercial development is allowed in the Urban environment provided it is compatible and complimentary to water-oriented uses and does not displace or diminish opportunities for water-oriented uses.

5. Parking facilities shall be placed inland away from the immediate water's edge and shoreline recreational areas, except as approved by a variance.

6. New commercial development shall not block public scenic views.

7. New commercial development shall provide for public access to the shoreline.

8. Removal of trees or natural vegetation shall be prohibited unless for public safety, scenic consideration, or public access and only where such removal will not cause degradation to shoreline ecological processes or functions.

9. Accessory commercial development that is not water-oriented shall be located outside of the shoreline jurisdiction unless the use is wholly contained within an existing structure or where necessary to support water-oriented uses.

6.3.5 Research and Development Facilities

Uses and activities associated with Research and Development Facilities that are identified as separate use activities in this program, such as Marinas, Piers and Docks, Signs, Utilities, etc., are subject to the regulations established for those uses in addition to the standards under this section.

1. Research and Development Facilities are prohibited in the Urban, Urban Conservancy, and Shoreline Residential designations.

2. Research and Development Facilities are permitted in the Natural and Aquatic environmental designations only when locating the facilities outside of the designation is not feasible and will not require shoreline armoring.

3. Facilities located in the Natural or Aquatic designation require a Conditional Use Permit.

4. An Environmental Impact Statement may be required if the new development comprises 30% or more of new impervious surfaces.

5. Any new development in the Research District is limited to expansion within existing building footprints and must expand vertically unless the project proponent provides a written statement with supporting documentation explaining why vertical expansion is not feasible.

6. Accessory development that is not water-oriented shall be located outside of the shoreline jurisdiction unless the use is wholly contained within an existing structure or where necessary to support water-oriented uses.

7. Parking facilities shall be placed inland away from the immediate water's edge and shoreline recreational areas, except as approved by a variance.

6.3.6 Marinas / Boating Facilities

1. The following standards or use regulations are directed toward the John Wayne Marina and potential future marina or boat launch developments or expansions on Sequim' shoreline. John Wayne Marina is a conforming water-dependent use that will require normal maintenance and repair, including occasional

replacement of elements. Marinas are prohibited in the Urban Conservancy, Shoreline Residential, Natural, and Research District environmental designations.

2. New marinas shall plan and provide for public access to shorelines of the state to include a variety of shoreline access opportunities and circulation for pedestrians (including disabled persons), bicycles, and vehicles between shoreline access points, consistent with other comprehensive plan elements.

3. New marina development or expansion of existing private marina facilities shall be allowed only in the Urban and associated Aquatic shoreline environments through a Shoreline Conditional Use Permit.

4. Living aboard moored or anchored vessels outside of the John Wayne Marina is prohibited. Live-aboard vessels within the John Wayne Marina shall be limited to the availability of adequate sanitary and solid waste facilities. Live-aboard vessels must be kept in good repair and in seaworthy condition at all times.

5. Marinas shall be aesthetically compatible with adjacent areas.

6. All activities, uses, and development in marinas shall comply with the following to meet health, safety, and welfare requirements.

    a. All fuels, solvents, and chemicals at marinas shall be kept, stored, handled and used in a manner that minimizes accidental spillage.

    b. Adequate and satisfactory means for handling accidental fuel, solvent, and chemical spills must be provided.

    c. Land and water access to marinas shall be planned to minimize traffic congestion and to minimize pedestrian/vehicle conflicts.

    d. Adequate fire protection shall be required as per the Washington State Fire Code.

    e. Using marine toilets while moored is prohibited unless these toilets are self-contained or have an approved treatment device;

7. Marinas shall provide access to potable water, sewage pump out, and solid waste facilities.

8. Accessory uses shall be limited to water-oriented uses and consistent in scale and intensity of the marina’s surrounding uses.

9. Boathouses or other covered moorage facilities are prohibited.

10. Marina development shall comply with all applicable local, state, and federal regulations and requirements, including those of the Washington State Department of Fish and Wildlife.

11. Marinas shall supply restroom and solid waste receptacles to accommodate marina users, and shall have facilities and established procedures for the discharge of solid waste or sewage, other than discharge into the water.

12. Marinas shall have facilities and established procedures for the disposal or discarding of fish or shellfish cleaning waste, scrapfish, viscera, or unused bait in or near the marina.

13. Applicants for new marinas and marina expansions must demonstrate the following**:**

    a. The proposed design will meet the Washington State Water Quality Standards;

    b. The proposed design will minimize significant interference with geohydraulic processes and disruption of existing shore forms;

    c. The proposed design will minimize impediments to fish migration;

    d. The proposed facility will not impact shellfish or finfish habitat, including spawning, feeding and rearing areas, unless appropriate mitigation;

    e. The proposed design will facilitate orderly launching, retrieval, and storage of boats as well as circulation of vehicles and pedestrians in the vicinity of the marina.

14. New marinas and marina expansions shall also comply with the relevant regulations outlined in 5.2.3, Piers, Docks, Mooring Buoys, Lifts, and Launches.

15. New marinas and marina expansion shall not interfere with any navigation rights as cited in WAC 173-26-241 (3)(c)(vii).

16. There shall be no extended moorage on waters of the state except as allowed by applicable regulations and impacts to navigation and public access is mitigated.

17. New or expanded existing marinas/boating facilities shall be designed to avoid or minimize the need for new dredging or maintenance dredging.

6.3.7 Outdoor Signs

1. All signs are regulated under Chapter 18.58 of the Sequim Municipal Code. Permanent outdoor signs, when permitted by Chapter 18.58, shall be allowed only when the standards of this section are met.

2. Outdoor advertising is prohibited in the Shoreline Residential, Urban Conservancy, and Aquatic shoreline environments. Public information signs are allowed for educational purposes and when required by law or necessary for public safety and circulation.

3. Illuminated signs shall require a Conditional Use Permit.

4. Signs extending above rooflines are prohibited.

5. Flashing or animated signs are prohibited.

6. Signs, when permitted, shall be designed, constructed, and placed in a manner that does not impair views of the shoreline or impair views upland from the water. Vistas and viewpoints shall be free from unnecessary signs.

7. Warning signs shall be installed by the City or by other appropriate entities where hazardous conditions exist on public properties.

8. Signs shall be secured and repaired as necessary to maintain public safety and value.

9. No sign shall be placed or located in any way that may interfere with pedestrian or vehicular traffic, visibility, line of sight, or public safety, which includes but is not limited to vision triangles.

6.3.8 Recreation

Recreational development is permitted in all shoreline environments, except aquatic, when the following standards are met:

1. Parking areas shall be located inland away from the immediate water's edge and recreational beaches. Access shall be provided by walkways or other nonmotorized methods.

2. Recreational developments shall not create significant adverse effects on residential uses of private property, the environmental quality or natural resources of the shoreline area.

3. Valuable shoreline resources and fragile or unique areas such as estuaries and accretion beaches shall be used only for non-intensive and nonstructural recreation activities.

4. All permanent recreational structures and facilities shall be located outside the one hundred year (100-year) flood plain, although the City may grant exceptions for non-intensive accessory uses (e.g., picnic tables, play areas, etc.).

5. Accessory use facilities such as restrooms, recreation halls and gymnasiums, commercial services, access roads and parking areas shall be located inland from shoreline areas unless it can be shown that such facilities are shoreline dependent. These areas shall be linked to the shoreline by walkways.

6. In approving shoreline recreational developments, the City shall ensure that the development will maintain, enhance or restore desirable shoreline features, including unique and fragile areas, scenic views and aesthetic values. To this end, the City of Sequim may adjust and/or prescribe project dimensions, location of project components on the site, intensity of use, screening, parking requirements and setbacks as deemed appropriate to achieve the intent of this program.

7. Proposals for recreational development shall include a landscape plan in which native, self-sustaining vegetation is preferred.

8. The removal of on-site native vegetation shall be limited to the minimum necessary for the development of picnic areas, selected view or other permitted structures or facilities.

6.3.9 Residential

Residential use is not water-dependent but is a preferred use of the shorelines when such development is planned and carried out in a manner that protects shoreline functions and processes consistent with the no net loss provisions of this Program. Uses, structures, and alterations to the natural environment associated with residential development that are identified as separate use activities or shoreline modifications in this program (such as piers and docks; bulkheads; utilities; fill; and clearing and grading) are subject to the regulations established for those uses in addition to any special conditions relating to residential areas established in this section.

1. Residential development in the Urban Conservancy, Natural, and Aquatic shoreline environments is prohibited.

2. Residential development in the Shoreline Residential environment, when permitted by the Zoning Code, shall be permitted only when the standards of this Chapter are met.

3. Residential development over water, including floating homes, is prohibited.

4. New residential development, including accessory dwelling units, shall be located and designed to avoid the need for future shoreline stabilization.

5. Plats and subdivision of land must be designed, configured, and developed in a manner that assures that no net loss of ecological functions results from the plat or subdivision at full build-out of all lots. New plats or subdivisions shall prevent the need for new shoreline stabilization or flood hazard reduction measures.

6. Residential development shall retain and protect the natural vegetation of the shoreline area, or restore and enhance natural vegetation according to the Vegetation Conservation and Land Clearing and Grading provisions of the SMP.

7. Minimum building setbacks and buffers from bluffs, the OHWM, and stream banks shall be governed by the provisions of the Critical Areas Ordinance as adopted in the SMP (Section 6.1.4) as well as other provisions of the SMP (See Appendix A).

8. Residential development plans submitted for approval shall contain provisions for protection of ground water supplies, erosion control, landscaping and maintenance of the natural shoreline integrity and ecological functions.

9. The established velocity, quantity and quality of storm water discharge shall be considered in terms of the sensitivity of the proposed receiving environment. The disposal mode selected shall minimize changes in infiltration, runoff and ground water recharge.

10. To the extent that all reasonable use allowed under current zoning is not precluded, new residential development, including appurtenant structures, must be designed and sited using geotechnical evaluation to avoid the need for shoreline stabilization over the next 100 years.

11. Residential development is prohibited within the 100-year flood plain except when it can be demonstrated (as determined by a qualified professional) that the storage capacity of the flood plain will not be significantly reduced, flood hazards to upstream properties will not be increased or public safety is otherwise endangered.

12. Accretion beaches shall not be developed.

13. New residential development consisting of more than two dwellings must provide joint use or community docks for any docks proposed.

6.3.10 Transportation Facilities

Transportation facility construction shall be permitted within the Urban, Urban Conservancy, Research District, and Shoreline Residential environments according to the standards of this Program. Transportation and parking plans and projects shall be consistent with the public access and environmental protection provisions of this program.

1. Circulation system planning shall include systems for pedestrians, bicycles, and public transportation where appropriate.

2. All transportation facilities in shoreline areas shall be constructed and maintained to cause the least possible adverse impacts on the land and water environments, shall respect the natural character of the shoreline, and make every effort to preserve wildlife, aquatic life and their habitats.

3. Transportation facilities shall not adversely impact existing or planned water-dependent uses by impairing access to the shoreline.

4. New or expanded surface transportation facilities shall be located outside the shoreline jurisdiction if feasible, or set back from the ordinary high water mark far enough to make protective measures such as riprap or other bank stabilization, fill, bulkheads, or substantial site re-grade unnecessary. New or expanded roads or driveways to water-dependent activities shall be reviewed.

5. Parking facilities in shorelines are not a preferred use and shall be allowed only as necessary to support an authorized use. Parking areas are limited to the minimum size necessary to support the authorized use, and shared parking is encouraged. Parking facilities shall avoid or minimize any environmental or visual impacts.

6. Transportation and utility facilities shall be required to make joint use of rights-of-way and to consolidate crossing of water bodies.

7. No vehicles shall be allowed on beach areas except for residential or service access to legally established uses or developments where access from the landward portion of the property is unavailable.

8. Fill for transportation facility development shall not be permitted in water bodies or associated wetlands and beaches except when all structural or upland alternatives have proven unfeasible and the transportation facilities are necessary to support uses consistent with this program.

9. Transportation facilities that are allowed to cross over water bodies and associated wetlands shall utilize elevated, open pile or pier structures whenever feasible. All bridges shall be built high enough to allow the passage of debris and anticipated high water flows.

10. New roads that cannot be located outside of Shoreline jurisdiction pursuant to 6.3.10 (4) shall be adequately set back from water bodies and shall provide buffer areas of compatible, self-sustaining native vegetation. Shoreline scenic drives and viewpoints may provide breaks in the vegetative buffer to allow open views of the water.

11. The City shall give preference to mechanical means for roadside brush control. If herbicides are used, they shall be applied so that chemicals do not enter water bodies. The use of herbicides shall conform to the manufacturer's directions.

12. Pedestrian shoreline transportation facilities, such as footpaths and boardwalks, where permitted shall meet all standards of this section and shall be planned and developed in a way to minimize impact on the natural shoreline environment.

13. Transportation facilities shall not be located in hazardous areas, such as steep slopes, areas with soils subject to severe erosion or landslide hazards, in front of feeder bluffs, over driftways, or on accretion beaches.

6.3.11 Utilities

These provisions apply to services and facilities that produce, convey, store, or process power, water, sewage, communications, waste, and similar services and functions. On-site utility features serving a primary use, such as a water or sewer line to a residence are “accessory utilities” and shall be considered a part of the primary use. Utilities are permitted within the Urban, Urban Conservancy, Research District, and Shoreline Residential environments when the standards of this section are met.

1. Utility work in the Natural and Aquatic environments require a Shoreline Conditional Use Permit.

2. Whenever feasible, all transmission lines for power, sewage, communications, water, etc., shall be located outside shoreline jurisdiction if possible. Where transmission lines must be located in the shoreline jurisdiction they shall be located underground.

3. Utilities shall be designed, located and installed in such a way as to preserve the natural landscape and minimize conflicts with present and planned land and shoreline uses while meeting the needs of future populations in areas planned to accommodate growth.

4. Utility production and processing facilities, such as power plants and sewage treatment plants, or parts of those facilities that are nonwater-oriented shall not be allowed in shoreline jurisdiction unless it can be demonstrated that no other feasible option is available. A study done by a qualified professional shall be submitted to justify the location of a utility facility in shoreline jurisdiction.

5. Utilities must be located in existing rights of way and corridors whenever possible.

6.3.12 Unclassified Uses

Uses that are not classified or set forth here may only be authorized as conditional uses provided the applicant can demonstrate that the criteria set forth in Chapter 7 of the SMP are met. Unclassified uses approved as conditional uses should also remain consistent with the policies of the Sequim SMP and RCW 90.58.020.

CHAPTER 7 – ADMINISTRATIVE PROCEDURES

7.1 Shoreline Permit Requirements

The SMA (RCW 90.58.140(3)) requires that local governments establish a program for the administration and enforcement of the shoreline permit system. All proposed uses and development occurring within shoreline jurisdiction must conform to RCW chapter 90.58 (the Shoreline Management Act) and this Program regardless of whether a permit is required. The purpose of this Chapter is to describe that program and provide guidance for obtaining development permits for activities in the City's shoreline jurisdiction. References to the "Shoreline Administrator" means the Planning Director or his/her designee responsible for administering the Sequim SMP.

Within the City of Sequim, all non-exempt substantial development undertaken within the shorelines of the state must first obtain a Shoreline Substantial Development, Shoreline Conditional Use, or Variance Permit from the City. Substantial development means any development of which the total cost or fair market value exceeds five thousand seven-hundred and eighteen dollars ($5,718) or as may be adjusted for inflation under the provisions of RCW 90.58.030, or construction of a dock in saltwater where the total cost exceeds $2,500, or any development that materially interferes with the normal public use of the water or shorelines of the state, except those exempted developments set forth in WAC 173-27-040.

The shoreline activities that are exempt from permit requirements are listed in Section 7.2. The following sections describe the process for obtaining a Shoreline Substantial Development, Shoreline Conditional Use, or Variance Permit. For each permit type, the criteria, application requirements, and decision process are presented.

The City's shoreline administrative procedures should be consistent with all provisions, criteria, application and public notice requirements, and the review procedures set forth in WAC 173-27, Shoreline Management Permit and Enforcement Procedures. In the event of any inconsistencies between this SMP and WAC 173-27, the mandatory provisions of the WAC control. In all other cases, this SMP controls.

7.2 Exemptions from Substantial Development Permit Requirements

Certain development activities are exempt from securing a Shoreline Substantial Development Permit. State law requires that exemptions be construed narrowly. Exemption from the Substantial Development Permit process does not constitute exemption from compliance with the policies and use regulations of the SMA (RCW 90.58); the provisions of this master program, or other applicable city, state or federal permit requirements. Exemptions must still comply with no net loss of ecological functions, which may require mitigation even though the development activity is exempt.

A development activity or use that is listed as a conditional use pursuant to this master program or is an unclassified use, must obtain a Conditional Use Permit even if the development is exempt from a Shoreline Substantial Development Permit. When an exempt development or use is proposed that does not comply with the bulk, dimensional and performance standards of the master program, such development or

use can only be authorized by approval of a variance, consistent with WAC 173-27-040(1)(b).

If any part of a proposed development is not eligible for exemption, then a Substantial Development Permit is required for the entire proposed development project, per WAC 173-27-040(d). The City may attach conditions to the approval of exempted developments and/or uses as necessary to assure consistency of the project with the SMA and Sequim SMP, per WAC 173-27-040(e).

The following shall not require Substantial Development Permits:

1. Any development in which the total cost or fair market value, whichever is higher, does not exceed six thousand four hundred and sixteen dollars ($6,416) or as determined under WAC 173-27-040, or construction of a dock in saltwater where the total cost does not exceed $2,500, if such development does not materially interfere with the normal public use of the water or shorelines of the state and does not result in a net loss of ecological functions. For purposes of determining whether or not a permit is required, the total cost or fair market value shall be based on the value of development that is occurring on shorelines of the state as defined in RCW 90.58.030 (2)(c). The total cost or fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment or materials.

2. Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. “Normal maintenance” includes those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition, including, but not limited to its size, shape, configuration, location and external appearance, except where repair involves total replacement which is not common practice or causes substantial adverse effects to the shoreline resource or environment.

    a. Normal repair must occur within a reasonable period after decay or partial destruction. If decay or partial destruction is fifty percent (50%) or greater of the replacement cost of the original development, a permit allowing repair or replacement must be secured within one year.

    b. Reconstruction conditions for nonconforming structures shall be those as set forth in Section 6.3.2

    c. Replacement of a structure or development may be authorized as a repair if:
        i. The replacement is reconstructed as it existed prior to the event, excluding reconstruction necessitated by the property owner’s criminal act. Building height and shoreline setbacks shall not exceed pre-existing setbacks and restrictions; and

ii. When the replacement supported by a statement from the Building Official that complete replacement is common practice and the replacement does not cause substantial adverse effects to shoreline resources or the environment.

3. Construction of a normal protective bulkhead common to single family residences. A “normal protective” bulkhead includes those structural and non-structural developments installed at or near, and parallel to the ordinary high water mark for the sole purpose of protecting an existing single family residence and appurtenant structures from loss or damage by erosion. A normal protective bulkhead is not exempt if constructed for the purpose of creating dry land. When a vertical or near vertical wall is being constructed or reconstructed, not more than one cubic yard of fill per one foot of wall may be used as backfill. When an existing bulkhead is being repaired by construction of a vertical wall fronting the existing wall, it shall be constructed no further waterward of the existing bulkhead than is necessary for construction of new footings. When a bulkhead has deteriorated such that the ordinary high water mark has been established by the presence and action of water landward of the bulkhead, the replacement bulkhead must be located at or near the actual ordinary high water mark. Alternative bank stabilization projects may also be considered a normal protective bulkhead when any structural elements are consistent with the above requirements and when the project has been approved by the Department of Fish and Wildlife.

4. Emergency construction necessary to protect property from damage by the elements. An “emergency” is an unanticipated and imminent threat to public health, safety, or the environment that requires immediate action within a time too short to allow full compliance with this chapter. Emergency construction does not include development of new permanent protective structures where none previously existed, except where new protective structures are deemed by the Shoreline Administrator to be the appropriate means to address the emergency situation. Upon abatement of the emergency situation, the new structure shall be removed or any permit that would have been required, absent an emergency, has been obtained. All emergency construction shall be consistent with the policies of RCW 90.58 and the Sequim SMP. As a general matter, flooding or other seasonal events that can be anticipated and may occur, but are not imminent, are not an emergency.

5. Construction or modification, by or under the authority of the Coast Guard, of navigational aids such as channel markers and anchor buoys.

6. Construction on shorelands by an owner, lessee or contract purchaser of a single family residence for his/her own use or for the use of his/her family. The residence shall not exceed a height of thirty-five (35) feet above average grade level and must meet all requirements of the City and any state agencies having jurisdiction. “Single-family residence” means a detached dwelling designed for and occupied by one family, including those structures and developments within a contiguous ownership which are a normal appurtenance. An

"appurtenance" is necessarily connected to the use and enjoyment of a single-family residence and is located landward of the ordinary high water mark and the perimeter of a wetland. Normal appurtenances include a garage, deck, driveway, utilities, fences, installation of a septic tank and drainfield, and grading that does not exceed two hundred fifty (250) cubic yards and does not involve placing fill in any wetland or waterward of the ordinary high water mark. All construction authorized under this exemption shall be located landward of the ordinary high water mark.

7. The marking of property lines or corners on state owned lands, when such marking does not significantly interfere with normal public use of the surface of the water.

8. Any project with a certification from the Governor pursuant to RCW 80.50.

9. Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this chapter, if:

    a. The activity does not interfere with the normal public use of the surface waters;

    b. The activity will have no significant adverse impact on the environment including but not limited to fish, wildlife, fish or wildlife habitat, water quality, and aesthetic values;

    c. The activity does not involve the installation of any structure, and upon completion of the activity the vegetation and land configuration of the site are restored to conditions existing before the activity;

    d. A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to ensure that the site is restored to preexisting conditions; and

    e. The activity is not subject to the permit requirements of RCW 90.58.550 (oil or natural gas exploration in marine waters).

10. The process of removing or controlling aquatic noxious weeds, as defined in RCW 17.26.020, as allowed in 6.1.2(b). If no reasonable alternative exists, then herbicide or other treatment methods applicable to weed control may be used that are recommended by a final environmental impact statement published by the Department of Agriculture or Ecology jointly with other state agencies under RCW 43.21C.

11. Watershed restoration projects as set forth in WAC 173-27-040(2)(o). The Shoreline Administrator shall review watershed restoration projects for consistency with this master program in an expeditious manner and shall issue a decision along with any conditions within forty-five days of receiving all

materials necessary to review the request from the applicant. No fee may be charged for accepting and processing applications for watershed restoration projects as used in this section.

12. A public or private project, the primary purpose of which is to improve fish or wildlife habitat or fish passage, when all of the following apply:

    a. The project has been approved in writing by the Washington State Department of Fish and Wildlife (WDFW) as necessary for the improvement of the habitat or passage and appropriately designed and sited to accomplish the intended purpose;

    b. The project has received hydraulic project approval by WDFW pursuant to RCW 77.55; and

    c. The Shoreline Administrator has determined that the project is consistent with this master program.

13. Hazardous substance remedial actions. The procedural requirements of chapter RCW 90.58 shall not apply to a project for which a consent decree, order or agreed order has been issued pursuant to RCW 70.105D or to Ecology when it conducts a remedial action under RCW 70.105D. Ecology shall, in consultation with the City, assure that such projects comply with the substantive requirements of RCW 90.58, WAC 173–26 and this master program.

7.2.1 Statement of Shoreline Exemption

Applicants for exempt uses or development must obtain a written statement of Shoreline Exemption verifying the proposed development is not subject to a Shoreline Substantial Development Permit. According to State guidelines the burden of proof that a development or use is exempt from the permit process is on the applicant. If any part of the development is not eligible for exemption, then a Substantial Development Permit is required for the entire proposed development.

The statement of Shoreline Exemption offers an applicant an itemization of SMP and other requirements applicable to the proposed project in conjunction with other permit processes that may be required. In the case of development subject to a building permit, but exempt from the shoreline permit process, the Building Official or other permit authorizing official, through consultation with the Shoreline Administrator, shall attach shoreline management terms and conditions to Building Permits and other permit approvals pursuant to RCW 90.58.140. For example, the approval of a Building Permit for a single-family residence can be conditioned on the basis of SMP policy and use regulations.

Where shoreline development proposals are subject to review, approval, and permitting by a federal or state agency, the Shoreline Administrator shall prepare a statement of exemption, addressed to the applicant, the federal or state permitting agency, and Ecology, pursuant to WAC 173-27-050.

The letter shall indicate the specific exemption provision from WAC 173-27-040 that is being applied to the development and provide a summary of the analysis demonstrating consistency of the project with the Sequim SMP and the SMA.

7.3 Permit Procedures

All Shoreline Permits, (Substantial Development, Conditional Use, and Variance) are classified as a C-I land use action. The Planning Commission shall be the decision-making authority for all Shoreline Permits.

Each permit for a Shoreline Permit issued by the City of Sequim shall contain a provision that construction pursuant to the permit shall not begin and is not authorized until twenty-one (21) days from the date of filing as defined in RCW 90.58.140(6) and WAC 173-27-1301, or until all review proceedings initiated within twenty-one days from the date of such filing have been terminated; except as provided in the SMA (RCW 90.58.140(5.b)) for Shoreline Hearings board appeals.

The Planning Commission shall hold a public meeting on each proposed Shoreline Permit application. The Shoreline Administrator shall prepare and distribute public notice of the meeting as set forth in SMC 20.01.191.

The Planning Commission shall determine the application's compliance with the review criteria for Shoreline Permits and this SMP, in addition to any other criteria specified by the Sequim Municipal Code or statute. Upon a finding of compliance, the Planning Commission shall instruct the Shoreline Administrator to prepare written findings of fact and statement of reasons in support of the determination and provide notice to Ecology as required according to the type of Shoreline Permit. The recommendation may include issuing the permit, issuing the permit with conditions, or denial of the application. In each case, the Planning Commission may attach conditions for approval to assure no net loss of ecological functions, as identified in the City's 2010 Inventory and Characterization. Ecology may also attach conditions for approval on Conditional Use Permits and Variances.

7.3.1 Substantial Development Permits

General Provisions.

Development means a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to this chapter at any state of water level. Substantial development means any development of which the total cost or fair market value exceeds five thousand seven hundred and eighteen dollars ($5,718), or construction of a dock in saltwater where the total cost exceeds $2,500, or any development which materially-interferes with the normal public use of the water or shorelines of the state, except those exempted developments set forth in the preceding section, consistent with WAC 173-27-040.

Criteria.

A Substantial Development Permit shall be granted by the Shoreline Administrator only when the development proposed is consistent with the following criteria:

1. Goals, objectives, policies and use regulations of the Sequim SMP;

2. Sequim Comprehensive Plan and Municipal Code; and

3. The policies, guidelines, and regulations of the SMA (RCW 90.58, WAC 173-26 and WAC 173-27).

If any application does not substantially comply with the criteria listed in this section, the Planning Commission may deny such application or attach any terms or conditions that are deemed suitable and reasonable given the purpose and objectives of this SMP. Upon the Planning Commission's determination of compliance with the criteria listed in this section, the Shoreline Administrator shall issue the permit, or issue the permit with conditions.

Notice to Ecology

Ecology shall be notified within eight (8) days of any Shoreline Substantial Development Permit decisions made by the Planning Commission. The Shoreline Administrator shall file the following with the Department of Ecology and the Attorney General:

1. A copy of the complete application pursuant to WAC 173-27-180;

2. Findings and conclusions that establish the basis for the decision including but not limited to identification of shoreline environment designation, applicable master program policies and regulations and the consistency of the project with review criteria for Substantial Development Permits;

3. The final decision of the Planning Commission;

4. The permit intake form (Appendix A to WAC 173-27-990, included at the end of this chapter);

5. Where applicable, Shoreline Administrator shall also file the applicable documents required by RCW 43.21C, the State Environmental Policy Act, or a statement summarizing the actions and dates of such actions taken under RCW 43.21C; and

6. Affidavit of public notice.

7. The final approved plan.

Ecology shall provide a written notice to the Shoreline Administrator and the applicant of the "date of filing." "Date of filing" is the date of Ecology's actual receipt of the Planning Commission's final decision on the Substantial Development Permit.

7.3.2 Conditional Use Permits

General Provisions

The purpose of a Shoreline Conditional Use Permit is to allow case-by-case review of uses which may have a greater potential for impacts without project-specific conditions, while providing flexibility in varying the application of the use regulations of this SMP in a manner consistent with the policies of RCW 90.58.020. Ecology is the final reviewing authority for Shoreline Conditional Use Permits pursuant to WAC 173-27.

Uses that are not classified or set forth here may only be authorized as conditional uses if the applicant can demonstrate that the criteria set forth for conditional uses are met. Unclassified uses approved as conditional uses should also remain consistent with the policies of RCW 90.58.020 and should not produce substantial adverse effects on the shoreline environment.

Criteria

Pursuant to WAC 173-27-160, the criteria below shall constitute the minimum criteria for review and approval of a Shoreline Conditional Use Permit. Uses classified as conditional uses, and not uses prohibited by the regulations of this SMP, may be authorized provided that the applicant can demonstrate all of the following:

1. That the proposed use will be consistent with the policies of RCW 90.58.020, the policies of this SMP, the City of Sequim Comprehensive Plan and other applicable plans, programs and/or regulations;

2. That the proposed use will not interfere with the normal public use of public shorelines;

3. That the proposed use of the site and design of the project will be compatible with other permitted uses within the area and with uses planned for the area under the comprehensive plan and shoreline master program;

4. That the proposed use will cause no significant adverse effects to the shoreline, will not result in a net loss of ecological functions, and will not be incompatible with the environment designation or zoning classification in which it is to be located;

5. That the public interest suffers no substantial detrimental effect; and

6. That the proposed use is in the best interest of the public's health, safety, morals or welfare.

7. That consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if conditional use permits were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment. Other uses which are not classified or set forth in this Program may be authorized as conditional uses provided the applicant can demonstrate

consistency with the requirements of this section and the requirements for conditional uses contained in this Program. Uses which are specifically prohibited by this Program may not be authorized pursuant to this section.

Notice to Ecology

Within eight (8) days of the Planning Commission's final decision the Shoreline Administrator shall file the following with the Ecology and the Attorney General:

1. A copy of the complete application pursuant to WAC 173-27-180;

2. Findings and conclusions that establish the basis for the decision including but not limited to, identification of shoreline environment designation, applicable master program policies and regulations, and the consistency of the project with review criteria for the applicable Shoreline Permit;

3. The final decision of Planning Commission;

4. The permit data sheet (Appendix A to WAC 173-27-990, included at the end of this Chapter); and

5. The Shoreline Administrator shall also file the applicable documents required by RCW 43.21C, the State Environmental Policy Act, or a statement summarizing the actions and dates of such actions taken under RCW 43.21C.

6. Affidavit of public notice;

7. The final approved plans.

Ecology shall provide a written notice to the Shoreline Administrator and the applicant of the "date of filing." "Date of filing" is the date of transmittal of the Ecology's final decision on the Conditional Use Permit or Variance Permit.

Ecology shall review the complete file submitted by the Shoreline Administrator on Shoreline Conditional Use Permits and any other information submitted or available that is relevant to the application.

Ecology shall base its determination to approve, approve with conditions or deny a Conditional Use or Variance Permit on consistency with the policy and provisions of the SMA, this SMP, and the criteria in WAC 173-27-160 or 173-27-170, as applicable.

Ecology shall render and transmit to the Shoreline Administrator and the applicant its final decision approving, approving with conditions, or disapproving the permit within thirty (30) days of the date of submittal. The Shoreline Administrator will notify parties of record of the decision.

7.3.3 Variances

General Provisions

The purpose of a Variance Permit is strictly limited to granting relief from specific bulk, dimensional or performance standards set forth in this SMP, and where there are extraordinary or unique circumstances relating to the physical character or configuration of property such that the strict implementation of the SMP would impose unnecessary hardships on the applicant or thwart the SMA policies as stated in RCW 90.58.020. Requests for allowing uses different than those specifically identified as allowed in the shoreline environment cannot be considered in the variance process.

Construction pursuant to this permit shall not begin nor can construction be authorized except as provided in WAC 173-27. In all instances, extraordinary circumstances shall be shown and the public interest shall suffer no substantial detrimental effect. Ecology is the final approving authority for Variance Permits.

Criteria

Pursuant to WAC 173-27-210, the criteria below shall constitute the minimum criteria for review and approval of a Shoreline Variance Permit. Variance Permits for development that will be located landward of the ordinary high water mark (per RCW 90.58.030(2)(b) definition), except those areas designated as marshes, bogs or swamps pursuant to WAC 173-22, may be authorized provided the applicant can demonstrate all of the following:

1. That the strict application of the bulk, dimensional or performance standards set forth in this Program precludes, or significantly interferes with, reasonable use of the property;

2. That the hardship described above is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and not, for example, from deed restrictions or the applicant's own actions;

3. That the design of the project will be compatible with other permitted activities within the area and with uses planned for the area under the comprehensive plan and shoreline master program and will not cause adverse impacts to the shoreline environment.;

4. That the variance authorized does not constitute a grant of special privilege not enjoyed by other properties in the area, and will be the minimum necessary to afford relief; and

5. That the public interest will suffer no substantial detrimental effect.

6. Variance Permits for development that will be located either waterward of the ordinary high water mark or within marshes, bogs or swamps as designated in

WAC 173-22, may be authorized provided the applicant can demonstrate all the criteria stated above as well as the following:

a. That the strict application of the bulk, dimensional or performance standards set forth in this Program precludes all reasonable use of the property; and

b. That the public rights of navigation and use of the shorelines will not be adversely affected by the granting of the variance.

c. That consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if variances were granted to other developments in the area where similar circumstances exist, the total of the variances should also remain consistent with the policies of RCW 90.58 and should not produce substantial adverse effects to the shoreline environment or result in a net loss of ecological functions. Variances from the use regulations of this SMP are prohibited.

Notice to Ecology

The same procedure identified in Conditional Use Permits shall be required for Variance Permits.

7.3.4 Application

The owner of the subject property or the authorized agent(s) of the owner is encouraged to have a pre-application meeting with the Shoreline Administrator and/or his or her staff to determine the need for a Shoreline Permit. If a Shoreline Permit is required, a completed application for a Shoreline Permit shall, at a minimum, shall contain the following information and diagrams:

1. A completed “Shoreline Substantial Development Permit” application form.

2. A completed JARPA form, if required.

3. Completed intake form from WAC 173-27-990, Appendix A – Shoreline Management Act Permit Data Sheet and Transmittal Letter, included at the end of this chapter.

4. The name, address and phone number of the applicant. The applicant should be the owner of the property or the primary proponent of the project and not the representative of the owner or primary proponent.

5. The name, address and phone number of the applicant's representative if other than the applicant.

6. The name, address and phone number of the property owner, if other than the applicant.

7. Location of the property. This shall, at a minimum, include the property address and identification of the section, township and range to the nearest quarter, quarter section or latitude and longitude to the nearest minute. All applications for projects located in open water areas away from land shall provide a longitude and latitude location.

8. Identification of the name of the shoreline (water body) that the site of the proposal is associated with. This should be the water body from which jurisdiction of the act over the project is derived (e.g. Sequim Bay).

9. A general description of the proposed project that includes the proposed use or uses and the activities necessary to accomplish the project.

10. A general description of the property as it now exists including its physical characteristics and improvements and structures.

11. A general description of the vicinity of the proposed project including identification of the adjacent uses, structures and improvements, intensity of development and physical characteristics.

12. A site development plan consisting of maps and elevation drawings, drawn to an appropriate scale to depict clearly all required information, photographs and text which shall include:

    a. The boundary of the parcel(s) of land upon which the development is proposed.

    b. The ordinary high water mark of all water bodies located adjacent to or within the boundary of the project. This may be an approximate location provided, that for any development where a determination of consistency with the applicable regulations requires a precise location of the ordinary high water mark the mark shall be located precisely and the biological and hydrological basis for the location as indicated on the plans shall be included in the development plan. Where the ordinary high water mark is neither adjacent to or within the boundary of the project, the plan shall indicate the distance and direction to the nearest ordinary high water mark of a shoreline.

    c. Existing and proposed land contours. The contours shall be at intervals sufficient to accurately determine the existing character of the property and the extent of proposed change to the land that is necessary for the development. Areas within the boundary that will not be altered by the development may be indicated as such and contours approximated for that area.

    d. A delineation of all wetland areas that will be altered or used as a part of the development.

e. A general indication of the character of vegetation found on the site.

f. The dimensions and locations of all existing and proposed structures and improvements including but not limited to; buildings, paved or graveled areas, roads, utilities, septic tanks and drainfields, material stockpiles or surcharge, and stormwater management facilities.

g. Where applicable, a landscaping plan for the project.

h. Where applicable, plans for development of areas on or off the site as mitigation for impacts associated with the proposed project shall be included and contain information consistent with the requirements of this section.

i. Quantity, source and composition of any fill material that is placed on the site whether temporary or permanent.

j. Quantity, composition and destination of any excavated or dredged material.

k. A vicinity map showing the relationship of the property and proposed development or use to roads, utilities, existing developments and uses on adjacent properties.

l. Where applicable, a depiction of the impacts to views from existing residential uses and public areas.

13. Copy of completed SEPA environmental checklist, declaration of non-significance or environmental impact statement, if required. Note that if the environmental review has not occurred prior to application for a Shoreline Permit, the time period for application review may be extended.

14. The names, addresses and legal description for each parcel of property within three hundred (300) feet of the exterior boundary of the subject property as shown by the records of the Clallam County Assessor.

15. Other information, plans, data and diagrams as required by the Shoreline Administrator.

7.3.5 Public Notice

Applicants are responsible for the following public notices, in addition to the provisions required in SMC 20.01.150, as part of any Shoreline Permit application. If SEPA compliance is required for the proposal, public notice requirements under SEPA may be satisfied concurrently as part of the Shoreline Permit process.

1. Notification by regular mail no less than thirty (30) days prior to issuance of a permit to all owners of property lying within 300 feet of the exterior boundaries of where substantial development is taking place or activities supporting the

proposed improvement. The form of such notice shall be provided by the City and the content shall be approved by the Shoreline Administrator prior to mailing.

2. Posting of a sign at the subject property, presenting the following information:

    a. Type of permit applied for;

    b. Brief description of proposed use;

    c. Address of subject property;

    d. Applicant's name;

3. Publication of public notice in a newspaper with local distribution no less than once a week for two consecutive weeks, with the last publication date no less than thirty (30) days prior to issuance of permit.

4. An affidavit that the notice has been properly published, posted and deposited in the U. S. mail pursuant to the above requirements shall be submitted to the Shoreline Administrator at least thirty (30) days in advance of the issuance of permit.

7.3.6 Appeals

All appeals of any final permit decision are governed by the procedures established in RCW 90.58.180, RCW 90.58.140(6), and WAC 481-03, the rules and procedures of the Shorelines Hearing Board. Appeals must be made to the Shorelines Hearing Board within twenty-one (21) days after the City's final decision concerning the Shoreline Permit or revisions of the permit.

7.3.7 Administrative Interpretations of the SMP

An administrative interpretation of the SMP shall be a Type A-1 process as defined under SMC 20.01. Administrative interpretations of the SMP shall be made in consultation with the Washington State Department of Ecology as provided under WAC 173-26-140.

7.3.8 Revision of Shoreline Permits

A permit revision is required whenever an applicant proposes substantive changes to the design, terms or conditions of a project from that which was approved in the permit. Changes are substantive if they materially alter the project in a manner that relates to its conformance to the terms and conditions of the permit, the master program and/or the policies and provisions of RCW 90.58. Changes that are not substantive in effect do not require approval of a revision.

1. When a revision of a Shoreline Permit is sought, the applicant shall submit detailed plans and text describing the proposed changes in the permit and demonstrating compliance with the following minimum standards pursuant to WAC 173-27-100.

2. If the proposed changes are determined by the Shoreline Administrator to be within the scope and intent of the original permit, and are consistent with the SMA (RCW 90.58), the Guidelines in WAC 173-26, and this SMP, the revision shall be approved. "Within the scope and intent of the original permit" means the following:

    a. No additional over water construction will be involved.

    b. Lot coverage and height may be increased a maximum of ten percent (10%) from the provisions of the original permit if:

        i. Revisions involving new structures not shown on the original site plan would require a new permit, and

        ii. Any revisions authorized under this subsection shall not exceed height, lot coverage, setback or any other requirements of this SMP for the area in which the project is located.

    c. Landscaping, consistent with the original permit and any conditions, may be added to a project without requiring an application for a new permit and is consistent with this SMP for the area in which the project is located.

    d. The use authorized pursuant to the original permit is not changed.

    e. No additional adverse environmental impact will be caused by the project revision.

4. If the revision, or the sum of the revision, and any previously approved revisions, violate the terms of one or more of the provisions itemized above, the applicant shall be required to apply for a new Shoreline Permit.

5. Revision approval, including revised site plans and text necessary to clearly indicate the authorized changes and the final consistency ruling, shall be filed with Ecology.

6. Substantial Development Permits. The revised permit shall become effective immediately. Within eight (8) days of the date of final action the revised site plan, text and the approved revision shall be submitted to Ecology and the Attorney General for the completion of their files.

7. Conditional Use and Variance Permits. The Shoreline Administrator shall submit the revision to Ecology for approval, approval with conditions, or denial, and shall indicate that the revision is being submitted under the requirements of WAC 173-27-100. Ecology shall render and transmit to the Shoreline Administrator and the applicant its final decision within fifteen (15) days of the date of Ecology's receipt of the submittal from the Shoreline Administrator. The revised permit is effective upon Ecology’s final action.

8. A notice of revision approval shall be forwarded all parties of record. Formal revisions to permits are subject to the twenty-one (21) day appeal process described above. Appeals shall be based only on allegations of a violation of (2) above.

9. Any construction undertaken as part of the revised permit is done at the applicant's own risk until the applicant the appeal period expires.

10. Denial of a permit revision has no effect on the validity of the original permit.

7.3.9 Review of Shoreline Actions

The Shoreline Administrator, shall on an annual basis, review all shoreline permits and exemptions issued during the previous year to determine their cumulative impacts to the shoreline and make a written determination if there may or may not have been a net loss of shoreline functions. The determination shall be made in consultation with applicable state and tribal agencies.

Appendix A

Shoreline Management Program

CRITICAL AND ENVIRONMENTALLY SENSITIVE AREAS PROTECTION

Sections:

18.80.010 Purpose.

Wetlands, streams, flood hazards, geologic hazards (erosion, landslide, seismic), steep slopes, fish and wildlife habitat areas, locally unique features (ravines, marine bluffs, beaches) and protective buffers, and critical aquifer recharge areas constitute critical areas that are of special concern to the city. The purpose of this chapter is to protect critical areas as required by the Growth Management Act and as provided in the guidelines promulgated by the Washington Department of Commerce. Accordingly, the intent of this chapter is to use a performance-based approach and establish minimum standards for development of properties that contain or adjoin critical areas and to protect the public health, safety and welfare in regard to critical areas by:

A. Mitigating unavoidable impacts by regulating alterations;

B. Protecting from impacts of development by regulating alterations;

C. Protecting the public from personal injury, loss of life or property damage due to flooding, erosion, landslides, seismic events or soil subsidence;

D. Protecting against publicly financed expenditures in the event critical areas are misused, which causes:

1. Unnecessary maintenance and replacement of public facilities,

2. Publicly funded mitigation of avoidable impacts,

3. Cost for public emergency rescue and relief operations where the causes are avoidable, or

4. Degradation of the natural environment;

E. Protecting the public trust in navigable waters and as to aquatic resources;

F. Preventing adverse impacts to water availability, water quality and streams;

G. Protecting unique, fragile and valuable elements of the environment, including wildlife and its habitat;

H. Alerting appraisers, assessors, owners, potential buyers or lessees to the development limitations of critical areas;

I. Providing city officials with sufficient information to adequately protect critical areas when approving, conditioning or denying public or private development proposals; and

J. Implementing the policies of the State Environmental Policy Act, Chapter 43.21C RCW; the city comprehensive plan; this chapter; and all updates and amendments, functional plans, and other land use policies formally adopted or accepted by the city. (Ord. 2012-001 § 2 (Exh. A); Ord. 631 § 1, 1992)

18.80.030 Definitions.

For the purposes of this chapter, the following definitions shall apply:

"Anadromous" means fish that live part or the majority of their lives in saltwater, but return to freshwater to spawn.

"Beaches and associated coastal-drift process areas" means the areas that encompass marine shorelines that contain important sites of material supply, transport and deposition that define the present landforms and natural character of the Sequim shoreline.

"Best management practices" means conservation practices or systems of practices and management measures that:

1. Control soil loss and reduce water quality degradation caused by nutrients, animal waste, toxins, and sediment; and

2. Minimize adverse impacts to surface water and ground water flow, circulation patterns, and to the chemical, physical and biological characteristics of wetlands.

"Category I wetlands" means wetlands that (1) represent a unique or rare wetland type; (2) are more sensitive to disturbance than most wetlands; (3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or (4) provide a high level of functions.

This category includes: relatively undisturbed estuarine wetlands of one or more acres; national heritage wetlands; bogs; mature forested wetlands of one or more acres; wetlands in coastal lagoons; and high-functioning wetlands that score 70 or more points on a scale of one to 100 based on the Department of Ecology's Wetland Rating System for Western Washington, publication 04-06-025, or as revised and approved by the Department of Ecology.

"Category II wetlands" means wetlands that may have some level of disturbance, but still retain high function in some areas. This category includes, but is not limited to: estuarine wetlands less than one acre or those that have been disturbed and are greater than one acre; interdunal wetlands greater than one acre; and wetlands that score 51 to 69 points on a scale of one to 100 based on the Department of Ecology's Wetland Rating System for Western Washington, publication 04-06-025, or as revised and approved by the Department of Ecology.

"Category III wetlands" means wetlands that score 30 to 50 points on a scale of one to 100 based on the Department of Ecology's Wetland Rating System for Western Washington, publication 04-06-025, or as revised and approved by the Department of Ecology.

"Category IV wetlands" means wetlands that have low functions and score less than 30 points on a scale of one to 100 based on the Department of Ecology's Wetland Rating System for Western Washington, publication 04-06-025, or as revised and approved by the Department of Ecology.

"Closed stream segments" are those segments of streams, regardless of their type, that are fully enclosed in an underground pipe or culvert.

"Compensatory mitigation" means replacing project-induced wetland losses or impacts, and includes, but is not limited to, the following:

1. "Creation," meaning actions performed to establish wetland functional characteristics and processes which have been lost by alterations, activities or catastrophic events within an area which no longer meets the definition of a wetland.

2. "Restoration," meaning actions performed to reestablish or rehabilitate wetland functional characteristics and processes which have been lost by alterations, activities or catastrophic events within an area which no longer meets the definition of a wetland.

3. "Enhancement," meaning actions performed to improve the condition of existing degraded wetlands so that the functions they provide are of a higher quality.

"Critical aquifer recharge areas" are areas with a critical recharging effect on aquifers used for potable water, including areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water, or is susceptible to reduced recharge.

"Critical areas" and "environmentally sensitive areas" mean and include any of the following areas and ecosystems:

1. Wetlands;

2. Streams or stream corridors;

3. Frequently flooded areas;

4. Geologically hazardous areas:

    a. Erosion hazard areas,

    b. Landslide hazard areas,

    c. Seismic hazard areas;

5. Fish and wildlife habitat conservation areas;

6. Locally unique features:

    a. Ravines,

    b. Marine bluffs,

    c. Beaches and associated coastal-drift processes;

7. Critical aquifer recharge areas; and

8. Buffers as established under SMC 18.80.070.

"Erosion hazard areas" means those areas containing soils which, according to the United States Department of Agriculture Soil Conservation Service Soil Classification System, may experience severe to very severe erosion. Erosion hazard areas also include coastal erosion-prone areas and channel migration zones.

"Fish and wildlife habitat conservation areas" are areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness. Locally important habitats are also included.

"Frequently flooded areas" means lands in the floodplain subject to a one-percent or greater chance of flooding in any given year (the 100-year storm flood). These areas include but are not limited to the floodplains of streams, rivers, lakes, coastal areas, wetlands, and the like.

"Geologically hazardous areas" means areas that, because of their susceptibility to erosion, sliding, earthquake, or other geological event, are not normally suited to siting commercial, residential or industrial development consistent with public health or safety concerns.

"Land use permit" means a permit or action required to be approved by the city to allow the development of one or more parcels of property.

"Landslide hazard areas" means areas potentially subject to risk of mass movement due to a combination of geologic, topographic and hydrologic factors. The following areas are considered to be subject to landslide hazards:

1. Areas of historic failures or potentially unstable slopes, such as areas mapped within Soil Conservation Service Slide Hazard Area Studies; as unstable, unstable old slides, or unstable recent slides designated by the Department of Ecology Coastal Zone Atlas; and as quaternary slumps, earthflows, mudflows, lahars or landslides on maps published by the United States Geological Survey or Department of Natural Resources, Division of Geology and Earth Resources;

2. Any area with a combination of:

    a. Slopes 15 percent or steeper, and

    b. Impermeable soils (typically silt and clay) frequently interbedded with granular soils (predominantly sand and gravel), and

    c. Springs or ground water seepage;

3. Any slope of 40 percent and with a vertical relief of 10 or more feet except areas composed of consolidated rock;

4. Any slope greater than 80 percent subject to rockfall during seismic events;

5. Any area which has shown movement during the past 10,000 years or which is underlain by mass wastage debris from that period of time;

6. Any area potentially unstable as a result of rapid stream incision, stream bank erosion (e.g., ravines) or undercutting by wave action (e.g., marine bluffs);

7. Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials.

"Locally unique feature zones" means variable width planning areas defined as setbacks from the top of ravines or bluffs, or corresponding to the shoreline management zone for beaches and associated coastal-drift processes.

"Locally unique features" means landforms and features that are important to the character of the city. These features or landforms usually contain more than one "critical area." Locally unique features in the region include ravines, marine bluffs, and beaches and associated coastal-drift processes.

"Marine bluffs" means coastal features resulting from wave erosion undercutting uplands located adjacent to the shoreline creating vertical cliffs greater than 20 feet in height that are an important source of sediment for coastal-drift processes and the landforms created by these processes.

"Practicable alternative" means an alternative that is available and capable of being carried out after taking into consideration cost, existing technology and logistics in light of overall project purposes, and having less impact to regulated wetlands. It may include an area not owned by the applicant which could reasonably have been or be obtained, utilized, expanded or managed in order to fulfill the basic purposes of the proposed activity.

"Priority habitats" means areas with one or more of the following attributes: comparatively high wildlife density; high wildlife species richness; significant wildlife breeding habitat, seasonal ranges, or movement corridors; limited availability; and/or high vulnerability.

"Qualified professional" means a person with experience and training in the pertinent scientific discipline, and who is a qualified scientific expert with expertise appropriate for the relevant critical area subject in accordance with WAC 365-195-905. A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology, or related field, and have at least five years of related work experience.

1. A qualified professional for wetlands must be a professional wetland scientist or ecologist with at least two years of full-time work experience as a wetlands professional, including delineating wetlands using the state or federal manuals, preparing wetlands reports, conducting function assessments, and developing and implementing mitigation plans.

2. A qualified professional for habitat must have a degree in biology or a related degree and professional experience related to the subject species.

3. A qualified professional for a geological hazard must be a professional engineer or geologist, licensed in the state of Washington.

4. A qualified professional for critical aquifer recharge areas means a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic assessments.

5. A qualified professional arborist must be an ISA (International Society of Arboriculture) Certified Arborist.

"Ravines" means narrow gorges normally containing steep slopes, having little or no defined floodplain, and deeper than 10 vertical feet as measured from the centerline of the ravine to the top of the slope. Ravines may also contain flowing water or streams.

"Regulated wetlands" means areas that meet the definition of "wetlands" and that are not exempt from regulation.

"Repair or maintenance" means an activity that restores the character, scope, size and design of a serviceable area, structure or land use to its previously authorized and undamaged condition. Activities that change the character, size or scope of a project beyond the original design, and drain, dredge, fill, flood or otherwise alter additional regulated wetlands, are not included in this definition.

"Seismic hazard areas" means areas subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement or subsidence, soil liquefaction, surface faulting, or tsunamis. Settlement and soil liquefaction conditions occur in areas underlain by cohesionless soils of low density usually in association with a shallow ground water table. One indicator of potential for future earthquake damage is a record of earthquake damage in the past. Ground shaking is the primary cause of earthquake damage in Washington, and ground settlement may occur with shaking.

"Stream buffers" means variable width planning areas defined as setbacks from the ordinary high water elevation of the stream or watercourse, or from the top of the bank or dike. Zones include both year-round and seasonal waterways, but vary in width depending on the rating of the stream.

"Stream types" include categories established as follows:

1. "Type 1" means those streams inventoried as "shorelines of the state" in the city's adopted shoreline master program.

2. "Type 2" means perennial or intermittent streams used by anadromous fish during any stage of life.

3. "Type 3" means perennial or intermittent streams with the potential for anadromous fish use, but which do not currently support anadromous fish because of fish barriers or any other condition that substantially interferes with stream use by anadromous fish.

4. "Type 4" means intermittent or perennial streams that are not Type 1, 2 or 3 that may contain fish other than anadromous fish.

5. "Type 5" means intermittent or perennial streams that are not Type 1, 2, 3, or 4.

"Unavoidable and necessary impacts" are impacts that remain after a person proposing to alter critical areas has demonstrated that no practicable alternative exists for the proposed project.

"Wetland buffer" or "wetland buffer zone" means an area that surrounds and protects a wetland from adverse impacts to the functions and values of a regulated wetland.

"Wetland categories," "classes of wetlands" or "wetland types" means descriptive classes of the wetlands taxonomic classification system of the current version of the Washington State Department of Ecology Wetlands Rating System for Western Washington.

"Wetland edge" means the line delineating the outer edge of a wetland. Wetlands will be delineated in accordance with the procedure outlined in WAC 173-22-035.

"Wetland functions" means the beneficial roles served by wetlands, including, but not limited to, water quality protection and enhancement; fish and wildlife habitat; food chain support; flood storage; conveyance and attenuation; ground water recharge and discharge; erosion control; wave attenuation; historical, archaeological and aesthetic value protection; and recreation. These beneficial roles are not listed in order of priority.

"Wetlands" means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands also include those artificial wetlands intentionally created from nonwetland areas created to mitigate conversion of wetlands. (Ord. 2012-001 § 2 (Exh. A); Ord. 631 § 1, 1992)

18.80.040 Applicability.

This chapter establishes regulations for the designation and protection of properties with critical areas and critical area buffers as indicated under subsection D of this section. Properties listed, identified, classified or rated as critical areas are those which are or may become designated critical areas by the city's comprehensive plan, development regulations, or by separate studies which indicate that all or portions of a particular area or specific site are critical areas. A site-specific analysis which indicates that any element regulated by this chapter is present will result in that portion of the property being classified as a critical area.

A. All development proposals on sites which are identified as critical areas shall comply with the requirements and provisions of this chapter. Responsibility for administration and enforcement of the provisions of this chapter shall rest with the department of community development director or the director's designee.

B. For the purposes of this chapter, development proposals include proposals which require land use approvals required by city ordinances, as amended, or the Revised Code of Washington.

C. When any other city provision conflicts with this chapter, that provision which provides the greatest protection to critical areas shall apply.

D. This chapter applies to all lots or parcels that contain or are adjacent to critical areas. Critical areas shall be defined and designated to assure that the properties subject to review under this chapter encompass all areas necessary to maintain the natural hydraulic and habitat functions of the critical area. The approximate distribution and extent of critical areas in the city and its urban growth area are displayed on maps on file with the city department of community development.

1. Critical areas composite maps shall be prepared and revised on an ongoing basis. The Clallam County Critical Areas Map may also be used as a guide in determining critical areas. Wetlands identified on the U.S. Fish and Wildlife Service National Wetlands Inventory, and hydric soils and "wet spots" identified by the USDA Soils Conservation Service Natural Resource Conservation Service Soil Survey of Clallam County Area, Washington, may also be used.

2. These maps are to be used as a guide to the general location and extent of critical areas and to alert the public and city officials of the potential presence of critical areas on-site or off-site of a development proposal. Given the generalized nature of these maps and recognizing that critical areas are a dynamic environmental process, the actual presence and location of critical areas, as determined by qualified professionals, shall be established and protected in accordance with all the provisions of this chapter, which shall govern the treatment of proposed development sites.

3. In the event that any of the critical areas shown on the maps conflict with the criteria set forth in this chapter, the criteria shall control.

E. The department of community development director, as assisted by other city officials, has final responsibility for the accuracy of the submitted information. Once classification and location information have been verified for a particular lot or parcel, the director shall require that the owner/applicant:

1. File a notice on title with the Clallam County auditor pursuant to SMC 18.80.090; and

2. Place a "critical areas easement" on the face of a final subdivision, minor subdivision binding site plan, or boundary line adjustment. (Ord. 2012-001 § 2 (Exh. A); Ord. 2011-017 §§ 1, 2; Ord. 2002-027 § 4; Ord. 631 § 1, 1992)

18.80.045 Critical area review.

A. The city shall perform a critical area review for a development proposal permit application or other request to proceed with an alteration on a site that includes a critical area or is within an identified critical

area buffer or building setback area. Any required studies shall be conducted in conformance with SMC 18.80.060(C).

B. As part of the critical area review, the city shall:

1. Determine whether any critical area exists on the property and confirm its nature and type;

2. Determine whether a critical area special study is required;

3. Evaluate the critical area special study, if one is required;

4. Determine whether the proposal is consistent with this chapter;

5. Determine whether any proposed alteration to the critical area is necessary; and

6. Determine if the mitigation and monitoring plans and bonding measures proposed by the applicant are sufficient to protect the public health, safety, and welfare, consistent with the goals, purposes, objectives, and requirements of this chapter. (Ord. 2012-001 § 2 (Exh. A))

18.80.050 Permitted uses and development restrictions.

A. Permitted Uses. Uses permitted on properties classified as critical areas shall be the same as those permitted in the underlying zone. Each use shall be evaluated in accordance with the review process required for the proposed use in the underlying zone in conjunction with the requirements of this chapter and state and federal regulations.

B. Development Restrictions.

1. The following critical areas and their buffers shall remain undisturbed pursuant to SMC 18.80.070, except as otherwise provided in SMC 18.80.080:

a. Wetlands;

b. Surface streams;

c. Ravines and marine bluffs;

d. Beaches and associated coastal-drift processes;

e. Fish and wildlife habitat conservation areas.

2. All other critical areas identified in SMC 18.80.030 are developable pursuant to the provisions of SMC 18.80.070. The applicant shall provide supporting documentation that the proposal incorporates measures pursuant to this chapter that adequately protect the public health, safety and welfare.

3. Special Conditions.

a. As a condition of any land use permit, building permit, grading permit, clearing permit and subdivision or short plat issued pursuant to the Sequim Municipal Code, the property owner and/or applicant shall be required to create a separate critical area tract or tracts containing the areas determined to be critical area and/or critical area buffer.

b. The common boundary between a separate critical area tract and the adjacent land shall be permanently identified. This identification shall include permanent wood or metal signs on treated wood or metal posts indicating that property owners, homeowner's associations, or other party is responsible for the care and maintenance of the critical area tract(s).

c. Sign locations and size specifications shall be approved by the department of community development director or authorized designee.

d. The department of community development director or authorized designee shall require permanent fencing of the critical areas when there is a substantial likelihood of the presence or introduction of domestic grazing animals within the development proposal.

e. The department of community development director or authorized designee may attach such additional conditions to the approval of any permit or application as deemed necessary to assure the preservation and protection of affected critical areas and to assure compliance with the purposes and requirements of this chapter.

f. This subsection shall not apply to any single-family lot that is a lot of record or any single-family lot within any subdivision or short plat that has received preliminary approval prior to the adoption of this subsection. This subsection shall not abrogate any requirements for critical area tracts already required for preliminary subdivisions or short plats approved prior to the adoption of this subsection. (Ord. 2012-001 § 2 (Exh. A); Ord. 2011-017 § 2; Ord. 631 § 1, 1992)

18.80.055 Exempt activities.

The following uses shall be exempt if they are not prohibited by any other ordinance or law and are conducted using best management practices:

A. Normal repair and routine maintenance and operation of residences, landscaping, utilities, roads, trails, irrigation and drainage ditches, and fish ponds which were lawfully constructed, approved, or established prior to the effective date of this chapter if no expansion results.

B. Operation and maintenance of all electric facilities, lines, equipment or appurtenances; water and sewer lines; natural gas, cable communications and telephone facilities, lines, pipes, mains, equipment or appurtenances, except for power, water, and sewer substations and pump sites or new utilities within designated frequently flooded areas. For the purposes of this chapter, operation and maintenance shall

include those usual acts necessary for the continued use of existing services in their established locations. Replacement, expansion, relocation or placement of new utility service lines shall be subject to the standards of this chapter, as applicable.

C. Conservation or preservation of soil, water, vegetation, fish, shellfish and other wildlife that does not involve changing the structure or functions of the existing wetland.

D. Low intensity outdoor recreational activities having minimal adverse impacts, including but not limited to wildlife watching and nonpermanent blinds, hiking, boating, swimming, canoeing, bicycling, pervious trails less than five feet in width, and sport fishing or hunting.

E. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and that does not require tilling of soil, planting of crops, chemical applications, or alteration of the wetland by changing existing topography, water conditions or water sources.

F. Existing and ongoing agricultural activities, including farming, horticulture, aquaculture, irrigation, ranching or grazing of animals. Activities on areas lying fallow as part of a conventional rotational cycle are part of an ongoing operation. Activities which bring an area into agricultural use are not part of an ongoing operation. An operation ceases to be ongoing when the area on which it was conducted has been converted to another use or has lain idle so long that modifications to the hydrological regime are necessary to resume operations.

G. Education, scientific research and activities, and use of nature trails.

H. Navigation aids and boundary markers.

I. Boat-mooring buoys.

J. Site investigative work necessary for land use application submittals, such as surveys, soil logs and other related activities. In every case, critical area impacts shall be minimized and disturbed areas shall be immediately restored.

K. Enhancement of a critical area or buffer by removing nonnative, invasive plant species. Only hand removal shall be allowed under this exemption unless the necessary permits have been obtained from the regulatory agencies specifically allowing biological or chemical treatments. All removed plant material shall be taken from the site and disposed of appropriately. Plants that appear on the State Noxious Weed Board list of noxious species must be handled according to a control plan appropriate for that plant species. Revegetation with native species is allowed at natural densities if performed in conjunction with removal of invasive species. (Ord. 2012-001 § 2 (Exh. A))

18.80.060 Submittal requirements and support information required.

A. Submittal Requirements. Applications for land uses or developments proposed within critical areas shall be filed with all the information requested on the application forms available from the department of

community development. All developments proposed on lots or parcels which may contain or adjoin critical areas, as determined by the city, shall be evaluated by the applicant to provide the information necessary for the department of community development to determine if and to what extent the site contains critical area characteristics. The department of community development director shall make the determination to classify a site or portion of a site as critical area pursuant to the procedures set forth in SMC 18.80.045. For applications which are subject to review pursuant to SEPA, the appeal of a determination that a site is a critical area shall be made pursuant to the SEPA appeals procedures as set forth in SMC Title 16.

B. Supporting Information Required.

1. All land uses and developments proposed on or adjacent to lots or parcels listed, identified, inventoried, classified or rated as critical areas shall include supporting studies, prepared to describe the environmental limitations of the site. No construction activity, including clearing or grading, shall be permitted until the information required by this chapter is reviewed and approved by the city as adequate. Special environmental studies shall include a comprehensive site inventory and analysis, a discussion of the potential impacts of the proposed development, and specific measures designed to mitigate any potential adverse environmental impacts of the applicant's proposal, both on-site and off-site, as follows:

a. A description of how the proposed development will or will not impact each of the following on the subject property and adjoining properties:

i. Erosion and landslide hazard,

ii. Seismic hazards,

iii. Drainage, surface and subsurface hydrology and water quality,

iv. Flood-prone areas,

v. Existing vegetation as it relates to steep slopes, soil stability and natural habitat,

vi. Locally unique landforms: ravines, marine bluffs, beaches and associated coastal-drift processes,

vii. Slopes greater than 40 percent,

viii. Wetlands, and

ix. Critical aquifer recharge areas pursuant to SMC 18.80.100;

b. Recommended methods for mitigating identified impacts and a description of how these mitigating measures may impact adjacent properties;

c. Any additional information determined to be relevant by the city or by the professional consultant who prepared the study.

2. Such studies shall be prepared by qualified professionals.

C. City Review.

1. An applicant for a development proposal that includes or is within an identified critical area or critical area buffer shall enter into a three-party agreement, as approved by the city. The applicant shall pay the costs for the city to hire the appropriate consultant(s) to provide a critical area special study to adequately evaluate the proposal and all probable impacts, unless studies have already been prepared by the applicant's consultant. If the applicant has already prepared studies, the applicant shall pay for the costs of a peer review of all studies submitted. The applicant shall pay for any additional studies that may be required in the peer review. The selection of the consultant(s) hired for the study or peer review by the city shall be at the sole discretion of the city.

2. All critical area studies shall be prepared under the direction of the city. The department of community development director will make the final determination on the adequacy of these studies.

3. Project proposals with impacts to critical areas must be submitted to the appropriate agencies for review and comment.

4. The city's review of critical area permit applications shall not be construed to take the place of any other additional local, state, or federal permits or permit requirements. (Ord. 2012-001 § 2 (Exh. A); Ord. 2011-017 §§ 1, 2; Ord. 631 § 1, 1992)

18.80.070 Development standards.

A. Streams and Stream Buffers. Any development or construction adjacent to streams shall preserve an undisturbed buffer which is wide enough to maintain the natural hydraulic and habitat functions of that stream as it relates to an urban environment. The dimensions of stream buffers are listed in subsection (A)(1) of this section. If streams are located within ravines, as defined in SMC 18.80.030, buffers will be established according to the criteria set forth in subsection B of this section.

1. Stream Buffers.

a. The following buffers of undisturbed native vegetation shall be provided for different classes of streams and their tributaries. Dimensions are measured from the ordinary high-water elevation of the stream or watercourse, or from the top of the bank or dike:

Type 1	150 feet;
Type 2	100 feet;

Type 3	75 feet;
Type 4	50 feet;
Type 5	25 feet.

b. Closed stream segments shall have no buffers.

c. Where the FEMA floodplain is wider than these buffers, the width of the floodplain shall be considered to be the buffer width.

2. Stream buffers shall be increased to include streamside wetlands that provide overflow storage for stormwaters, feed water back to the stream during low flows or provide shelter and food for fish.

3. Additional Buffers. The department of community development director may require additional native vegetation or increased buffer sizes when environmental information indicates the necessity for additional vegetation or greater buffers in order to achieve the purposes of this chapter. In cases where additional buffers are not feasible, the department of community development director may require the applicant to undertake alternative on-site or off-site mitigation measures, including but not limited to a financial contribution to projects or programs which seek to improve environmental quality within the same or adjacent watershed.

4. Stream relocation shall be allowed only when the relocation:

a. Is part of an approved mitigation or rehabilitation plan;

b. Will result in equal or better habitat and water quality;

c. Will not diminish the flow capacity of the stream; and

d. Will result in equal or better hydrologic continuity.

Any relocation must obtain prior approval from the Washington Department of Fish and Wildlife. Relocation of Type 1 streams is prohibited.

B. Ravines, Marine Bluffs and Beaches and Associated Coastal-Drift Processes. All properties falling within the buffer zones identified in the following subsection are subject to the requirements of this chapter.

1. Buffers. The following buffers of undisturbed vegetation shall be established from the top of ravines and the top and toe of marine bluffs and ravine bluffs:

a. Ravines, 50 feet;

b. Marine bluffs; 50 feet;

c. Beaches and associated coastal-drift processes; 25 feet.

2. Buffer Reduction. Undisturbed zones adjoining both marine bluffs and beaches shall be sufficient to assure that natural coastal-drift processes will remain unimpaired.

a. Buffers for "feeder" or eroding bluffs shall not be reduced.

b. The buffer for noneroding bluffs may be reduced when expert verification and environmental information demonstrate that the proposed construction method will:

i. Not adversely impact the stability of ravine sidewalls and bluffs;

ii. Not increase erosion and mass-movement potential of ravine sidewalls and bluffs;

iii. Use construction techniques which minimize disruption of the existing topography and vegetation; and

iv. Include measures to overcome any geological, soils and hydrological constraints of the site.

c. Buffers shall not be reduced to less than 25 feet from the top of a ravine, or the top or toe of a noneroding bluff.

d. Buffer reductions may only be granted subject to the variance criteria under 7.3.3. of the SMP.

3. Additional Buffers. The department of community development director may require increased buffers if environmental studies indicate such increases are necessary to mitigate landslide, seismic and erosion hazards, or as otherwise necessary to protect the public health, safety and welfare.

4. Viewshed Enhancement. In ravine and marine bluff buffers, tree removal for viewshed enhancement is allowed so long as tree removal does not exceed 50 percent and:

a. Will not increase geological hazards such as erosion potential, landslide potential or seismic hazard potential; or

b. Will not adversely affect significant wildlife habitat areas; and

c. Is based upon a review and recommendation by a certified arborist.

C. Geological Hazard (Erosion, Landslide, Seismic) Areas. Areas containing or adjacent to geological hazard areas shall be altered only when the department of community development director concludes, based on environmental information, the following:

1. Landslide Hazard Areas.

a. There will be no increase in surface water discharge or sedimentation to adjacent properties;

b. There will be no decrease in slope stability on adjacent properties; and

c. Either:

i. There is no hazard as proven by evidence of no landslide activity in the past in the vicinity of the proposed development and a quantitative analysis of slope stability indicates no significant risk to the development proposal and adjacent properties,

ii. The landslide hazard area can be modified or the development proposal can be designed so that the landslide hazard is eliminated or mitigated so that the site is as safe as a site without a landslide hazard, or

iii. The alteration is so minor as not to pose a threat;

2. Erosion Hazard Areas.

a. Areas containing erosion hazard areas shall have land clearing, grading or filling limited to the period between April 1st and October 1st,

b. Vegetation shall be preserved or replaced;

3. Seismic Hazard Areas.

a. Areas containing or adjacent to seismic hazard areas shall be altered only when the department of community development director concludes, based on environmental information, the following:

i. There is no actual hazard based on a lack of seismic activity in the past in the area of the development proposal, and a quantitative analysis of potential for seismic activity indicates no significant risk to the development proposal; or

ii. The development proposal can be designed so that it will minimize any risk of harm from seismic activity to public health, safety or welfare on or off the site.

b. Construction on fills allowed through a development permit shall be certified by a qualified professional to be safe. This requirement may be waived by the public works director for actions involving minor changes, alterations, or additions to developed properties; provided, that such activities do not jeopardize public health, safety or welfare on or off the site;

4. Geological Hazard Area Buffers. If it is determined that a geological hazard area, particularly landslide hazard and erosion hazard areas or steep slopes, cannot be safely developed and must remain as permanent open space, the geological hazard area shall have a buffer of 50 feet from the top and toe of the designated area. This buffer may be reduced (to not less than 25 feet) or enlarged based on geotechnical review, which assures any such variation provides or is necessary to provide adequate protection of any structures on site.

D. Fish and Wildlife Habitat Conservation Areas. To protect the habitat of animal species which are considered to be endangered or threatened species and thereby maintain and increase their populations, fish and wildlife habitat conservation areas shall be subject to the following:

1. When a development proposal contains a priority habitat for endangered or threatened species, the applicant shall submit a habitat management plan. The need for a habitat management plan should be determined during State Environmental Policy Act (SEPA) review of the proposal. The habitat management plan should identify how the impacts from the proposed project will be mitigated. Possible mitigation measures should include, but are not limited to:

a. Establishment of buffer zones,

b. Preservation of critically important plants and trees within the buffer,

c. Limitation of access to habitat area,

d. Scheduling construction activities to avoid interference with wildlife and fisheries rearing, resting, nesting or spawning activities,

e. Using best available technology to avoid or reduce impacts,

f. Using drainage and erosion control measures to prevent siltation of aquatic areas, and

g. Possibly reducing the size, scope, configuration or density of the project;

2. Buffer. To retain adequate natural habitat for endangered or threatened species, buffers shall be established on a case-by-case basis as described in a habitat management plan;

3. Uses and activities allowed within a significant wildlife habitat area as identified by a habitat management plan shall be limited to low-intensity land uses which will not adversely affect or

degrade the habitat and which will not be a threat to the critical ecological processes such as feeding, breeding, nesting and resting;

4. Bald eagle habitat shall be protected pursuant to the Washington State bald eagle protection rules (WAC 232-12-292). Whenever activities are proposed within 800 feet of a verified nest territory or communal roost, a habitat management plan shall be developed by a qualified professional. The director shall verify the location of eagle management areas for each proposed activity. Approval of the activity shall not occur prior to approval of the habitat management plan by the Washington Department of Fish and Wildlife.

E. Frequently Flooded Areas. Development in frequently flooded areas which are not subject to the standards of other critical areas will be directed by Chapter 8.36 SMC, Flood Damage Prevention.

F. Wetlands.

1. The following wetlands are exempt from regulation:

a. All isolated wetlands less than 1,000 square feet that are not part of a wetland mosaic;

b. Category III wetlands less than 2,500 square feet;

c. Category IV wetlands less than 4,356 square feet;

d. Category IV wetlands greater than 4,356 square feet and less than 10,000 square feet with mitigation; and

e. Wetlands created directly as a result of poorly maintained storm drainage systems that would not have been created if the drainage system had been properly maintained.

f. The city reserves the right to require mitigation, after public notice, for small wetland impacts, consistent with ratios established in the table in subsection (F)(7) of this section should a mitigation bank or in-lieu fee program become available in the appropriate watershed.

2. Determination of Regulatory Wetland Boundary.

a. The exact location of the wetland boundary shall be determined through the performance of a field investigation applying the wetland definition provided in this chapter. Qualified professionals shall perform wetland delineations, which shall be delineated in accordance with the procedure outlined in WAC 173-22-035 pursuant to RCW 36.70A.175 and 90.58.380. An applicant for a wetland permit is required to show the location of the wetland boundary on a scaled drawing as a part of the permit application.

b. The city retains the right to obtain its own delineations through a qualified professional pursuant to SMC 18.80.060. If the city's delineation differs from the applicant's delineation, the city's delineation shall control and shall be considered a final decision.

3. Wetland rating categories shall be applied to the regulated wetland:

a. As it exists on the date of adoption of the rating system by the city;

b. As the regulated wetland may naturally change thereafter; or

c. As the regulated wetland may change in accordance with permitted activities.

d. Wetland rating categories shall not be altered to recognize illegal modifications made by the applicant or with the applicant's knowledge.

4. Regulated Activities. A permit shall be obtained from the city prior to undertaking the following activities in a regulated wetland or its buffer:

a. The removal, clearing, excavation, grading or dredging of soil, sand, gravel, minerals, organic matter or material of any kind;

b. Dumping, discharging or filling with any material;

c. Draining, flooding or disturbing of the water level or water table;

d. Pile driving;

e. The placing of obstructions;

f. The construction, reconstruction, demolition, or expansion of any structure;

g. The destruction or alteration of wetlands vegetation through clearing, harvesting, shading, intentional burning or planting of vegetation that would alter the character of a regulated wetland; provided, that these activities are not part of a forest practice governed under Chapter 76.09 RCW and its rules, unless those activities are Class IV activities regulated by the city;

h. Stormwater management facilities in Category III or IV wetlands having no other reasonable alternative on-site location if the facilities are located in the outer 25 percent of the buffer; or

i. Development in Category III or IV wetlands having no feasible alternative location if mitigation sequencing is applied; or

j. Activities that result in the introduction of pollutants or a significant change of water temperature, physical or chemical characteristics of wetlands water sources, or in the quantity, timing, or duration of the water entering the wetland.

When such permit applications are submitted, the city shall submit applications to the Department of Ecology for comment, pursuant to SMC 18.80.060(C)(3). Ecology should submit its comments or should request an extension of the review period within 30 days of submittal. Extensions may be up to 30 days in length. When submitted, no permit shall be issued under this subsection prior to receipt of such comments or the expiration of the time period or any extensions and receipt of any other necessary permits.

5. Buffers. Wetland buffers shall be required for all regulated activities adjacent to regulated wetlands. Any wetland created, restored or enhanced as compensation for approved wetland alterations shall also include the standard buffer required for the category of the created, restored or enhanced wetland. All buffers shall be measured from the wetland boundary as surveyed in the field. The width of the wetland buffer zone shall be determined according to wetland category, habitat score, and the intensity of the proposed land use. For the purposes of this section, "low impact land use" means land uses with low levels of human disturbance or low wetland habitat impacts, including, but not limited to, passive recreation, open space, educational field trips, small gardens, or low impact stormwater retention facilities. A maximum net density of four dwelling units per acre is defined as low intensity. "Net density" means the density calculation after the land set aside for roads and wetlands (but not their buffers) has been removed from the total land associated with the proposed development. "High impact land use" means land uses associated with moderate or high levels of human or structural disturbance including but not limited to R-II conditional or special uses, R-III zoning and above, multifamily residential, active recreation, commercial and industrial land uses.

Wetland Rating	Land Use Impact	Buffer
Cat I – Habitat score 20 or more, or estuarine or coastal lagoon	Low High	150 ft. 200 ft.
Cat I – Habitat score 19 or less	Low High	125 ft. 200 ft.
Cat II – Habitat score 20 or more, or estuarine or coastal lagoon	Low High	100 ft. 150 ft.
Cat II – Habitat score 19 or less	Low High	65 ft. 100 ft.

Wetland Rating	Land Use Impact	Buffer
Cat III – Habitat score 20 or more	Low	75 ft.
	High	125 ft.
Cat III – Habitat score 19 or less	Low	40 ft.
	High	75 ft.
Cat IV	All	25 ft.

The following measures are required, as applicable, to receive the buffer widths listed above.

• Outdoor lighting from the development shall be designed and installed to prevent direct casting of light into adjacent wetland areas. Final design shall be reviewed and approved by the department of community development prior to permit issuance.
• Activity that generates noise shall be located away from wetlands. If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source.
• The applicant shall prepare a restrictive covenant, to be placed upon the deed for the property, that prohibits use of pesticides within 150 feet of the delineated on-site wetland area. Proof of the recorded covenant shall be provided to the city prior to permit issuance.
• Surface water management shall be consistent with low impact development (LID) practices as set forth in the 2005 State Department of Ecology document entitled "Stormwater Management Manual for Western Washington" and the 2005 Puget Sound Action Team and Washington State University Pierce City Extension document entitled "Low Impact Development: Technical Guidance Manual for Puget Sound." Final design shall be reviewed and approved by the public works department prior to permit issuance.
• Permanent signage on the boundary of a wetland buffer to protect its functions and values. Fencing may be required if requested by the wetland biologist to protect its functions and values. Fencing design shall not interfere with fish and wildlife migration and shall minimize impacts to the wetland and its associated habitat.
• The applicant shall utilize dust control best management practices (BMP) during development activities. Such practices shall be consistent with "BMP C140" of the 2005 State Department of Ecology document entitled "Stormwater Management Manual for Western Washington."
• Surface water from areas adjacent to on-site delineated wetland areas shall be channelized and treated prior to discharge into wetland buffer areas. Surface water treatment shall be consistent with "BMP T511" of the 2005 State Department of Ecology document entitled "Stormwater Management Manual for Western Washington." Final design shall be reviewed and approved by the city public works department prior to permit issuance.
• All treated surface water proposed for discharge into any on-site delineated wetland area shall be conveyed in a manner consistent with those practices set forth in "Guide Sheet 2: Wetland Protection Guidelines" of

the 2005 State Department of Ecology document entitled "Stormwater Management Manual for Western Washington." Final design shall be reviewed and approved by the city public works department prior to permit issuance.
• Existing on-site drainage system facilities shall be reviewed by a Washington State-licensed engineer to determine their ability to accommodate the increased volume of surface water created by the new development. The facilities shall be modified as necessary with facility design consistent with the direction provided in "Volume III" of the 2005 State Department of Ecology document entitled "Stormwater Management Manual for Western Washington." Final design shall be reviewed and approved by the city public works department prior to permit issuance.
• Surface water from impervious surfaces and lawns located adjacent to on-site delineated wetland areas shall be channelized and treated prior to discharge into wetland buffer areas. Surface water treatment shall be consistent with those practices contained in "Volume V" of the 2005 State Department of Ecology document entitled "Stormwater Management Manual for Western Washington." Final design shall be reviewed and approved by the city public works department prior to permit issuance.
• Apply integrated pest management.
• The delineated on-site wetland area shall be placed in a separate tract as prescribed in SMC 18.80.090.

6. A building setback line of 15 feet is required from the edge of any wetland buffer. Minor structural intrusions into the area of the building setback may be allowed if the department of community development director or authorized designee determines, supported by objective written evidence, that such intrusions will not negatively impact the wetland. If the wetland buffer is already heavily impacted, building setbacks may be reduced in exchange for buffer enhancement – see SMC 18.80.080.

7. Wetlands Restoration and Creation.

a. Any person who alters regulated wetlands shall restore or create equivalent areas or greater areas of wetlands than those altered in order to compensate for wetland losses.

b. Where feasible, restored or created wetlands shall be a higher category than the altered wetland.

c. Compensation areas shall be determined according to function, acreage, type, location, time factors, ability to be self-sustaining, and projected success. Wetland functions and values shall be calculated using the best professional judgment of a qualified wetland ecologist using the best available techniques. Multiple compensation projects may be proposed for one project in order to best achieve the goal of no net loss.

d. Acreage Replacement Ratio. The following ratios apply to wetland creation or restoration which is in-kind, on-site, timed prior to or concurrent with alteration, and has a high probability of success. These ratios do not apply to remedial actions resulting from

unauthorized alterations. The first number specifies the acreage of replacement wetlands and the second specifies the acreage of wetlands altered. Ratios for rehabilitation and enhancement may be reduced when combined with 1:1 replacement through creation or re-establishment.

Category and Type of Wetland	Creation or Reestablishment	Rehabilitation	Enhancement	Preservation
Category I: Coastal Lagoon, Natural Heritage site	Not considered possible	6:1	Case by case	10:1
Category I: Mature Forested	6:1	12:1	24:1	24:1
Category I: Estuarine	Case by case	6:1 of estuarine wetland	Case by case	Case by case
Category I: Based on functions	4:1	8:1	16:1	20:1
Category II	3:1	6:1	12:1	20:1
Category III	2:1	4:1	8:1	15:1
Category IV	1.5:1	3:1	6:1	10:1

G. Standard Buffer Width Averaging. Buffers may be modified by averaging buffer widths. This section shall not apply to geohazard areas. Averaging shall not be allowed in conjunction with any other buffer reduction provisions. Averaging to improve critical area protection may be permitted when all of the following conditions are met:

1. There are no feasible alternatives to the site design that could be accomplished without buffer averaging;

2. The buffer is increased adjacent to the higher-functioning or more sensitive areas and decreased adjacent to the lower-functioning or less sensitive portion;

3. The total area of the buffer after averaging is equal to the area required without averaging; and

4. The buffer at its narrowest point is never less than three-quarters of the required width.

5. The buffer width averaging meets the criteria under 7.3.3. of the SMP.

H. Density Credit or Floor Area On-Site Transfer Calculation. The calculation of potential dwelling units in residential development proposals and allowable floor area in nonresidential development proposals shall

be determined by the ratio of developable area to undisturbable critical areas and buffers of the development site. Density credits and floor area calculations are designed to provide compensation for the preservation of critical areas and their buffers, flexibility in design, and consistent treatment of different types of development proposals. Density credit or floor area shall be allowed for landslide and erosion hazard areas, and required buffers for any critical area.

Percentage of Site as Critical Area	Floor Area Added to Remaining Developable Site	Density Credit
1 – 10	.30	100%
11 – 20	.27	90%
21 – 30	.24	80%
31 – 40	.21	70%
41 – 50	.18	60%
51 – 60	.15	50%
61 – 70	.12	40%
71 – 80	.09	30%
81 – 90	.06	20%
91 – 99	.03	10%

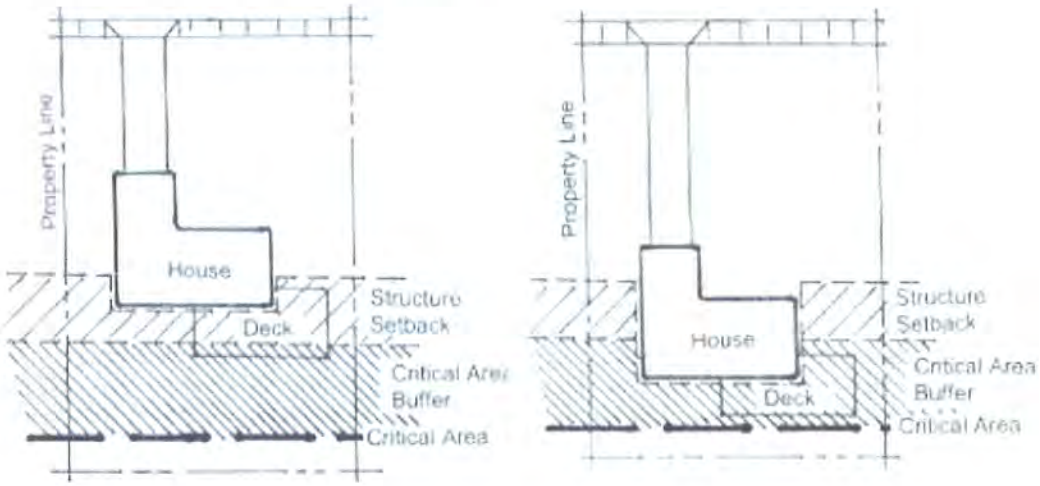
Full density credit shall be allowed for erosion, seismic, and flood hazard areas. For landslide, erosion, and seismic hazards, the most restrictive regulations shall apply. The resulting density determination is rounded down to the nearest whole number.

For example: A 4.5-acre site in the R-II zone would have a potential gross density of 22 units (based on five units per acre). If the developable area of the site is reduced to 2.25 acres (a 50 percent reduction based on landslide hazard areas and critical area buffers), the net density is 11 units for the site. Applying the density credit of 60 percent from the above table allows 17 units on the site (11 x 160% = 17.6 or 17 units). (Ord. 2012-001 § 2 (Exh. A); Ord. 2011-017 § 2; Ord. 631 § 1, 1992)

18.80.075 Buffer and setback on sites with existing primary structure(s).

Where a primary structure legally established on a site prior to June 1, 2012, encroaches into the critical area buffer or structure setback established in this chapter, the critical area buffer and/or structure setback shall be modified to exclude the footprint of the existing primary structure. Expansion of any existing structure into the critical area buffer or critical area structure setback shall be allowed only

pursuant to the provisions of SMC 18.80.080.



(Ord. 2012-001 § 2 (Exh. A))

18.80.080 Development exceptions.

A. Reasonable Use Exceptions. Reasonable use exceptions will comply with Section 7.3.3. of the SMP. ~~Nothing in this chapter is intended to preclude reasonable use of property. An applicant for a city permit to develop or use real property located in a critical area may apply for a reasonable use exception set forth in Chapter 18.72 SMC. Applications for modification of critical area development standards shall be processed as Type B permits as set forth in Chapter 20.01 SMC.~~

~~1. An applicant requesting modification shall provide the director with the following information:~~

~~a. Technical studies and other data that describe the possible injurious effects of the proposed development on occupiers of the land, on other properties, on public resources, and on the environment. Possible injurious effects must be described even when the injurious effect will become significant only in combination with similar effects from other developments; and~~

~~b. An explanation with supporting evidence of how and why compliance with the unmodified critical areas development standards would not permit reasonable use of the property.~~

~~2. The reasonable use exception shall be approved and critical areas development standards may be modified only when all of the following findings can be made:~~

~~a. The application of this chapter would deny all reasonable use of the property;~~

~~b. No other reasonable use of the property has less impact on the critical area;~~

~~c. The proposed impact to the critical area is the minimum necessary to allow for reasonable use of the property;~~

~~d. The inability of the applicant to derive reasonable use of the property is not the result of actions by the applicant after the effective date of the ordinance codified in this chapter or its predecessor;~~

~~e. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;~~

~~f. To the extent feasible while still allowing for reasonable use of the property, the proposal has been mitigated to avoid, reduce, or compensate for loss of critical area functions and values consistent with the best available science; and~~

~~g. The proposal is consistent with other applicable regulations and standards.~~

~~3. A critical areas development standard may be reduced, waived or otherwise modified only to the extent necessary to make the standard reasonable in light of all the facts and circumstances of a particular case. In modifying a development standard, the director may impose reasonable conditions that prevent or mitigate the same harm that the modified regulation was intended to prevent or mitigate.~~

~~4. A decision to modify a development standard may be appealed pursuant to the provisions of Chapter 20.01 SMC. The decision as to whether development pursuant to a modified development standard will cause significant injury shall be affirmed unless found to be clearly erroneous. The decision as to whether strict application of a development standard is reasonable shall be accorded substantial weight, and the burden of proof of justifying the reasonable use exception shall be on the applicant.~~

B. Modification of Existing Structures. Existing structures or improvements that do not meet the requirements of this chapter are considered conforming pursuant to SMC 18.80.075 and may be remodeled, reconstructed or replaced; provided, that the new construction does not further disturb or encroach upon a critical area or its buffer.

C. Previously Altered Critical Areas or Buffers. If any portion of a critical area or its buffer has been altered from its natural state, the applicant may propose to develop within the altered area pursuant to the following decision criteria:

1. The critical area or buffer was lawfully altered in accordance with the provisions of the city ordinances and any state and federal laws at the time the alteration occurred;

2. The alteration has significantly disrupted the natural functions of the critical area or its buffer as determined by a qualified professional;

3. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least adverse impact on the critical area and its buffer as determined by a qualified professional;

4. The proposal incorporates the development standards of SMC 18.80.070;

5. The new development will not further degrade the critical area or its buffer as determined by a qualified professional;

6. The proposal is consistent with the purpose and intent of this chapter; and

7. The applicant shall mitigate and enhance the remaining critical area or buffer. An enhancement plan shall be submitted in accordance with the requirements of SMC 18.80.060.

D. Emergencies. The department of community development director may approve improvements that are necessary to respond to emergencies that threaten the public health and safety, or public development proposals, when it determines that no reasonable alternative exists and the benefit outweighs the loss.

1. Emergencies shall be verified by a licensed engineer and notice of their existence shall be posted in a paper of general circulation within the city.

2. Within 30 days, the director shall determine if the action taken was within the scope of the emergency actions allowed in this subsection. If the director determines that the action taken, or any part of the action taken, was beyond the scope of an allowed emergency action, then enforcement provisions shall apply.

3. After the emergency, the person or agency undertaking the action shall fully fund and conduct necessary restoration and/or mitigation for any impacts to the critical area and buffers resulting from the emergency action in accordance with an approved critical area report and mitigation plan. The person or agency undertaking the action shall apply for review, and the alteration, critical area report, and mitigation plan shall be reviewed by the city in accordance with the review procedures contained herein. Restoration and/or mitigation activities must be initiated within one year of the date of the emergency, and completed in a timely manner.

E. Drainage Facilities. Category III or IV wetlands and their buffers, and stream buffers, may be altered for use as a public drainage facility; provided, that all requirements of the city stormwater management plan and all other local, state and federal laws are satisfied, and so long as increased and multiple natural resource functions are achievable and the benefits outweigh any lost resource. The department of community development director may approve public drainage facilities in a buffer only when he/she determines that long-term impacts are minimal or when there are no practicable or reasonable alternatives and mitigation is provided. Drainage facilities shall be limited to the outer 25 percent of a buffer.

F. Trails and Trail-Related Facilities. Public and private trails and trail-related facilities, such as picnic tables, benches, interpretive centers and signs, and viewing platforms, shall be allowed, but use of impervious surface shall be minimized. Trails and trail-related facilities shall be avoided within streams. The department of community development director may approve such trails and facilities only when he/she determines that there is no practicable or reasonable upland alternative. Trail planning construction and maintenance shall adhere to the following additional criteria:

1. Trails and related facilities shall, to the extent feasible, be placed on existing levies, road grades, utility corridors or any other previously disturbed areas;

2. Trails and related facilities shall be planned, aligned, and constructed to minimize removal of trees, shrubs, snags and important wildlife habitat and disturbance to critical area functions;

3. Trails and related facilities shall provide water quality protection measures to assure that runoff from them does not directly discharge to wetlands or streams; and

4. Private trail widths shall be limited to five feet; public trail widths shall be limited to five feet or the minimum necessary to achieve American Disabilities Act (ADA) compliance;

5. Public trails shall be constructed and located in a manner that will achieve ADA compliance;

6. Trails and related facilities shall not exceed five percent impervious surface based on the total size of the critical area and its buffer.

G. Utilities. Every attempt shall be made to avoid locating new utilities within streams and stream buffers. The department of community development director may approve new utilities in streams and stream buffers only when he/she determines that there is no practicable or reasonable upland alternative.

H. Stream Crossings. Stream crossings, whether for access or utility purposes, shall be avoided to the extent possible; but when necessary due to the lack of feasible alternatives, crossing of streams shall follow all applicable local, state and federal laws and the following criteria:

1. Bridges are required for streams that support anadromous fish, unless otherwise allowed by the Washington State Department of Fisheries;

2. All crossings using culverts shall use superspan, oversize, box or bottomless culverts;

3. All crossings shall be constructed and installed during summer low flow between June 15th and September 15th;

4. Crossings shall not occur in anadromous fish spawning areas unless no other feasible crossing site exists;

5. Bridge piers or abutments shall not be placed in either the floodway or between the ordinary high-water marks unless no other feasible alternative placement exists;

6. Crossings shall not diminish flood-carrying capacity;

7. Crossings shall provide for maintenance of culverts, bridges and utilities; and

8. Crossings shall serve multiple properties whenever possible.

I. Time Limitation. A development exception automatically expires and is void if the applicant fails to file for a building permit or other necessary development permit within one year of the effective date of the development exception, unless either:

1. The applicant has received an extension for the development exception pursuant to subsection J of this section;

2. The development exception approval provides for a greater time period.

J. Time Extension. The department of community development director may extend the development exception, not to exceed one year, if:

1. Unforeseen circumstances or conditions necessitate the extension of the development exception;

2. Termination of the development exception would result in unreasonable hardship to the applicant, and the applicant is not responsible for the delay; and

3. The extension of the development exception will not cause adverse impacts to critical areas.

K. Mitigation. For any allowable development exception provided under this section, the associated adverse impacts must be considered unavoidable but mitigable. The applicant must first demonstrate that they have taken the following mitigation sequencing actions:

• Avoiding the impact altogether by not taking a certain action or parts of an action;

• Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

• Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

• Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

• Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or

• Monitoring the impact and taking appropriate corrective measures.

Mitigation shall not be implemented until after city approval of the critical area report and mitigation plan prepared in accordance with subsection (K)(4) of this section.

1. General Requirements. The applicant shall develop a mitigation plan that provides for construction, maintenance, monitoring and contingencies of the critical areas compensatory mitigation as required by conditions of approval and consistent with the requirements of this chapter. The mitigation plan must be consistent with subsection (K)(4) of this section. All mitigation sites shall have buffers consistent with the buffer requirements of this chapter. Where feasible, mitigation projects shall be completed prior to activities that will disturb critical areas. In all other cases, mitigation shall be completed immediately following disturbance and prior to use or occupancy of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing wildlife and vegetation. For mitigation projects that involve creating new wetlands or relocating streams, the director of community development shall have the authority to modify the buffer requirements on a case-by-case basis to avoid unduly encumbering neighboring properties.

2. On properties where mitigation is required, prior to issuance of any construction, grading, or building permits, or preliminary approval of a major plat, short plat, or binding site plan, a "critical areas performance bond" or other suitable financial guarantee as approved by the city attorney shall be submitted to the department of community development. The amount of the bond or other financial guarantee shall be equal to 150 percent of the estimated cost of the mitigation. Such bond or other suitable financial guarantee shall not be released until all required mitigation is installed.

3. Monitoring. All mitigation projects shall be monitored for a period of five years. Monitoring reports shall be submitted annually for the first three years following construction and at least upon the completion of the fifth year to document milestones, successes, problems, and contingency actions of the mitigation. The applicant shall deposit an amount equal to 125 percent of the full cost of monitoring with the city before monitoring begins. The city shall use such funds to pay for monitoring costs associated with the mitigation project. Once the monitoring has been completed, the city shall refund any remaining funds to the applicant within 60 days of receiving the final monitoring report. The director shall have the authority to extend the monitoring period and require additional monitoring reports beyond the initial five-year monitoring period for any project that does not meet the performance standards identified in the mitigation plan, does not provide adequate replacement for the functions and values of the impacted critical area, or otherwise warrants additional monitoring (such as when forested wetlands are restored or created).

4. Mitigation Plans. All restoration and compensation projects shall follow a mitigation plan prepared by qualified professionals containing, at a minimum, the following components:

a. Baseline Information. Quantitative data shall be collected and synthesized for both the impacted critical area and the proposed mitigation site, if different from the impacted critical area, following procedures approved by the department of community development;

b. Environmental Goals and Objectives. Goals and objectives describing the purposes of the mitigation measures shall be provided, including a description of site selection criteria, identification of target evaluation species and resource functions;

c. Performance Standards. Specific criteria for fulfilling environmental goals and objectives and for beginning remedial action or contingency measures shall be provided, including water quality standards, species richness and diversity targets, habitat diversity indices, or other ecological, geological or hydrological criteria;

d. Detailed Construction Plan. Written specifications and descriptions of mitigation techniques shall be provided, including the proposed construction sequence, accompanied by detailed site diagrams and blueprints that are an integral requirement of any development proposal;

e. Monitoring Program. A program outlining the approach for assessing a completed project shall be provided including descriptions or proposed experimental and control site survey or sampling techniques. A protocol shall be included outlining how the monitoring data will be evaluated by agencies that are tracking the progress of the mitigation project. A report shall be submitted at least twice yearly documenting milestones, successes, problems and contingency action of the restoration or compensation project. The department of community development director shall require that the applicant monitor the project consistent with subsection (K)(3) of this section;

f. Contingency Plan. A plan shall be provided fully identifying potential courses of action and any corrective measures to be taken when monitoring or evaluation indicates project standards are not being met;

g. Performance and Maintenance Securities. Securities ensuring fulfillment of the mitigation project, monitoring program and any contingency measures shall be posted pursuant to SMC 18.80.110.

5. Restoring Closed Stream Segments.

a. The city allows the voluntary opening of previously channelized/culverted streams and the rehabilitation and restoration of streams, especially on public property or when a property owner is a proponent in conjunction with new development.

b. When closed stream segments are restored, a protective buffer shall be required of the stream section. The buffer distance shall be 25 feet, regardless of stream classification, to

allow for restoration and maintenance. The stream and buffer area shall include habitat improvements and measures to prevent erosion, landslide and water quality impacts.

c. Removal of pipes conveying streams shall only occur when the city determines that the proposal will result in a new improvement of water quality and ecological functions and will not significantly increase the threat of erosion, flooding, slope stability or other hazards.

6. Other mitigation alternatives, such as banking, in-lieu fees, off-site mitigation, and/or advance mitigation, may be used if the city has established procedures.

a. In-Lieu Fee. To aid in the implementation of off-site mitigation, the city may develop a program which prioritizes wetland areas for use as mitigation and/or allows payment in lieu of providing mitigation on a development site. This program shall be developed and approved through a public process. The program should address:

i. The identification of sites within the city that are suitable for use as off-site mitigation. Site suitability shall take into account wetland functions, potential for wetland degradation, and potential for urban growth and service expansion; and

ii. The use of fees for mitigation on available sites that have been identified as suitable and prioritized.

b. Wetland Mitigation Banks. Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:

i. The bank is certified under state rules;

ii. The administrator determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and

iii. The proposed use of credits is consistent with the terms and conditions of the bank's certification.

Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank's certification. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification. In some cases, the service area of the bank may include portions of more than one adjacent drainage basin for specific wetland functions.

7. Final Approval. The department of community development director shall grant final approval of a completed restoration or compensation project if the final report of the project mitigation plan satisfactorily documents that the area has achieved all requirements of this section. (Ord. 2012-001 § 2 (Exh. A); Ord. 631 § 1, 1992)

18.80.090 Notice to title and protective tracts.

A. To inform subsequent purchasers of real property of the existence of critical areas, when development is permitted in an identified critical area or its associated buffer, a notice to title applicable to the property shall be filed with the Clallam County auditor. The notice shall state that critical areas or buffers have been identified on the property and that limits on actions in or affecting the critical area or buffer may exist. The notice shall run with the land. This notice shall not be required for development by a public agency or public or private utility when within a recorded easement or right-of-way, or on the site of a permanent public facility. The applicant shall submit proof that the notice has been filed for public record before the city approves any development permit for the property or, in the case of subdivisions, short subdivisions, planned unit developments, and binding site plans, at or before recording.

B. Separate critical area tracts shall be required for subdivisions, development agreements, binding site plans, or any other project that requires a site permit, to protect critical areas that are to remain undisturbed pursuant to this chapter. The department of community development director or responsible designee shall require that the owner/applicant of parcels with critical area features and delineations convey this information on parcel/plat legal documents filed with the city and the county. The plan shall clearly depict the critical areas tract, which must include the critical area and any required buffers. Other lands may be included within the critical areas tract at the developer's discretion. Development restrictions within the tract shall be clearly noted on the site plan. Responsibility for maintaining critical area tracts shall be held by a homeowners' association, adjacent lot owners, the permit applicant or designee, or other appropriate entity as approved by the department of community development director or authorized designee and shall also be indicated on the plat or plan. (Ord. 2012-001 § 2 (Exh. A); Ord. 2011-017 § 2; Ord. 2002-027 § 4; Ord. 631 § 1, 1992)

18.80.100 Critical aquifer recharge areas.

A. Intent. The intent of this section is to identify, classify and protect vulnerable aquifer recharge areas within the city and to protect vulnerable aquifer recharge areas from pollution by pre-land use activities.

B. Applicability. This section applies to all development proposals within designated areas with a critical recharging effect on aquifers used for potable water.

C. Permitted Uses. Development permitted on lands or shorelands designated as having critical recharging effect on aquifers used for potable water shall be the same as those permitted in the underlying zoning classification subject to the restrictions and standards of this chapter.

D. Classification and Designation.

1. Classification. All city lands shall be classified as having either a high, moderate or low aquifer recharge potential. At a minimum, classification shall be based on soil permeability as described within the Soil Survey of Clallam County. Where adequate information is available, aquifer recharge potential shall be further classified based on the recharge potential of surficial geologic materials, depth to ground water, and topography (i.e., slopes). Lands classified as having a

high, moderate or low aquifer recharge potential shall also be classified as having a high, moderate or low susceptibility to contamination of an underlying aquifer, respectively. Based on these criteria, the potential for recharging aquifers or transmitting contaminants to the underlying aquifer is greatest where the aquifer is close to the ground surface, where ground surface slopes are minimal, and where the recharge potential of the soils and/or surficial geologic material is greatest.

2. Designation. All lands classified as high or moderate aquifer recharge potential and aquifer susceptibility are designated as areas with a critical recharging effect on aquifers used for potable water. Critical aquifer recharge areas shall be rated as high or moderate susceptibility areas as follows:

a. High susceptibility aquifer recharge areas are all wellhead protection areas within the five-year travel time boundary;

b. Moderate susceptibility aquifer recharge areas are all wellhead protection areas within the 10-year travel time boundary; and

c. Low susceptibility includes all areas within the city that do not meet the criteria for a high or moderate susceptibility rating.

These areas shall be identified on maps available at the department of community development.

3. Declassification. Applicants may request that the city declassify a specific area included in the map. The application must be supported by a hydrogeologic assessment demonstrating that the designation is not warranted based on the physical character of the aquifer. The application to declassify an area shall be reviewed by the city and a determination made to amend the map as appropriate.

E. Definitions Referral. The use of terms within this section shall include those listed below and the definitions used in SMC 18.80.030.

1. "Aquifer" means a saturated geologic formation which will yield a sufficient quantity and quality of water to serve a private or public system or well. "Sufficient" means a possible minimum draw of three gallons per minute.

2. "Aquifer recharge" or "aquifer recharge area" means the process by which water is added to an aquifer. It may occur naturally by the percolation (infiltration) of surface water, precipitation or snowmelt from the ground surface to a depth where the earth materials are saturated with water. Aquifer recharge can be augmented by "artificial" means through the addition of surface water (e.g., land application of wastewater or stormwater) or by the injection of water into the underground environment (e.g., drainfields and drywells). Aquifer recharge areas are those

areas overlying the aquifer(s) where natural or artificial sources of water can move downward to an aquifer(s). Most areas are aquifer recharge areas.

3. "Aquifer susceptibility" means the ability of the natural system to transmit contaminants to and through the ground water system.

4. "Critical aquifer recharge areas" means those land areas which contain hydrogeologic conditions which facilitate aquifer recharge and/or transmitting contaminants to an underlying aquifer.

5. "Ground water" means all water found beneath the ground surface, including a saturated body of rock, sand, gravel or other geologic material.

F. Performance Standards. The following protection standards shall apply to the regulated uses outlined below and in areas designated as high or moderate susceptibility. The city shall impose development conditions when necessary to prevent degradation of ground water. Conditions shall be based on known, available, and reasonable methods of prevention, control, and treatment.

1. Activities that will not degrade ground water quality and adversely affect aquifer recharging may be permitted in a critical aquifer recharge area if they comply with the city stormwater management regulations and other applicable local, state and federal regulations. These activities typically include commercial and industrial development that does not include storage, processing, or handling of any hazardous substance, or other development that does not substantially divert, alter, or reduce the flow of surface or ground waters.

2. Aboveground Storage Tanks or Vaults. Aboveground storage tanks or vaults for the storage of hazardous substances or dangerous wastes as defined in Chapter 173-303 WAC, or any other substances, solids or liquids in quantities identified by the Clallam County environmental health division, consistent with Chapter 173-303 WAC, as a risk to ground water quality, shall be designed and constructed so as to:

a. Prevent the release of a hazardous substance to the ground, ground waters or surface waters; and

b. Have constructed around and under them an impervious containment area enclosing or underlying the tank or part thereof. Impervious containment shall be greater than the volume of the tank to avoid an overflow of the containment area;

c. Provide for release detection;

d. Provide written spill response and spill notification procedures to the local fire district.

3. Agricultural Activities. Agricultural activities, including commercial and hobby farms, are encouraged to incorporate best management practices concerning animal keeping, animal waste

disposal, fertilizer use, pesticide use and stream corridor management, and seek the technical assistance of the Clallam County Conservation District and cooperative extension agent.

4. Land Divisions. Subdivisions, short subdivisions and other divisions of land relying on on-site septic systems because city sewer services are not available shall be evaluated for their impact on ground water quality. The following measures may be required as determined by the Clallam County environmental health division:

a. An analysis of the potential nitrate loading to the ground water may be required to assess the impact on ground water quality;

b. Alternative site designs, phased development and/or ground water quality monitoring may be required to reduce contaminant loading where site conditions indicate that the proposed action will measurably degrade ground water quality;

c. Open spaces may be required on development proposals overlying areas highly susceptible for contaminating ground water resources;

d. Community/public water systems and community drainfields are encouraged and may be required where site conditions indicate a high degree of potential contamination to individual wells from on-site or off-site sources;

e. Where wells are required to be abandoned, the applicant shall ensure that they are abandoned according to state guidelines;

f. Remove contaminants from stormwater runoff prior to their point of entry into surface or ground water resources using available and reasonable best management practices in conformance with the Department of Ecology's "Stormwater Management Manual for the Puget Sound Basin."

5. Parks, Schools and Recreation Facilities. Fertilizer, herbicide and pesticide management practices of schools, parks, golf courses and other nonresidential facilities that maintain large landscaped areas shall be evaluated in relation to best management practices as recommended by the cooperative extensions service.

6. Stormwater Standards for Commercial and Industrial Uses. All new commercial and industrial land uses that have greater than 5,000 square feet of impervious area, or handle, store, dispose, transport or generate hazardous substances/wastes defined as dangerous or extremely dangerous wastes under Chapter 173-303 WAC (regardless of quantity), that may come in contact with stormwater runoff, including, but not limited to, gas stations and distributors, carwashes, trucking companies, and paint shops, shall remove contaminants prior to their point of entry into surface or ground water resources using available and reasonable best management practices in conformance with the current version of the Department of Ecology

Stormwater Management Guidelines as adopted by the city. Maintenance of stormwater facilities must be assured as a permit condition.

7. Underground Storage Tanks and Vaults. Underground storage tanks and vaults used for the storage of hazardous substances, solids or liquids in quantities identified by the Clallam County environmental health division, consistent with Chapter 173-303 WAC, as a risk to ground water quality, shall be designed and constructed so as to:

a. Prevent releases due to corrosion or structural failure for the operational life of the tank or vault;

b. Be cathodically protected against corrosion, constructed of noncorrosive material, steel-clad with a noncorrosive material, or designed in a manner to prevent the release or threatened release of any stored substance;

c. Use material in the construction or lining of the tank which is compatible with the substance to be stored;

d. Provide for release detection method(s); and

e. Provide written spill response and spill notification procedures to the local fire district.

8. Spreading or Injection of Reclaimed Water or Biosolids. Water reuse or biosolid projects must be in accordance with the city's comprehensive plans and approved by the Departments of Ecology and Health.

9. Vehicle Repair and Servicing. Vehicle repair and servicing must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment should leaks occur.

G. Prohibited Uses. The following activities and uses are prohibited in high and moderate critical aquifer recharge areas:

1. Dry wells on sites used for vehicle repair and servicing shall not be allowed, and any existing dry wells on the site must be abandoned using techniques approved by the Department of Ecology prior to commencement of any new vehicle repair and servicing facility;

2. Landfills including hazardous or dangerous waste, municipal solid waste, special waste, and inert and demolition waste landfills;

3. All classes of underground injection wells, unless approved by state or local authorities as part of an approved remediation action; and

4. Facilities that store, process, or dispose of radioactive substances. (Ord. 2012-001 § 2 (Exh. A); Ord. 2011-017 § 1; Ord. 631 § 1, 1992)

18.80.110 Securities and enforcement.

A. Performance Securities. The department of community development director may require the applicant of a development proposal to post a cash performance bond or other acceptable security to guarantee full performance of all mitigation required under this chapter. All securities shall be on a form approved by the city attorney. Until written release of the security, the security may not be terminated or canceled. The department of community development director shall release the security upon determining that all mitigation requirements have been fully performed and upon the applicant depositing the monitoring costs required under SMC 18.80.080(K) with the city.

B. Monitoring. Costs associated with monitoring under any mitigation plan required under SMC 18.80.080(K) shall be paid in accordance with that section.

C. Renewable Bonds. Any bonds required by this section may be in the form of one-year bonds to be renewed as appropriate.

D. Enforcement. Violations of this chapter shall be subject to the enforcement provisions of this code and shall be punishable as a misdemeanor offense.

Ecology Grant #G1000054
November 2012

Appendix B
City of Sequim Inventory and Characterization Report

Prepared for the City of Sequim
152 W, Cedar St.
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Prepared by Kristina Nelson-Gross

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INTRODUCTION

The City of Sequim (City), Washington is undertaking a comprehensive update to its Shoreline Master Program (SMP) as required by the implementing guidelines in the Washington Administrative Code (WAC). To support this effort, the City applied for and received a grant issued by the Washington State Department of Ecology (Ecology) (G1000054).

The purpose of the Inventory and Characterization Report is to review existing conditions and establish a baseline, against which the impacts of future development actions in the shoreline will be measured. The report also engages in a regional environmental analysis, though this will be limited as Clallam County is also updating its SMP concurrent with the City, and the County will be engaging in a more comprehensive regional analysis. In order to best use limited grant resources, this Inventory and Characterization is focused on reach-scale analysis of conditions and opportunities within the City shorelines. This report also analyzes specific segments or "reaches" of the shoreline, which includes the level of function, impairment, development, or other conditions affecting the reach. Finally, it also analyzes opportunities for environmental restoration, increased public access and shoreline use, and data gaps. As such, the Inventory and Characterization Report provides the basis for City's Shoreline Master Program designations and regulations.

The Inventory and Characterization Report relies heavily on existing information and analyses of City shorelines. New data gathering and extensive re-analysis of existing data are outside of the scope of the City's SMP update. This report also includes a map folio, located at the end of the document. Because the Shoreline Master Program is a long-range planning document, this report includes those shorelines within the City limits and within the Urban Growth Area (UGA). The City has chosen to pre-designate those areas within the UGA, though they will continue to be regulated by the Clallam County Shoreline Master Program until annexed into the City.

Shoreline Jurisdiction

Under the Shoreline Management Act (SMA), RCW 90.58, the shoreline area regulated by the City's Shoreline Master Program must include all shorelines of statewide significance, shorelines of the state, and their adjacent shorelands. The portion of Puget Sound seaward from the line of extreme low tide is considered a "shoreline of statewide significance". Submerged lands below extreme low tide mark extending to mid-channel are also shorelines of the statewide significance.

"Shorelines of the state" are generally described as all marine shorelines and shorelines of all other streams or rivers having a mean annual flow of 20 cubic feet per second (cfs) or greater and lakes with a surface area greater than 20 acres. Adjacent shorelands are defined as the upland area a minimum of 200 feet of the ordinary high water mark (OWHM), as well as any associated wetlands within its municipal jurisdiction. (RCW 90.58.030).

"Associated wetlands" means those wetlands that are in proximity to and influence or are influenced by tidal waters or a lake or stream subject to the SMA (WAC 173-22-030 [1]). These are typically identified as wetlands that physically extend into the shoreline jurisdiction, or wetlands that are functionally related to the shoreline jurisdiction through surface water connection and/or other factors. Ecology guidance states that an entire wetland is associated if any part of the wetland lies within the area 200 feet from the ordinary high water mark (OHWM) of a state shoreline.

The City's shoreline jurisdiction includes all the submerged lands from the mid-channel to the adjacent shorelands located within 200 feet of the OWHM. The City does not have any streams or rivers that meet the 20 cfs requirement, though the portion of Johnson Creek tidally influenced by Sequim Bay falls within the shoreline jurisdiction. They City's shoreline jurisdiction also includes "shorelines of statewide significance, which are those submerged lands extending from extreme low tide to mid-channel. One associated wetland falls within the City's shoreline jurisdiction.

The wetland commonly known as "Pitship Marsh" is within 200 feet of the OHWM and hydrologically connected to Sequim Bay; as such, the entire wetland falls within the city's shoreline jurisdiction. Similarly, the wetland in Washington Harbor along the inner portion of South Spit near PNNL/Battelle is an "associated wetland", but is not yet within the City's jurisdiction because it lies within the City's Urban Growth Area (UGA).

Figure 1 - Pitship Marsh

Study Area

The City of Sequim (population 6,606 as of 2010) is located in east Clallam County. The City has no other incorporated cities adjacent to its jurisdiction. Approximately 27,000 of Clallam County's 70,100 residents live in the vicinity. State Route (SR) 101 passes through the City from east to west in the southern portion of the City.

According to the 2000 U.S. Census Bureau, the City has a total area of approximately 5.28 square miles, none of which is water. The study area for this report includes all land and waters currently within the City's proposed shoreline jurisdiction, as well as minimal treatment of shorelines in the UGA currently regulated under Clallam County's SMP. The City's updated SMP encompasses approximately 5,359 lineal feet of marine shoreline within the City limits. The UGA shoreline area, although discussed in this report, will continue to be regulated by Clallam County's SMP until these areas are annexed by the City of Sequim. The UGA encompasses approximately 8,342 lineal feet of shoreline.

Methodology

A number of City of Sequim, Clallam County, state, tribal, and federal agency data sources and technical reports were reviewed to compile this inventory and characterization, including but not limited to the following:

- City of Sequim Comprehensive Plan (2006)
- City of Sequim Wastewater Comprehensive Plan (2003)
- City of Sequim Water Comprehensive Plan (2006)
- City of Sequim Preliminary Wildlife Study, Westech (2006)
- City of Sequim Wetlands Inventory, Westech (2011)
- Clallam County Dept. of Community Development, Clallam County
- Jamestown S'Klallam Tribe, West Sequim Bay Shoreline Inventory (2006)
- Point No Point Treaty Council, Historical Changes to Estuaries, Spits, and Associated Tidal Wetland Habitats in Hood Canal and Strait of Juan de Fuca Regions of Washington State (2006)
- Washington State Dept. of Health, Office of Shellfish Programs, Sanitary Survey of Sequim Bay (1999)
- Washington State Dept. of Natural Resources, Liquefaction Susceptibility Map of Clallam County, Washington (2004)

A number of sources were also reviewed to characterize overall watershed and Puget Sound nearshore conditions and to assess the ecological function of Sequim's shorelines in an ecosystem-wide context. Watershed, eastern Strait, and Puget Sound level condition sources reviewed for this report include, but are not limited to the following:

- Final Environmental Impact Statement for the Dungeness River Agricultural Users Association Comprehensive Water Conservation Plan (2003)
- Point No Point Treaty Council – Shoreline Alterations in the Hood Canal and Eastern Strait of Juan de Fuca (2003)
- Soil Survey of Clallam County Area, Washington (1979)
- WRIA 17 Salmon and Steelhead Limiting Factors Analysis (2002)
- WRIA 18 Salmon and Steelhead Limiting Factors Analysis (1999)
- WRIA 18 Watershed Plan, Chapters 2.1 – Natural Environment, 2.9- East Strait Clallam Independent Drainages, 2.10 – Sequim Bay and Drainages, 3.5 – Stormwater Recommendations, and 3.15 – Sequim Bay and Drainages Recommendations (2005)

CURRENT REGULATORY FRAMEWORK SUMMARY

State and Federal Regulations

A number of state and federal agencies may have jurisdiction over land or natural elements in the City's shoreline jurisdiction. Local development proposals most commonly trigger requirements for state or federal permits when they impact wetlands or streams; potentially affect fish and wildlife listed under the federal Endangered Species Act (ESA); result in over one acre of clearing and grading; or affect the floodplain or floodway. As with local requirements, state and federal regulations may apply throughout the City, but regulated resources are common within the City's shoreline jurisdiction. The state and federal regulations affecting shoreline-related resources include, but are not limited to:

Federal Rivers and Harbors Appropriation Act of 1899 (FRHA): Section 10 of the Act provides the U.S. Army Corps of Engineers (Corps) with authority to regulate activities that may affect navigation of "navigable" waters. Puget Sound and the Eastern Strait of Juan de Fuca are designated navigable water-bodies. Accordingly, proposals to construct new or modify existing in-water structures (including piers, marinas, bulkheads, breakwaters), to excavate or fill, or to "alter or modify the course, location, condition, or capacity of" marine waters must be reviewed and approved by the Corps.

Endangered Species Act (ESA): The federal ESA addresses the protection and recovery of federally listed species. The ESA is jointly administered by the National Oceanic and Atmospheric Administration (NOAA) Fisheries (formerly referred to as the National Marine Fisheries Service), and the United States Fish and Wildlife Service (USFWS).

Section 9 of the ESA prohibits "take" of listed species. Take has been defined in Section 3 as: "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The take prohibitions of the ESA apply to everyone, so any action of the City that results in a take of listed fish or wildlife would be a violation of the ESA and exposes the City to risk of lawsuit. Per Section 7 of the ESA, activities with potential to affect federally listed or proposed species and that either require federal approval, receive federal funding, or occur on federal land must be reviewed by the National Marine Fisheries Service (NOAA Fisheries) and/or U.S. Fish and Wildlife Service (USFWS) via a process called "consultation."

Clean Water Act (CWA): The federal CWA requires states to set standards for the protection of water quality for various parameters, and it regulates excavation and dredging in waters of the U.S., including wetlands. Certain activities affecting wetlands in the City's shoreline jurisdiction or work in the adjacent rivers may require a permit from the U.S. Army Corps of Engineers and/or Washington State Department of Ecology under Section 404 and Section 401 of the CWA, respectively.

Section 404 provides the Corps, under the oversight of the U.S. Environmental Protection Agency, with authority to regulate "discharge of dredged or fill material into waters of the United States, including wetlands" (http://www.epa.gov/owow/wetlands/pdf/reg_authority_pr.pdf). The extent of the Corps' authority and the definition of fill have been the subject of considerable legal debate. As applicable to the City of Sequim's shoreline jurisdiction, however, it generally means that the Corps must review and approve most activities in streams, wetlands, and lakes. These activities may include wetland fills, stream and wetland restoration, and culvert installation or replacement, among others. Similar to SEPA requirements, the Corps is interested in avoidance, minimization, restoration, and compensation of impacts.

Section 401, Water Quality Certification, of the Act allows states to review, condition, and approve or deny certain federal permitted actions that result in discharges to state waters, including wetlands. In Washington, the Department of Ecology conducts that review, with their primary review criteria of ensuring that state water quality standards are met. Actions within marine waters, streams, lakes or wetlands within the shoreline zone that require a FHRA Section 10 or CWA Section 404 permit (see above), will also need to be reviewed by Ecology.

National Pollutant Discharge Elimination System (NPDES): Ecology regulates activities that result in wastewater discharges to surface water from industrial facilities or municipal wastewater treatment plants. NPDES permits are also required for stormwater discharges from industrial facilities, construction sites of one or more acres, and municipal stormwater systems that serve populations of 10,000 or more.

Hydraulic Project Approval (HPA): The Washington Department of Fish and Wildlife (WDFW) regulates activities that use, divert, obstruct, or change the natural flow of the beds or banks of waters of the state and may affect fish habitat. RCW 77.55 (the Hydraulic Code) gives the WDFW the authority to review, condition, and approve or deny "any construction activity that will use, divert, obstruct, or change the bed or flow of state waters." As applicable to the City of Sequim's shoreline jurisdiction, however, it generally means that WDFW must review and approve most activities in marine and fresh waters. These activities may include pier and bulkhead repair or construction, stream alteration, and culvert installation or replacement, among others. WDFW can condition projects to avoid, minimize, restore, and compensate adverse impacts. Projects creating new impervious surface that could substantially increase stormwater runoff to waters of the state may also require approval.

Other relevant federal laws include the National Environmental Policy Act, Anadromous Fish Conservation Act, Clean Air Act, and the Migratory Bird Treaty Act. State laws which address shoreline issues include the Growth Management Act, State Environmental Policy Act, tribal agreements and case law, Watershed Planning Act, Water Resources Act, Salmon Recovery Act, and the Water Quality Protection Act.

A variety of agencies (e.g., U.S. Army Corps of Engineers, National Marine Fisheries Service, U.S. Fish and Wildlife Service, Washington Department of Ecology, Washington Department of Fish and Wildlife) are involved in implementing these regulations, but review by these agencies of shoreline development in most cases would be triggered by in- or over-water work, discharges of fill or pollutants into the water, or substantial land clearing. Depending on the nature of the proposed development, state and federal regulations can play an important role in the design and implementation of a shoreline project, ensuring that impacts to shoreline functions and values are avoided, minimized, and/or mitigated.

City of Sequim Regulations

City of Sequim Shoreline Master Program

The Shoreline Management Act is implemented through the development of local Shoreline Master Programs (SMPs). Local SMPs establish a system to classify shoreline areas into specific "environment designations." The purpose of shoreline environment designations is to provide a uniform basis for applying policies and use regulations within distinctly different shoreline areas. In a regulatory context, shoreline environment designations provide the governing policy and regulations that apply to land within the SMP jurisdiction. Portions of individual parcels that are outside SMP jurisdiction are governed by zoning and other applicable land use regulations. Generally, environment designations should be based on existing and planned development patterns, biological and physical capabilities and limitations of the shoreline, and a community's vision or objectives for its future development.

In 1996, the City of Sequim adopted its SMP and submitted it to the Dept. of Ecology in 1997. Pursuant to RCW 90.58.050, which states "local governments shall primary responsibility for initiating the planning required… and administering the regulatory program…" and RCW 90.58.070, which states "If any local government… fails to adopt a master program" the Dept. of Ecology will adopt and implement a program for the local jurisdiction. The City has locally adopted an SMP and administered the program accordingly.

Under the 1996 SMP, the City had three environmental designations within their jurisdiction:

- Conservancy, which extended from the southern portion of Pitship Marsh to Whitefeather Way, including Pitship Marsh and a buffer of approximately 200 feet around the Marsh, and
- Urban, which encompassed the John Wayne Marina facilities.
- Aquatic, which applies to all lands seaward of the Ordinary High Water mark (OHWM).

City of Sequim Comprehensive Plan
The City's Comprehensive Plan was last updated in 2006. The Growth Management Act requires local governments to periodically update their Comprehensive Plans. The City will begin the process of updating their Comprehensive Plan in 2011.

The Comprehensive Plan is a long-range planning document that establishes the goals and polices, which reflect the community's vision for the City over a 20-year period. The current Comprehensive Plan land use designations on the shoreline include Residential, Public Facilities, Commercial, and Research and Development Park. These land use designations are important because they reflect the general land use patterns and vision the City has adopted for areas both inside and outside the shoreline jurisdiction. The City's Shoreline Master Program goals and policies are adopted by reference as one element of the Comprehensive Plan.

City of Sequim Municipal Code, Title 15: Buildings and Construction
Title 15 establishes and regulates the City's building and construction practices.

City of Sequim Municipal Code, Title 18: Zoning
Title 18 establishes and regulates the City's zoning districts; districts within the shoreline area include Residential, Commercial, Public Facilities, and Research and Development Park.

City of Sequim Municipal Code, Chapter 18.70: Wetlands Protection
Chapter 18.70 sets out the provisions, restrictions, and regulations regarding wetlands within the City's jurisdiction. Two wetlands fall within the shoreline jurisdiction. The City is currently revising this chapter and the Environmentally Sensitive Areas, Chapter 18.80. Chapter 18.70, however, will be repealed and incorporated into 18.80.

City of Sequim, Municipal Code, Chapter 18.80: Environmentally Sensitive Areas
Chapter 18.80 establishes the development standards, permitted uses, and restrictions for environmentally sensitive areas, such as critical aquifer recharge areas, geologically hazardous areas, flood hazard areas, streams, and fish and wildlife conservation areas. Designated environmentally sensitive areas are found throughout the shoreline area, including geologically hazardous areas, fish and wildlife conservation areas, critical aquifer recharge areas, and streams.

WATERSHED NATURAL CHARACTERISTICS

The City of Sequim lies within Water Resource Inventory Area (WRIA) 18 for the Dungeness River Basis and WRIA 17 for the Quilcene-Snow River Basins. The City's marine shoreline in WRIA 17 runs from Johnson Creek south to the southernmost end of Reach 1, and WRIA 18 runs from Johnson Creek north to the westernmost end of Reach 5. Johnson Creek and Bell Creek drain into Sequim Bay, but only Johnson Creek is within the City's shoreline jurisdiction.

The Sequim Bay watershed drains an area of approximately 35,813 acres, from Mt. Zion to the south, the Strait of Juan de Fuca to the north, the Discovery Bay watershed to the east, and to the Dungeness watershed to the west. Mt. Zion, at an elevation of 4,273 feet, is the highest point within the watershed. Topography is steep in the upper, forested portions of the watershed with more gentle and flatter slopes toward Sequim Bay. Water used for domestic and farmland irrigation from the Dungeness River enters Sequim Bay through two ditches and a pipe outfall. Streams, creeks and irrigation ditches drain the upland watershed flowing in and out of each other, diverting and re-charging streams, tributaries, wetlands, and groundwater.

Johnson Creek is the third largest stream within the watershed, flowing northeast from the foothills of the Olympic Mountains into the west side of Sequim Bay at Pitship Point (near the John Wayne Marina). The east branch originates near the top of Burnt Hill, at an elevation of approximately 2200 ft. The west branch drains an unnamed pond/lake located at an approximate elevation of 400 ft. The total length of Johnson Creek is about 7.4 miles. Five river miles are attributed to the mainstem, while two miles consist of tributaries. The upper creek flows through a substantial ravine, while the lower two miles are low gradient, rising about 400 feet in two miles. The lower gradient section of Johnson Creek (below Highway 101) has been channelized, heavily armored, and is disconnected from its floodplain. Development has eliminated sinuosity and instream structure.

Bell Creek, an independent drainage into Sequim Bay, flows from the uplands of Happy Valley and the north flank of Burnt Hill through the eastern portion of the City of Sequim. It enters into a lagoon in Washington Harbor on the marine shoreline just north of the mouth of Sequim Bay and drains a watershed of over 3100 acres. During at least one time in its geologic history, it is believed to be the location of an old route ("paleo-channel") taken by the Dungeness River several thousands of years ago. In more recent times, it probably operated as an ephemeral stream fed by precipitation runoff. Historically, Bell Creek has served as a conveyance channel for irrigation water. Much of the creek has been heavily altered by rural and urban development. The lower 2.0 miles of Bell Creek are channelized and the lower 0.25 mile is diked. The creek is thought to be primarily spring fed, with stable flows and a limited floodplain.

Climate

The watershed lies in the rain shadow of the Olympic Mountains. The rain shadow effect of the Olympic lessens the impact of major storms to the Sequim Bay area. Sequim Bay's location exposes it to marine air masses that have been conditioned for extended periods over the open ocean.

Sequim Bay experiences prevailing winds from the west, which is common for much of middle North America. The climate is mild with cool winters and warm summers, reflecting the moderating influence of winds from the Pacific Ocean. In winter, the average wind speed is eight miles per hour, though strong and sometimes damaging winds are not uncommon.

Precipitation averages 28 inches over the Sequim Bay watershed and varies from 35 inches in the upper watershed (Mt. Zion) to 15 inches at the lower elevations to less than 10 inches at Sequim Bay. The lowlands average 20 inches per year south of Sequim, and less in the lower Dungeness Valley, Sequim and the Miller Peninsula. Total annual precipitation in Sequim is approximately 16 inches. Summer storms must produce in excess of 1 inch of rainfall to show up as runoff in area streams.

Most precipitation falls in the winter. Winter precipitation is primarily rain up to 1,500 feet elevation, with mixed rain and snow between 1,500 and 2,500 feet, and primarily snow above 2,500 feet. Much of the higher elevation precipitation, which accounts for the bulk of the precipitation that does fall in this area, accumulates as snowpack and subsequently contributes to sustained spring and summer runoff. Average seasonal snowfall in Sequim is 6-8 inches, but the number of days of snow cover varies greatly from year to year.

Geology and Soils

The Olympic Peninsula is geologically very young; its oldest rocks are dark, oceanic crustal basalt common throughout the region. Glaciers have been the primary sculptors of the mountains, foothills, and coastal lowlands. Repeated episodes of glacial advance and recession, called glaciations, resulted in thick accumulations of glacial and interglacial deposits throughout the region. The retreat of the huge and heavy ice sheets of the cordilleran glaciations carved the inland waterways of Puget Sound. The glacial ice penetrated upland into the Olympic Mountains and covered most of the northwestern end of the Olympic Peninsula.

Stratigraphic deposits include the Everson sand, Everson glaciomarine drift, Vashon recessional deposits, Vashon till, and Vashon advance outwash. These heterogeneous deposits of clay, silt, sand, and gravel form the aquifers and aquitards that comprise the regional groundwater flow system in the Sequim-Dungeness region. The volcanic and marine sedimentary rocks that underlie the unconsolidated glacial deposits form the bottom-most unit of the ground water flow system. Beach deposits, alluvium, peat, and marsh deposits, and older alluvium deposits comprise the nonglacial surficial deposits in the region.

Surface and Groundwater

Precipitation falling within the watershed is conveyed directly to lakes and streams by surface runoff or travels in the subsurface as groundwater flow. Groundwater typically flows from south to north-northeast, discharging into Sequim Bay. Small amounts of rainfall soak into the ground, but during heavy rainfall, the ground quickly becomes saturated, inhibiting further infiltration. Water that is unable to infiltrate travels down slope across the ground surface as stormwater runoff.

Impermeable surfaces, such as pavement, rooftops, or compacted ground increase stormwater runoff. Conversely, vegetation promotes infiltration by intercepting rainfall, effectively spreading precipitation events over longer periods of time and reducing peak flows and associated sediment transport. Vegetation also reduces erosion by holding soil in place and reducing splash erosion.

Coastal Processes

Sediment transport, or littoral drift, is primarily influenced by prevailing winds and waves, so the drift may change seasonally, or even daily. Eroding bluffs deposit sediment to the water, which is transported by littoral drift. The sediment is deposited onto beaches and replenishes the sediment lost during wave activity, or the sediment forms spits.

Gibson and Travis spits, which flank the opening to Sequim Bay, are formed by sediment drift from the west and the east, respectively. There are relatively short stretches of south-to-north drift along both northwest and northeast shorelines of Sequim Bay, while the dominant drift direction tends to be north-to-south in the remainder of the bay. A much shorter spit (South Spit) originates at the southeast base of Washington Harbor and extends north nearly joining the

south end of Gibson Spit, though a large opening between the two spits remains. See Map 4 in the Map Folio.

Water Quality

Section 303(d) of the Federal Clean Water Act requires Washington State to periodically prepare a list of all surface waters in the State for which beneficial uses of the water, such as drinking, recreation, aquatic habitat, and industrial use are impaired by pollutants. The Washington Department of Ecology maintains a 303(d) list, composed of waterbodies where tested pollutants have exceeded thresholds established by the state surface water quality standards (WAC 173-201A).

Water quality, particularly fecal coliform, in Sequim Bay has been an issue for some time. Fecal coliform develops in the intestinal tract of warm-blooded animals; as such the primary sources are human and animal waste introduced into the waterbody. Several irrigation ditches in the Bell Creek and Johnson Creek subbasins have been found to contribute to fecal coliform loads entering Sequim Bay. Bell Creek was estimated to contribute 90 percent of the fecal coliform load entering Sequim Bay. A study performed by Ecology indicated that Bell Creek was the single largest source of bacteria to Sequim Bay. Studies have identified two major contributors of fecal coliform to Sequim Bay: large-scale beef and dairy farms along the lower two miles of Bell Creek and Highland Irrigation ditches and associated land uses for Johnson Creek.

Johnson Creek, which travels through John Wayne Marina, is on the Dept. of Ecology's water quality 303(d) list for fecal coliform. Bell Creek, which drains into Washington Harbor, is not within the City's shoreline jurisdiction, but the creek is also listed on Ecology's 303(d) list for fecal coliform, dissolved oxygen, and bioassessment at the creek mouth.

Table 1. Dept. of Ecology's 303(d) listed Waterbodies

Waterbody Name	Pollutant	Year	Medium
Johnson Creek	Fecal coliform	1996, 1998, 2008	Water
Bell Creek	Dissolved Oxygen Fecal coliform Bioassessment	2008 1996, 1998, 2008 2008	Water Water Other

Despite these listings, much of the Bay is approved for shellfish harvest. The area around John Wayne Marina and within and near Washington Harbor (at the mouth of Bell Creek), however, remains closed. In the 1999 Sanitary Survey of Sequim Bay, prepared by the Washington State Dept. of Health, the reasons for closures were due to boat traffic, contributions from John Wayne Marina, and non-point source pollution from Bell Creek and Johnson Creek. A 2007 National Oceanic and Atmospheric Administration/National Marine Fisheries Service Community Profile Report, however, indicated that there is no evidence that the Marina currently affects water quality in Sequim Bay.

NEARSHORE LAND USE PATTERNS

Land use in shoreline areas is a major factor in the preparation of master programs for two reasons. First, the Shoreline Management Act (SMA), Chapter 90.58 RCW, establishes a policy that gives preference to uses that are unique to or dependent upon a shoreline location.

Consequently, WAC 173-26-201(2)(d) calls for master program provisions to give higher priority to the following types of uses, in the order presented below:

1. Areas for protecting and restoring ecological functions.
2. Water-dependent and associated water-related uses.
3. Other water-related and water-enjoyment uses.
4. Single-family residential uses where they are appropriate and can be developed without significant impact to ecological functions and displacement of water-dependent uses.
5. Non-water-oriented uses where the uses described in 1-4 are inappropriate or where non-water-oriented uses demonstrably contribute to the objectives of the SMA.

A second important reason for inventorying shoreline and adjacent land uses is that this inventory information is critical for assigning environment designations as called for in WAC 173-26-211. As noted in subsection (3), the SMP and the comprehensive plan must be mutually consistent, and shoreline and adjacent land use is very relevant to the criteria for individual environments in the WAC section.

The City of Sequim is located in eastern Clallam County and borders the western edge of Sequim Bay. Shoreline areas fall within the City limits and the Urban Growth Area (UGA). These areas contain a variety of land use modifications, such as roads, bulkheading and armoring, overwater structures, and John Wayne Marina.

Historical Land Use Changes

Johnson Creek

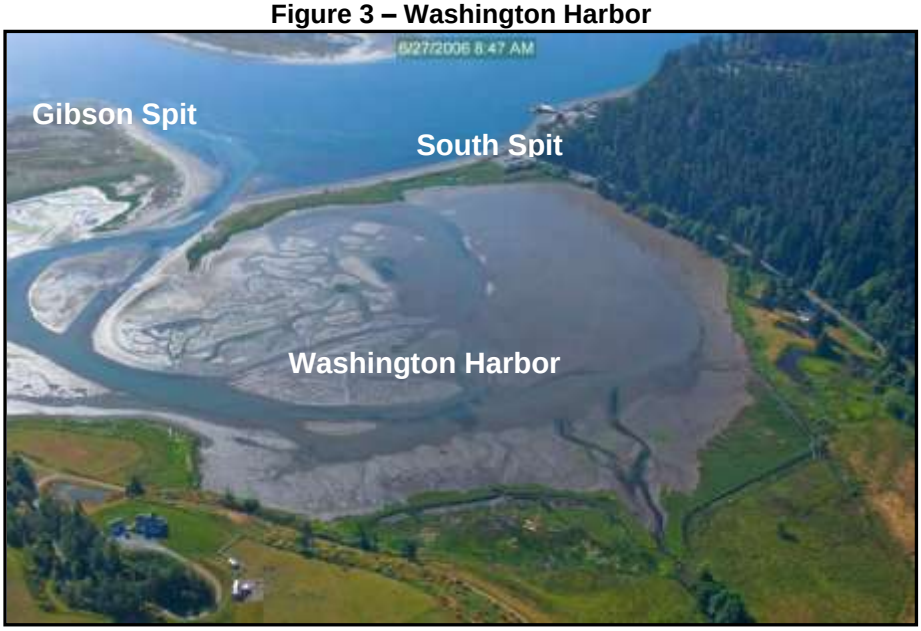
The Johnson Creek/Pitship Point stream-delta complex historically entered the bay through a tiny lagoon at Pitship Point and never supported tidal marsh habitat. John Wayne Marina now sits on the site of this former lagoon. Johnson Creek still enters the bay, now immediately south of a large jetty, and much of the former tide flat directly associated with the stream is now filled. A fan-shaped delta occurs where Johnson Creek empties into the Bay at the John Wayne Marina.

Figure 2 - John Wayne Marina & Johnson Creek

Washington Harbor

North of the City's shoreline jurisdiction, a 1250 foot-long east-west road crosses the lagoon and tidal marsh in Washington Harbor. This road alters much of the north section of tidal lagoon and marsh habitats and has substantially impaired the lagoon's historical habitat connectivity. This road, built sometime after 1965, supports the Sequim Wastewater Treatment Plant outfall. The two culverts under the roadbed provide inadequate tidal exchange to the north of the road, as this area is reportedly filling in with sediment. There is a plan in the works, facilitated by the Jamestown S'Klallam Tribe, that would remove the culverts and replace the road with a bridge to improve tidal exchange and habitat connectivity.

Figure 3 – Washington Harbor



The south spit and associated tidal marsh and lagoon was the site of a long building structure, the Bugge Clam Cannery. By 1926, a small lagoon and marsh at the base of the spit were filled to accommodate a line of buildings along the shore at what is now the site of the Pacific Northwest National Laboratory (PNNL)/Battelle building complex. A dock and shoreline bulkheading fronts much of the laboratory facility along the base of the spit. Away from its base, much of the spit itself appears relatively unchanged.

Current Land Use

During the inventory process, the City of Sequim divided the shoreline into segments or "reaches" based upon the existing development patterns along the shoreline (Table 2). These segments were not defined based on shoreline drift cells; however, because land use often develops as a function of conditions driven by shoreline physical processes, these segments correspond relatively well with the shoreline drift.

Current land use is a mix of residential, commercial, public facilities, and research and development. Interestingly, the commercial zoning in this area is not shoreline commercial, though the City has this designation in its zoning code. The commercial zoning in this area is designated "C-III, regional commercial". This designation is designed for regional commercial uses, meaning those that attract a regional clientele. These uses typically include larger-scale

retail and shopping centers, though residential uses are conditionally allowed. There are no water-dependent or water-related use requirements associated with this zoning designation.

Table 2. Shoreline Reaches

Reach	Description	Zoning	Approx. Length in Feet	Acres/ Parcels
1	S of Pitship Marsh, N to Whitefeather Way/ W. Sequim Bay Rd.	City: Residential-II (3-5 du/ac) approx. 75% of Reach UGA: SRII approx. 25% of Reach	1478	24.85/4
2	Whitefeather Way to N end of John Wayne Marina	Public Facilities approx. 39% of Reach City: CIII – General Commercial approx. 46% of Reach City: Residential-II (3-5 du/acre) approx. 15% of Reach	2429	20.97/10
3	N of John Wayne Marina to Forest Rd.	City: Residential-II (3-5 du/acre) approx. 30% of Reach UGA: SRII approx. 70% of Reach	3379	39.79/25
4	N of Forest Rd. to end of South Spit	City: Research and Development Park 0% before annexation UGA: SRII 100% before annexation	4171	*59.9/5
5	Tip of South Spit into Wa. Harbor	City: Research and Development Park 0% before annexation UGA: SRII 100% before annexation	2244	*16.73/1

* Reach 5 is comprised of one parcel also included in Reach 4

The entire shoreline area consists of approximately 145 acres and 44 parcels. Of these, approximately 27% are vacant parcels. A number of parcels not included in this figure, however, are under-utilized, e.g., one single-family residence located on a 2.5 acre lot designated Residential-II, which allows three to five dwelling units per acre. Nonetheless, it is unlikely that these lots would be developed to their full build-out because of their lot configuration. Most of the parcels are long and thin, making access for multiple homes more difficult.

Table 3. Parcel Summary

Reach	Number of Parcels	Number of Vacant Parcels	Percent Vacant
1	4	1	25
2	10	4	40
3	25	4	16
4	*5	4	80

5	*1	0	0
Total	44	12	27

* Reach 5 is comprised of one parcel also included in Reach 4

Most of the shoreline's current land use is for single family residences. The residential development along the shoreline has remained relatively stable. Much of the residential development occurred prior to passage of the Shoreline Management Act in 1972. The oldest structures, cabins at Sequim Bay Resort, were built in 1910, and the oldest single family residence was built in 1930. The table below breaks down the number of single-family residences built before the Shoreline Management Act (1972) and after its passage. Commercial buildings and accessory structures were not included in this data. Because of the large number of homes built before 1972, several of these homes are located close to the bluff line, sometimes as little as 25 feet from the bluff, though exact data is not available.

Table 4. Single-family Residences, Before/After 1972

Total of Residences	Residences, pre-1972	Residences, post-1972	Percent pre-1972
30	17	13	57%

John Wayne Marina is the largest single facility within the shoreline jurisdiction. The marina was built in 1985 on 22 acres of land donated by the Wayne family. The facility has restrooms, shower and laundry facilities, a restaurant, a boat launch, a public meeting room with kitchen, and moorage space for approximately 300 boats. Moorage may be temporary or permanent, and the marina also offers fueling, waste oil disposal, and sewage pump-out services.

The research and development park zoning designation is relatively new and is not yet within the City's jurisdiction. Uses in this district include those associated with environmental, and marine and coastal security research, among others. This area is located within the City's UGA, but Pacific Northwest National Laboratories/Battelle (PNNL/Battelle), currently located in this area, is annexing into the City. With annexation, city services may be extended to the site, which would allow Battelle to expand and attract similar campus-style research facilities to its property.

Roads and Transportation Facilities

West Sequim Bay Road runs parallel to Sequim Bay from just north of John Wayne Marina to the southern end of Reach, just south of Pitship Marsh. John Wayne Marina is accessed via W. Sequim Bay Rd. and the Marina currently provides the only public shoreline access. At the Marina, there are walking trails and a beach access point.

The City is currently exploring ways in which to improve W. Sequim Bay Rd., which may include widening, signalization, or other traffic calming mechanisms. Conceptual plans also include bicycle lanes and sidewalks, which would enhance public access opportunities along the shoreline and further the City's goal of "re-thinking" transportation.

Utilities

The City operates a wastewater reclamation facility near Bell Creek which was originally constructed in 1966. Over the years, concerns about the effluent outfall and the subsequent effects on shellfish beds prompted the City to upgrade the facility. The wastewater facility now

produces Class A reclaimed water, which is released just north of mouth of Sequim Bay. The City also recently completed an $11 million upgrade to the facility, which was specifically designed according to the National Water Research Institute's pathogen-removal criteria to produce nearly pathogen-free recycled water. The project doubled the plant's current capacity and converted the facility from an oxidation ditch to a conventional activated sludge plant that allows enhanced nitrogen removal. It also included construction of aeration blowers, clarifiers, ultraviolet disinfection facilities, and other means of ensuring that the water is treated to the highest standards. These upgrades provide increased reliability and pathogen removal, which allowed the Washington Department of Health to conclude that enlarging the existing 300-yard radius shellfish closure zone would not need to be enlarged, despite doubling flow capacity. Further, the increased capacity allows the City to extend its service area, which could replace some of the existing on-site septic systems within the area.

Currently, the City does not have utility services located in this area, so utility services are limited to on-site septic systems and private wells. The table below provides a summary of the on-site septic systems within the shoreline area:

Table 5. On-Site Septic Systems

Earliest known installation	Total number of known systems	Total number of known repairs	Total number of known expansions	Unknown
1970	25	14	3	6

The "unknown" category represents those parcels with known residential structures but no information on the installation and status of on-site septic systems. In addition, the Dept. of Health, Sanitary Survey 1999 indentified four parcels, all within Reach 3, as "suspected pollution sites". Of these parcels, three lack any record of repair since the 1999 survey. Because most of the septic systems are located within Reach 3, a more in-depth discussion of the septic systems in the shoreline area will be discussed in the "Reach 3 Summary".

Also, there are no stormwater facilities in the area. Infiltration is the primary method of addressing stormwater. Areas cleared of vegetation are susceptible to erosion, which can significantly increase sediment loading to nearby drainage courses and water bodies. Without detention or retention, the volume of stormwater runoff can also generally increase during and following construction as vegetative cover is removed and replaced with impervious surfaces such as roads and rooftops. Increased stormwater runoff could lead to erosion of stream banks and accelerated channel scouring from increased flow rates, which eventually can adversely impact the quality of stormwater eventually draining into marine waters adjacent to Sequim Bay and the City's UGA.

Utility services will likely be expanded throughout the region in the coming years. PNNL/Battelle is scheduled for major expansion in 2012, and the City must provide water and sewer to the site by the end of 2011 to accommodate this growth. Further, a large development (the Wayne project) is planned in and near Reach 1 and upland of Reach 2. Under the current plan, though it is still conceptual, the developer plans to construct some single family residences above Pitship Marsh, which is located in Reach 1. The City is exploring ways in which stormwater facilities could be managed as part of a regional infrastructure improvement.

Existing and Potential Public Access Points

Most of the tidelands within the shoreline area are privately owned. John Wayne Marina is the only existing portion of the shoreline available for public use. The Marina has a variety of facilities and a beach access point located on the premises.

Figure 4 – John Wayne Marina

1) Boat Launch
2) Fueling facilities
3) Harbormaster
4) Parking Lot
5) Marina Entrance
6) Picnic Area

Photo courtesy of John Wayne Marina website

Other existing public access points are limited to view access. View access is available along W. Sequim Bay Rd. and a small portion of Washington Harbor Rd. These areas, however, are also areas of anticipated future development.

The Marina currently has enough room to add some additional slips, but market demand has not made the addition necessary. Further, expanding the current breakwater is highly unlikely, though there has been some discussion about adding mooring buoys outside the breakwater. There has also been some discussion of constructing a fishing pier in conjunction with the Jamestown Tribe. All of these proposals, however, are purely conceptual with no target date or timeline for project initiation.

The Wayne project is one of the anticipated future development areas. The primary location of this development is within Reach 1 and upland of Reach 2. A major aspect of this development is increased public access opportunities. Increased public access to the beach and the associated wetland (Pitship Marsh) would be obtained via access trails, some of which would be ADA accessible, in addition to providing new view access points.

The Pacific Northwest National Laboratories/Battelle (PNNL/Battelle), located in Reaches 4 and 5, is another area of anticipated future growth, which may provide public access. Because of the nature of PNNL/Battelle's research and clientele, public access within the City's shoreline

jurisdiction is unlikely; however, PNNL/Battelle also owns Travis Spit, located across Sequim Bay. PNNL/Battelle has indicated a willingness to allow future public access to Travis Spit, which is located under Clallam County's jurisdiction. See Figure 5 below.

Figure 5 - PNNL/Battelle & Travis Spit

Another possible public access site is currently in private ownership just above the Marina on W. Sequim Bay Road. This vacant parcel is quite small, encompassing only about .3 acres, but provides views overlooking the entire area. Neighboring property owners said that the parcel is a natural scenic viewpoint and that people often stop there to admire the views.

Historical/Cultural Resources

Washington State's Department of Archeological and Historic Preservation (DAHP) maintains the Washington State Inventory of Cultural Resources. A review of this inventory for Clallam County indicates only one site may fall within the shoreline area. The Suxtickwi'in Village Site lies within the Washington Harbor vicinity, and its actual location was confirmed on a field visit. However, because the DAHP lists the site as "address restricted", this report will not identify the location of the site.

NEARSHORE PHYSICAL CHARACTERIZATION

Soils

The coastal geology of Sequim Bay is dominated by glacial till and outwash, with alluvial deposits occurring at the head of the bay and where small streams enter the bay. The dominant

soils in shoreline area are beaches, hoypus, and yeary. Hoypus soils, consisting of deep, somewhat excessively drained soils, are formed from glacial outwash. Permeability in hoypus soils is rapid and water capacity is low. Yeary soils are formed by compact glacial till, over which lies reworked marine sediment. Yeary soils are moderately well drained, though permeability is moderately slow until it reaches the compact glacial till, when it becomes very slow.

Soil Erosion and Sediment Load

Sequim Bay has an accelerated sedimentation rate, which appears to be originating from the Johnson Creek watershed. Bacterial and viral contaminants adhere to sediment and then transported to the waterbody. The sediment particles concentrate the effects of the bacterial and viral contaminants in the waterbody. Increased sedimentation can reduce shellfish and anadromous fish production.

Geologic Hazard Areas

In the City of Sequim, geologic hazards include areas subject to landslides, erosion, earthquakes, or other geological hazards. Geologic evidence suggests that at least six subduction earthquakes (magnitude 8 or greater) have occurred on the Olympic Peninsula. Earthquakes typically involve ground shaking, which causes most structural damage, and ground failure.

Liquefaction and landslides are forms of ground failure. Liquefaction occurs when water-saturated sands, silts, or (less commonly) gravels are shaken so violently that the grains rearrange and the sediment loses strength, begins to flow out as sand boils (also called sand blows or volcanoes), or causes lateral spreading of overlying layers. Ground failures, such as ground cracking or lateral spreads (landslides on very shallow slopes) commonly occur above liquefied layers. The Department of Natural Resources Soil Liquefaction Map for Clallam County shows that, overall, the risk of liquefaction is very low. Small portions of land along Johnson Creek and at the base of South Spit, however, are at an increased risk of liquefaction.

Landslide and erosion hazards information was obtained from Clallam County. The Department of Ecology Coastal Zone Atlas maps provide an additional source of documented landslide areas and characterize slope stability of the entire shoreline along Puget Sound. This mapping should not be considered comprehensive and does not include landslides that have occurred since the late 1970s.

Areas designated as landslide and erosion hazards are found in Reaches 3, 4, and 5, as shown in Map 3 located at the end of this document. The Dept. of Ecology's Coastal Atlas slope stability supports these landslide and erosion designations, with intermediate and unstable slopes dominating these reaches. Reach 1 is considered stable, and Reach 2 has been modified at the southern end of John Wayne Marina.

Table 6. Dept. of Ecology Slope Stability Map Designations

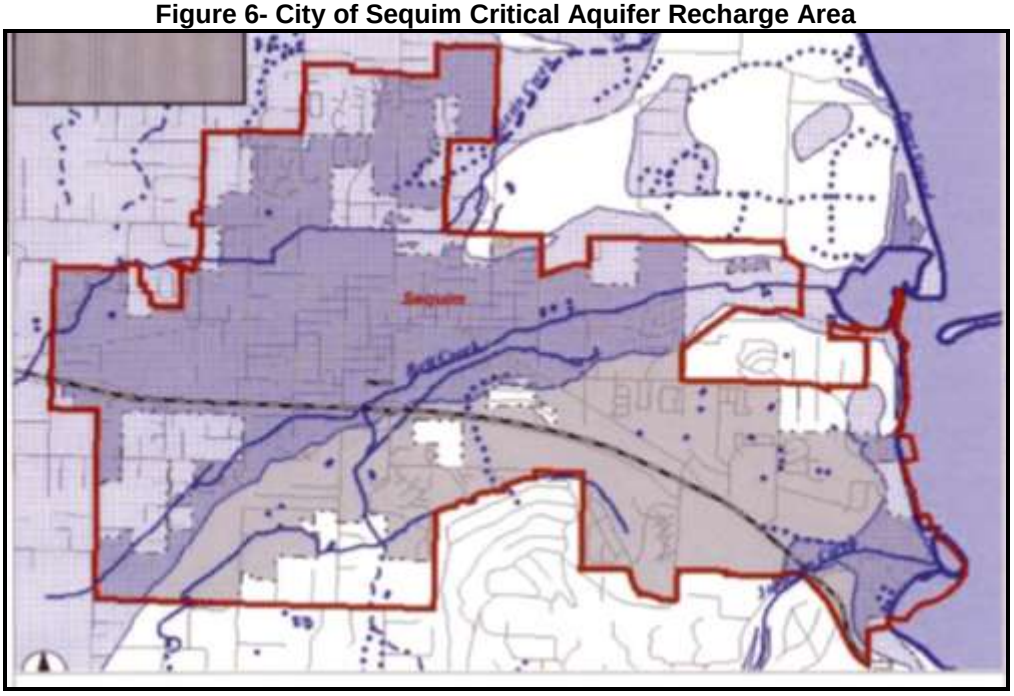
Slope Stability	Designation Definition
Stable	Generally rise less than 15 percent in grade, except in areas of low groundwater concentration or competent bedrock. Include rolling uplands and lowlands underlain by stable material (i.e., unweathered till and/or peat deposits) with no significant slope.

Intermediate	Generally steeper than 15 percent except in areas where weaker material and/or abundant material exist. These areas include slopes of sand and gravel, till, or thin soils over bedrock with no known failures.
Unstable	Slopes that are considered unstable due to geology, groundwater, slope, and/or erosional factors which include areas of landslide and talus too small or obscure to be mapped.
Unstable Recent Landslide	Recent or historically active landslide areas (based on surveys conducted in the late 1970s).
Unstable Old Landslide	Post-glacial but prehistoric landslide areas.
Modified	Slopes that are highly modified by human activity and include areas of significant excavation or filling. Response of the slope to a combination of human activity and natural processes may be unpredictable.

Aquifer Recharge Areas

All of the shoreline area, except for approximately half of Reach 4, is in a critical aquifer recharge area. The City is in the process of updating its Critical Areas Ordinance, at which time the City will make its susceptibility designations.

Figure 6- City of Sequim Critical Aquifer Recharge Area



The areas shaded in purple, as illustrated by Clallam County Critical Areas mapping, indicate critical aquifer recharge areas.

Frequently Flooded Areas

The Sequim Municipal Code defines frequently flooded areas as follows:

lands in the floodplain subject to a one-percent or greater chance of flooding in any given year (the 100-year storm flood). These areas include but are not limited to the floodplains of streams, rivers, lakes, coastal areas, wetlands, and the like.

The Federal Emergency Management Agency (FEMA) flood insurance maps identify areas that fall within the 100-year floodplain. The FEMA Map for the shoreline area (1989) indicates that all marine beaches, much of John Wayne Marina, Pitship Marsh, and all of South Spit fall within the 100-year floodplain.

Shoreline Modifications

Shoreline modification refers to structural changes to the shorelines' natural bank. Examples include shoreline armoring (bulkheads, rip-rap, etc.), overwater structures (dock and piers), or dredging and filling. The following assessment of the extent of shoreline modification is based on the Washington State Department of Natural Resources ShoreZone Inventory (2001). Information was also obtained from the Jamestown Tribe and the Point No Point Treaty Council's Sequim Bay Shoreline Inventory (2006). Field visits were also used to verify the reported shoreline modifications in accessible areas.

Armoring

Shoreline armoring is typically used to protect upland property from wave-induced erosion, to retain or stabilize unstable banks, create areas of calm water, stabilize entrances to harbors, or establish moorage for vessels. However, shoreline armoring also has adverse effects on the nearshore physical processes necessary to maintain native species habitats and shoreline functions. These effects include the loss of beach areas, sediment impoundment, modification of groundwater regimes, lowering of beach elevations, redirection of wave energy, alteration of substrate, and loss of riparian vegetation and associated functions. Increased wave action also causes beach sediment to coarsen because the steep slopes do not dissipate wave energy and removes fine material away from the beaches. Coarser sediment interferes with eelgrass propagation, forage fish spawning, and may also interfere with hardshell clam habitat.

Despite the perceived benefits and protections of shoreline armoring, it has detrimental effects on the shoreline environment and may increase shoreline erosion. Armoring interferes with littoral drift (sediment transport). Transported sand and gravel accumulate on the updrift side of shore obstructions and deplete the downdrift side of obstructions by blocking sediment transport. Further, armoring eroding bluffs prevents downshore beaches from being replenished. In areas where the beach is depleted, erosion accelerates.

One form of armoring, bulkheads, increases wave energy at the face of the bulkhead, which causes downcutting or lowering of the beach. Bulkheads fail when a beach has been lowered below the face of the bulkhead. Armoring is the most significant cause of changes in beach size, shape, and substrate character.

Most of the shoreline area is heavily modified and has been for many years. Riprap and wooden bulkheads, likely creosote, appear to be the dominant armoring types, though concrete bulkheads are also used. One property owner in Reach 3, however, participated in the Washington Dept. of Fish and Wildlife bulkhead removal program in 2004. The Table below displays the amount and type of armoring per reach segment.

Table 7. Shoreline Armoring

Reach	Length	Modification Type	Length	Percentage
1	1478	Riprap/wood bulkhead	700	47
2	2429	Riprap	2429	100
3	3379	Wood/concrete bulkhead	2180	65
4	4171	Wood bulkhead	600	14
5	2244	Riprap	100	4

Estimates based upon Jamestown Tribe 2006 Shoreline Inventory Map and field observation

Overwater Structures

Overwater structures include floating or fixed docks, covered moorage, piers, breakwaters, or marinas. Overwater structures are typically located in the nearshore. These structures change the levels of light, shoreline energy regimes, substrate type and stability, and water quality. They also restrict light needed by eelgrass, which used by forage fish and other marine life for spawning, foraging, and refuge. Overwater structures can also alter wave energy and sediment dynamics. These changes may result in alterations in the abundance and diversity of species in the nearshore.

Additionally, construction materials associated with overwater structures, such as treated wood, can leach contaminants into the nearshore environment. Treated wood releases poly-aromatic hydrocarbons (PAHs) from creosote-treated wood and other chemicals such as ammoniacal copper zinc arsenate and chromated copper arsenate. (Hanson et al. 2003). PAHs can cause cancer, reproductive anomalies, immune dysfunction, and growth and development impairment to exposed fish. (Id.) Concrete or steel, on the other hand, are relatively inert and do not leach contaminants into the water.

Other contaminants, such as stormwater run-off, fuel/sewage spills, household cleaning, pesticide or herbicides, may also enter marine waters from houseboats, covered moorages, and boat houses.

John Wayne Marina has approximately 10 docks, including the fueling dock, containing 300 moorage slips. Of these 300 moorage slips, approximately 10 percent of these boats are used as primary residences.

Figure 7 - John Wayne Marina

Overwater structure information was obtained from Washington Dept. of Natural Resources ShoreZone Inventory (2001), Clallam County records, and the Jamestown Tribe's Shoreline Inventory (2006). This data indicates that, for the rest of the shoreline area, there are three docks and three private access points. The longest dock, located in Reach 3, stretches approximately 300 ft. into the Bay. Originally, two adjacent property owners constructed the dock, but it is unknown if the dock still serves both lots. All of these structures are located within Reach 3, except one dock in Reach 4, which is at the Pacific Northwest National Laboratory (PNNL)/Battelle Marine Research facility.

Dredging and Fill

The shoreline of Puget Sound is shorter than it was historically (1850s-1890s), declining by approximately 15%. Much of this shortening is because of artificial fill in the nearshore at the expense of barrier estuaries, barrier lagoons, closed lagoon marshes, and open coastal inlets. Once filled, the ecological value of these areas is impaired or lost.

Two areas within the shoreline region have been artificially filled: John Wayne Marina and the Pacific Northwest National Laboratory (PNNL)/Battelle Marine Research Facility site. The John Wayne Marina site historically contained a small spit (Pitship Point) and lagoon at the mouth of Johnson Creek, but never supported tidal marsh habitat. During construction of the Marina, the area was dredged and filled. This area is also a drift-cell divergence zone, which means that sediment is transported south of the Marina and north toward the southern spit at Gibson Spit.

The southern spit at Gibson Spit is the other area affected by artificial fill. This region historically supported tidal marsh habitat and a small backshore lagoon. This spit has been shortened approximately 580 feet (33% of its historical length) by artificial fill at the base. This area was entirely altered by 1926, probably to accommodate the cannery located at the base of the spit. PNNL/Battelle Marine Sciences Laboratory is now located at this site. Construction of the lab facilities required a significant amount of additional fill, approximately three to four feet, because of the underlying peat-bog.

NEARSHORE BIOLOGICAL CHARACTERIZATION

Wetlands

Wetlands near the shoreline typically include tidal marshes and tidally influenced estuaries. Since achieving statehood in 1889, Washington State has lost an estimated 70% of its estuarine wetlands. Estuarine wetlands are important for juvenile salmon rearing.

There are two estuarine wetlands located within the shoreline area. One wetland is approximately four to six acres in size, though the far northeast portion was filled to accommodate a building and parking by 1977. This wetland, also known as Pitship Marsh, had its tidal connection significantly impaired when W. Sequim Bay Rd. (formerly Old Olympic Highway) was constructed prior to 1926. Until recently, the only tidal connection from the marsh to Sequim Bay was through a small culvert.

Figure 8 – (Reach 1) Pitship Marsh Before/After

Pitship Marsh – Before

Pitship Marsh – After

Photo courtesy of North Olympic Salmon Coalition

The culvert likely adversely affected fish passage; it also may have converted some of the salt marsh to freshwater marsh because of the freshwater input from the east side of the marsh. In 2009, however, the undersized culvert was removed and replaced with a bridge. Now, the wetland has high salinity on the east side of the wetland, gradually changing to low salinity in the west. The bridge will increase tidal exchange, which will enhance juvenile salmon habitat and passage.

Despite this restoration effort, the Water Resource Inventory and Analysis (WRIA) report for the WRIA 18 region indicates that upland development poses a threat to ecological functions. The upland area behind the marsh is an area of anticipated future growth.

The second wetland is located in the City's Urban Growth Area, along the inner edge of the southern spit in Washington Harbor. This tidally-influenced estuarine wetland is approximately 1.5 acres and is covered almost entirely by *American Glasswort*, a plant that thrives in saline environments. At the base of the spit, the glasswort ends and transitions to other beach plants to the western edge outside the UGA.

Critical Fish and Wildlife Areas

Critical fish and wildlife habitat areas are those areas identified as critically important in maintaining and preserving fish, wildlife, and natural vegetation. These areas include shellfish beds on private and public lands suitable for recreational and commercial harvest; eelgrass and kelp beds, primary habitats associated with endangered, threatened, or sensitive species, and forage fish spawning areas.

In 2006, the City of Sequim conducted a preliminary wildlife study, based upon the Washington Dept. of Fish and Wildlife data. Information was also obtained from Clallam County's critical areas map. The shoreline and upland areas have a considerable amount of waterfowl, shellfish, and forage fish spawning areas. Reaches 4 and 5 also contain bald eagle habitat. The Table below shows the types of habitats located in the shoreline and upland areas.

Table 8. Critical Fish and Wildlife Habitat Areas

Reach	Habitat
1	Waterfowl, herring, sand lance, surf smelt, hardshell intertidal clam, approved shellfish harvest areas, eelgrass, bald eagle zone 2 habitat
2	Anadromous/resident fish, waterfowl, eelgrass/kelp beds, approved shellfish beds in southern tip of the reach
3	Subtidal geoduck, eelgrass/kelp beds, bald eagle zone 1 and 2 habitat on northern tip of reach, approved shellfish beds on northern half of reach
4	Eelgrass/kelp beds, subtidal geoduck, approved shellfish beds to base of spit, bald eagle zone 1 and 2 habitat, wildlife corridors, sand lance, hardshell subtidal clam, hardshell intertidal clam, pandalid shrimp, waterfowl
5	Falcon, waterfowl, bald eagle zone 1 and 2 habitat, eelgrass

Marine Riparian Vegetation

Riparian vegetation along marine shorelines serves a variety of critical ecological functions. Coastal trees and other vegetation on backshore areas, banks, and bluffs help stabilize the soil, control pollution entering marine waters, provide fish and wildlife habitat, and modify stressful physical conditions along shorelines. Riparian areas are transitional, providing connections between and affecting both adjacent aquatic and terrestrial systems.

Marine riparian vegetation has been adversely affected by the road along Reach 1, the marina in Reach 2, and residential development in Reach 3. Marine vegetation in Reaches 1 and 2 are absent because of armoring, which includes wooden and concrete bulkheads, riprap, and boat ramps. The vegetation in Reach 3, while still present, appears to be a mix of native and nonnative landscaping, though some areas appear to be relatively untouched. Reaches 4 and 5 have been minimally affected by PNNL/Battelle Marine Research facilities. On a field visit in Reach 4, however, the facilities manager for PNNL/Battelle, mentioned that several large fir trees along the bluff line had been removed because they were dying from water saturation and were presenting a hazard to buildings and parking areas.

Beaches, Banks, and Bluffs

Beaches and bluffs provide critical nearshore habitat functions and values for fish and wildlife. Coastal bluffs are the primary source of beach sediment along the marine shore, and their natural erosion is essential for maintaining beaches and associated nearshore habitats. Bulkheads and other shore-parallel structures along coastal bluffs impound potential beach sediment, commonly bury upper beach spawning habitat and fundamentally alter the beach and backshore. These changes result in a decrease in the amount of drift sediment available for maintenance of down-drift beaches.

Sediment is deposited into the water from eroding bluffs, which is then carried by the drift cell to another location. As discussed in the "Coastal Processes" section, sediment transport is responsible for beach replenishment and spit formation. Sediment deposition seaward of the original coastline forms barrier beaches, which are characterized by relatively continuous ridges of sand and gravel rising slightly above high tide. Barrier beaches often form across embayments and at drift cell convergence zones or distinct bends in the shoreline.

The beaches throughout this region primarily consist of barrier beaches in Reaches 1 and 2. Reach 3 is comprised of a barrier beach with a low, forested bluff. High-bank, feeder bluffs (bluffs that erode and deposit sediment into the water) dominate much of Reach 4. Areas along the Reach are continuously eroding and dropping off into Sequim Bay.

Figure 9 – Reach 4 Feeder Bluffs

A recent field visit to the PNNL/Battelle facilities revealed a relatively large section of the bank had sloughed off and fallen onto the adjacent beach.

Reach 4 also has a barrier beach spit formation (South Spit). This spit is formed by the sediment transported and deposited at the termination point of the drift cell that runs north along the shoreline in Reaches 3 and 4. The termination of this drift cell forms the tip of South Spit. See Map 4 in the Map Folio.

The opening between South Spit and Gibson Spit form the entrance into Washington Harbor; Reach 5 runs along the southern portion of the Harbor. Washington Harbor is a barrier estuary/salt marsh complex with freshwater input from Bell Creek. Barrier beaches may create protected embayments on their landward sides that may evolve into lagoons and salt marshes, as illustrated in Washington Harbor. Washington Harbor is subject to wave and fluvial sediment deposition, as well as tidal erosion. Each of these processes plays an important role in

maintaining this habitat, and each has been impaired by dikes along Bell Creek, shoreline armoring and modifications, and impaired water quality from irrigation ditches, dairy operations, and other upland uses.

Kelp and Eelgrass Beds

Kelp provides habitat for many fish species, including rockfish and salmonids, potential spawning substrate for herring, and buffers the shoreline from waves and currents, among other functions. Kelp is largely dependent upon the type of substrate; it prefers a rocky substratum for attachment. Kelp is more likely to be found in areas where there is a coarsening of substrate in the low intertidal and shallow subtidal zones. Changes in kelp distribution may indicate the coarsening of shallow subtidal sediments (such as that caused by erosion related to shoreline armoring) or an increase in nutrient loading (such as from sewage effluent).The Dept. of Ecology's Coastal Atlas indicates that patchy kelp beds are found from the tip of Pitship Point (John Wayne Marina) to the southern tip of Reach 3. Patchy kelp beds are also present along most of Reach 4.

Eelgrass beds are found in intertidal areas and provide feeding and rearing habitat for a large number of marine organisms. Juvenile salmonids seek refuge from predators in eelgrass and macroalgae (kelp and marine alga). Eelgrass slows water currents and dampens waves, thereby trapping sediments, detritus and larvae. The roots of eelgrass stabilize the sediment. Eelgrass is limited to low-moderate wave energy inter-tidal and shallow subtidal areas with mud/sandy substrate, and is therefore highly sensitive to actions or activities that affect their distribution and availability. Reach 1 contains continuous eelgrass fringe and extends to the southern most tip of Reach 2. From there, patchy eelgrass fringe extends from the tip of Pitship Point (John Wayne Marina) to the end of the Reach. Beginning at Reach 3, the eelgrass fringe is again continuous, running the entire length of Reach 3 to approximately mid-reach in Reach 4. At mid-reach, patchy eelgrass fringe extends to the end of the Reach. Eelgrass beds are located off-shore of Reach 4, approximately mid-reach, and throughout Washington Harbor in Reach 5.

Stressors that affect kelp and eelgrass include those that affect the amount of light available to the plant, the direct and indirect effects of high or low nutrient levels, toxics, and physical disturbances. Nutrient levels can affect kelp and eelgrass by being insufficient for growth. Elevated nutrient levels associated with stormwater runoff and septic systems can cause excessive macroalgae or phytoplankton growth or increase competition from invasive species that reduce the amount of light and substrate available. One form of opportunistic macroalgae is the *ulva,* which form dense mats that reduce light and oxygen. These mats have been identified throughout Washington Harbor (Reach 5) and immediately outside the mouth of the Harbor (northern-most tip of Reach 4). These mats may prevent access to benthic prey organisms by creating a barrier over the substrate, which may smother benthic organisms and shellfish, causing low oxygen/anoxic conditions. Armoring alters wave energy, which can also change the composition of nearshore substrates.

Priority Habitats and Species

The Washington Dept. of Fish and Wildlife maintains priority habitat and species information for Washington State. *Priority species* require protective measures for their survival due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority species include State Endangered, Threatened, Sensitive, and Candidate species; animal aggregations (e.g., heron colonies, bat colonies) considered vulnerable; and

species of recreational, commercial, or tribal importance that are vulnerable. *Priority habitats* are habitat types or elements with unique or significant value to a diverse assemblage of species. A priority habitat may consist of a unique vegetation type (e.g., shrub-steppe) or dominant plant species (e.g., juniper savannah), a described successional stage (e.g., old-growth forest), or a specific habitat feature (e.g., cliffs). The following sections discuss some of the priority species and species of local importance that occur within the shoreline jurisdiction.

Shellfish

Sequim Bay has a long history of commercial, subsistence, and ceremonial harvesting, but also has the longest documented history of paralytic shellfish poisoning toxins (PSTs) in Washington State. Over the past fifty years, shellfish PST levels and the number of associated shellfish closures have been increasing in Puget Sound. Sequim Bay in particular has the longest history of paralytic shellfish poisoning blooms, which regularly occur during August and September.

Along with producing Class A water, the City also extended its outfall in 1999 into deeper water and farther away from the mouth of the Bay. These efforts allowed the Dept. of Health to re-open some shellfish areas that had been closed for many years, though there is still a 300 foot closure area around the outfall.

In 1999, the Washington Dept. of Health Sanitary Survey identified several sites within Sequim Bay as pollution hazards: the City of Sequim wastewater treatment plant outfall, Washington Harbor, Bell Creek, John Wayne Marina, Johnson Creek, and Sequim Bay State Park. Of these, Washington Harbor, John Wayne Marina, and Johnson Creek fall within the City's shoreline jurisdiction.

This year, however, the City completed an $11 million wastewater treatment plan expansion, which was specifically designed to meet pathogen removal criteria developed by the National Water Research Institute to produce nearly pathogen-free reclaimed water. This was done in part to protect and restore nearby shellfish beds.

Areas closed to commercial shellfish harvesting include all of Washington Harbor, located in Reach 5; the southern Spit located in Reach 4; and the area stretching from the southern tip of Pitship Point (John Wayne Marina), located in Reach 2, to approximately 2/3 of Reach 3. Other areas remain approved for commercial shellfish harvest.

Salmonids

Marine intertidal, nearshore, and subtidal areas provide critical habitat for salmonids, particularly juvenile salmonid smolts as they migrate from the freshwater to marine environments. Shallow nearshore areas are known to provide rearing habitat and shallow-water migration corridors that offer protection from predators. Subtidal areas also provide rearing support for salmonids, including production of benthic prey items.

According to the Biological Assessment for the City of Sequim's Water Reclamation Plant Facility, (September 2008), Bell Creek has not been designated as critical habitat for any listed anadromous fish. It is, however, spawning ground for winter steelhead and coho. Bull trout use of Bell Creek is likely only for foraging. Bell Creek, however, lies outside of the City's shoreline jurisdiction, but the creek drains into Washington Harbor (Reach 5).

Johnson Creek is within the City's shoreline jurisdiction (Reach 2). The Washington Department of Fish and Wildlife's Salmonscape program indicates that winter steelhead and coho are present in Johnson Creek. Summer chum have a historical presence within the creek and may return because they have recently been found in the recently restored Pitship Marsh (Reach 1).

Forage Fish

Forage fishes are small, schooling fishes that are key prey items for larger predatory fish and wildlife in a marine food web. In Puget Sound, forage fish species occupy every marine and estuarine nearshore habitat. Because of their role as critical prey species, including for economically important predators such as salmon, recent attention has been paid to their conservation and protection. Nearshore habitats are of special concern and are considered "priority habitats" by Washington Dept. of Fish and Wildlife because many species use these habitats for spawning.

The forage fish species most likely to occur in the shoreline jurisdiction include surf smelt, sand lance, and Pacific herring. Different species use different parts of the intertidal and subtidal zones, with sand lance and surf smelt spawning primarily in the substrate of the upper intertidal zone, and Pacific herring spawning primarily on intertidal or subtidal vegetation, such as eelgrass.

Sand lance are present in Reaches 1 and 4; Reach 1 also contains surf smelt and herring spawning grounds. Herring spawning grounds are also found offshore of Reach 4, just south of Travis Spit, which is within Clallam County's shoreline jurisdiction. Information on the forage fish species is summarized in the Table below.

Table 9. Forage Fish Species

Species	Documented Presence	Spawning Period	Preferred Spawning Substrate	Critical Substrate Factors	Spawning Location
Pacific herring	Reaches 1 and 4	Mid-January to the end of March	Suitable for eelgrass and other marine vegetation	Water depth Substrate composition Overwater structures	Shallow subtidal and lower half of intertidal zones
Sand lance	Reaches 1 and 4	November to February	Fine-grained sand and gravel, .2-.4 mm in diameter	Shoreline armoring, Changes in beach composition	Upper third of intertidal zone
Surf smelt	Reach 1	Coastal/ Strait stocks are summer spawners (late May- end of October)	Sand-gravel mix, ranging from 1-7 mm in diameter	Shoreline armoring, availability of a suitable amount of appropriately textured spawning substrate	Upper third, approx. 7+ feet from extreme high water mark

Nearshore modifications, such as armoring and overwater structures, threaten forage fish habitat because these modifications change the substrate composition. Overwater structures limit the light needed by eelgrass and other marine vegetation, which impairs herring spawning habitat. Armoring interrupts sediment drift, which may cause beaches to coarsen because of the lack of replacement sediments, and increases wave energy. Beaches that become too coarse may become unsuitable for sand lance and surf smelt spawning.

Shorebirds and Upland Birds

Adjacent to the open waters of Puget Sound, the upland terrestrial environment provides habitat for birds, amphibians, reptiles, and insects. Seventy-five species of birds are associated with marine nearshore environments in Washington. Bald eagles are among these birds, preferring to nest along freshwater and marine shorelines. Bald eagle zones 1 and 2 occur within and adjacent to the shoreline area; these zones act as buffers to protect eagle habitat because eagles are sensitive to human disturbance. Zone 1 is the primary zone in which eagles reside and typically contain nesting areas. Zone 2 is the secondary zone and acts as an additional screen for nesting sites. The size and shape of each zone will depend on screening vegetation, prevailing winds, topography, and the sensitivity of the nesting eagles to human activities.

Other birds within the shoreline area include Peregrine falcons, merlins, great blue herons, nonbreeding concentrations of plovers, sandpipers, and pharalaropes, and other shorebirds and waterfowl. The Table below summarizes the bird distribution in the shoreline area.

Table 10. Bird Distribution by Reach

Reach	Bird	Habitat Protection Areas
1	Bald Eagle Waterfowl	Zone 2 - 800’ or to shoreline
2	Bald Eagle Waterfowl	Zone 2 - 800’ or to shoreline
3	Bald Eagle	Zone 1 – 400’ Zone 2 – 800’ or to shoreline
4	Bald Eagle	Zone 1 – 400’ Zone 2 – 800’ or to shoreline
5	Bald Eagle Falcons Shorebird Waterfowl	Zone 1 – 400’; Zone 2 800’ or to shoreline

REACH SUMMARIES, ASSESSMENT, AND OPPORTUNITY AREAS

The following section summarizes the shoreline characterization for each shoreline reach, addresses whether ecological functions have been impaired, and discusses opportunity areas within each reach.

"Opportunity areas" are those areas in the shoreline jurisdiction that may be appropriate for protection and/or restoration, including elements such as wetlands, habitat, riparian (streamside) vegetation, and riverbanks/shoreline modified by riprap or bulkheads. The City could explore opportunities for protection, restoration, or increased public access through a variety of ways, including regulatory and non-regulatory methods. Publicly owned lands provide the greatest flexibility in implementing protection or restoration efforts by the City. Restoration opportunities on privately owned land may be pursued through the development of an incentive-based redevelopment program, and/or a public education program. Other opportunities throughout the City include extension of City services like sewer and water, and developing a comprehensive stormwater management program. These types of projects will affect shoreline conditions and may have beneficial effects on habitat and natural shoreline functions.

Reach 1 – Pitship Marsh

Table 11. Reach 1 - Shoreline Summary

Land Use and Zoning	Habitat	Hazards	Public Access
Land Use Residential W. Sequim Bay Rd. runs parallel to shoreline Zone Residential 75% Commercial, regional 25% Area of future growth	Drift cell (R to L) and divergence zones Eelgrass Forage fish Bald Eagle Zone 2 Shellfish Salt marsh/wetland Barrier beach	Critical Aquifer Recharge Area	View

Reach 1 is comprised of four parcels totaling approximately 24.85 acres. Pitship Marsh is located within the fourth and largest parcel, which encompasses about 18.45 acres. Residential

use is the dominant land use in this reach, though the fourth parcel is partially zoned commercial. It, along with several other upland parcels, is also the site of future development.

The future development planned at this site encompasses approximately 166 acres, and may include more than 250 single family residences and 120 transient accommodations. (See Map 2 in the Map Folio located at the end of this report.) Of these accommodations, 75 may be located in a lodge, while others may be stream-side vacation cabins. Public access trails, some of which would be ADA accessible, to the beach and behind Pitship Marsh are also planned.

Plans also include single family residences located upland of Pitship Marsh; this area is comprised primarily of marine fill that was dredged during construction of John Wayne Marina. Because of the presence of the dredged material and its effect on infiltration, there are plans to collect the stormwater runoff and deliver it to a regional wastewater treatment facility that would be located at the south end of this reach. Multiple commercial lots may also be located within this development.

As discussed in the Current Land Use section, the shoreline commercial zoning designation does not currently exist on the City's zoning map; the commercial zoning is designated as regional commercial. Higher density and intensity commercial uses could cause a conflict adjacent residential uses, as well as Shoreline Management Act preferred uses because of the "regional" zoning designation. A more in-depth analysis will need to take place when the development plans move beyond the conceptual stage.

Existing development consists of approximately five residential uses and associated outbuildings. The oldest residence was constructed in 1946 and the newest was constructed in 2005. All of these residences rely on septic systems. One parcel is vacant.

Currently, the only public access available is view access while driving down W. Sequim Bay Rd. There are some places along the road where the shoulder is wide enough for a vehicle to stop, but beach access is prohibited and posted with "No Trespassing" signs.

A recent restoration project in this area removed a small culver that previously provided the only tidal exchange between Sequim Bay and Pitship Marsh. The culvert was removed and has since been replaced with a bridge. This restoration is discussed more fully in the "Wetlands" section of the Nearshore Physical Characterization.

Table 12. Reach 1 - Shoreline Process and Function Summary

Shoreline Processes & Functions	Alterations	Function Rating
Hydrologic Sediment transport Attenuating wave energy Nutrient/toxic compounds removal Vegetative Maintaining temperature Large woody debris Sediment transport Attenuating wave energy Habitat Physical space and conditions	Armoring Septic systems and other alterations associated with land uses Impervious surfaces associated with W. Sequim Bay Rd. and residential land uses	**Hydrologic** **LOW** **Vegetative** **LOW/MODERATE** **Habitat** **LOW/MODERATE**

Food production and delivery Resting and foraging Migration		

Shoreline processes and functions within Reach 1 have been impacted by the following activities:

- Shoreline armoring, including wooden/concrete bulkheads and riprap, and W. Sequim Bay Rd.;
- Removal of marine riparian vegetation;
- Increased impervious surfaces and vegetation removal at a watershed scale;
- Reliance on septic systems in an area with soils of limited absorption/filtration capabilities; and
- Construction of John Wayne Marina (Reach 2).

Effects upon the nearshore environment include:

- Sediment supply to nearshore areas impaired by riprap, bulkheads, road, and Marina.
- Marine riparian vegetation provides wildlife habitat, microclimates (shade/prey), source of large woody debris, bank stability, improvements to water quality;
- Subestuaries and deltas depend upon rainfall to bring sediments from upstream to the nearshore area. High flow rates and volumes resulting from increased runoff from impervious surfaces can alter the formation and function of these features.
- Increased wave energy from armoring coarsens beach substrate. Forage fish, such as sand lance and surf smelt, require certain beach substrate composition to spawn, and herring rely on the presence of eelgrass, which is also affected by substrate composition.
- Excessive nutrients found in the soil from septic systems or other nonpoint source pollution can cause an overgrowth of algae, which can block light and cause an imbalance in nutrient and gas exchange.
- Insufficient tidal exchange in Pitship Marsh is harmful to juvenile salmonids; maintenance of proper tidal flux and flow is essential for proper salmon habitat.
- Soils are predominantly hoypus, which have a high infiltration rate. Hoypus soils are poor filters and do not effectively remove excessive nutrients, toxins, or other pollutants.

Opportunity areas may include:

- Removing riprap and bulkheads and replace with “soft” armoring; “soft” armoring includes using techniques that more closely mimic natural processes and functions, such as using logs and/or other large woody debris to act as a bulkhead.
- Explore incorporating public access into future development.
- Continue monitoring the effects of the recent restoration to the Pitship Marsh culvert removal (described in the “wetlands” section), including its effect on juvenile salmon.
- Explore opportunities to limit/prohibit new overwater structures and/or improve habitat functions with structures.
- Amending the City’s Comprehensive Plan Zoning Map to properly identify C-II(S), shoreline commercial, zones in areas within the Shoreline Management Act jurisdiction to avoid use conflicts.

Reach 2 – John Wayne Marina

Table 13. Reach 2 - Shoreline Summary

Land Use and Zoning	Habitat	Hazards	Public Access
Land Use Sequim Bay Resort John Wayne Marina Residential Zone Commercial, regional 39% Public Facilities 46% Residential 15% Area of future development	Drift cell divergence zone Bald Eagle Zone 2 Kelp/eelgrass Anadromous fish Barrier beach	100-yr floodplain Modified slope stability Intermediate slope stability Critical Aquifer Recharge Area	View Boat launch Beach access Picnic areas Hand launch

Reach 2 consists of the John Wayne Marina, as well as Sequim Bay Resort and three single family residences, located on ten parcels. These parcels total approximately 21 acres. The largest land use within the shoreline area is the John Wayne Marina.

John Wayne Marina was constructed in 1985 on land donated by the John Wayne family. In 2003, it was featured in the June issue of SEA Magazine as “Best of the West” for small marinas. The Marina has approximately 300 boat slips, a restaurant, showers and restrooms, fueling dock, and pump out facilities. It is also the only area within the shoreline jurisdiction that provides public access. It has picnic areas and a ramp providing beach access. The boat ramp and hand launch also provide opportunities for recreational activities, such as fishing, boating, sailing, and canoeing. There are also commercial kitchen and meeting room facilities available for public use.

According to NOAA's Community Profiles Report (2007), construction of the Marina resulted in a loss of sand lance spawning areas and eelgrass habitat. The report also indicates that there is no evidence to suggest that the Marina contributes to Sequim Bay's water quality issues.

Sequim Bay Resort is the other dominant land use in this area, and is also part of the area of future development as described in the summary for Reach 1 above. Currently, the Resort has several cabins, seven ranging from 355 to 654 square feet and one large cabin at 1004 square feet. Most of these cabins were built in 1910. The Resort also has 41 recreational vehicle sites with full hook-ups available, including water, sewer, and power. The water and sewer facilities are provided by the Resort and Marina water and septic system. According to the Dept. of Health's 1999 Sanitary Survey, the Resort/Marina septic system is located approximately 100 feet from the shoreline and 50 feet from Johnson Creek. The water system is supplied by three wells; the deepest is approximately 44 feet deep.

One residential parcel consists of approximately one acre and contains a 720 square foot residence built in 1970, located on the bluff less than 120 feet from Sequim Bay. The other two parcels are not located on the waterfront; one parcel has a 2,200 square foot home that was built in 1999, and the other has a 2,900 square foot home that was built in 1990.

The upland portion of this reach is also part of the area proposed for future development described in Reach 1. Some of the proposed commercial buildings, however, may be located within the shoreline jurisdiction. As noted in Reach 1, this may be an area of potential use conflicts, due to the City's current lack of C-II(S), shoreline commercial, zoning. The City intends to begin updating its Comprehensive Plan in 2011, however, which may be an opportune time to correct this conflict before development plans move beyond the conceptual stage.

Table 14. Reach 2 - Process and Function Summary

Shoreline Processes & Functions	Alterations	Function Rating
<u>Hydrologic</u> Sediment transport Attenuating wave energy Nutrient/toxic compounds removal <u>Vegetative</u> Maintaining temperature Large woody debris Sediment transport Attenuating wave energy <u>Habitat</u> Physical space and conditions Food production and delivery Resting and foraging Migration	Armoring Docks, piers and other overwater structures Impervious surfaces associated with parking lots, boat ramps, and other commercial/marina uses Fill/other shoreline modifications to accommodate Marina construction Septic systems for commercial/public facilities' uses, including restaurant, laundry, and showers	**<u>Hydrologic</u>** **LOW** **<u>Vegetative</u>** **LOW** **<u>Habitat</u>** **LOW**

Shoreline processes and functions within Reach 2 have been impacted by the following activities:

- Riprap surrounds the entire Marina;
- Floating concrete docks and creosote pilings;
- Extensive fill and other modifications, including straightening Johnson Creek, during construction of the Marina;
- Highest percentage of impervious surfaces because of extensive paving associated with the Marina's parking lots and buildings;
- Removal of marine vegetation;
- Nonpoint source pollution entering Johnson Creek from Highland Irrigation ditches upland and within the watershed area; and
- Steam incision and other modifications of Johnson Creek upland.

Effects on the nearshore environment include:

- Interference with sediment transport to the north and to the south of the Marina because the Marina is located within a divergence zone. The Point No Point Treaty Council's Shoreline Alterations Study (2003) rate the Marina's impact on drift cell erosion and accretion as "severe" and sediment transport as "moderate".
- Beach coarsening from increased wave energy and disrupted sediment transport to replenish the beaches.
- Light restriction from overwater structures, impairs growth of eelgrass and other marine vegetation, though floating docks secured by anchors and chains demonstrated no appreciable decline on eelgrass.
- Floating docks are known to support prey resources for intertidal resident fish, though salmonids are likely disadvantaged.
- Increased sediment and fecal coliform and other pollutants in Johnson Creek.
- The habitat function of the tidally-influenced area of Johnson Creek is considered "lost" by WRIA 17 and WRIA 18 *Salmon Limiting Factors Analysis* and by the Point No Point Treaty Council's *Historical Changes to Estuaries, Spits, and Associated Tidal Wetland Habitats in Hood Canal and Strait of Juan de Fuca Regions of Washington State* (2006).
- High flow rates and volumes resulting in increased runoff from impervious surfaces can alter the formation and function of nearshore features and functions.

Opportunity areas may include:

- Restoring marine vegetation and habitat diversity.
- Replacing creosote pilings.
- Improving and/or restoring tidal connectivity between Johnson Creek and Sequim Bay.
- Increasing public access through better signage to the beach access ramp.
- Reducing and/or limiting new overwater structures and/or improve habitat function with overwater structures.
- Reducing nonpoint source pollution from parking lots, marina activities, and stormwater runoff.
- Studying and/or monitoring the effects of overwater structures within the Marina.
- Amending the City's Comprehensive Plan Zoning Map to properly identify C-II(S), shoreline commercial, zones in areas within the Shoreline Management Act jurisdiction to avoid use conflicts.

Reach 3 – Single- Family Residential Development

Table 15. Reach 3 - Shoreline Summary

Land Use and Zoning	Habitat	Hazards	Public Access
Land Use Residential Zone Residential 100%	Drift cell (L to R) and divergence zone Bald Eagle Zones 1 and 2 Kelp/eelgrass Shellfish Wildlife corridor Barrier beach/low Forested bluff	Intermediate slope stability Unstable slopes Landslide areas Critical Aquifer Recharge Areas	

Reach 3 is comprised entirely of single family residential uses and associated out-buildings, located on 25 parcels, consisting of approximately 40 acres. Of these parcels, four are vacant, including one home that was demolished. The homes have an average age of 46 years, with build dates ranging from 1930 to 2006; of these homes, 13 homes were built before 1970. Several homes are located less than 50 feet from the bluff.

There are three docks and overwater structures, and a significant portion (65%) of the reach has bulkheads. The largest dock is approximately 300 feet in length and is constructed with creosote pilings. County records indicate that this dock is shared between neighboring property owners and includes a 20 x 25 foot float. Another large dock is approximately 200 feet long and also appears to be made of creosote pilings. Most of the bulkheads appear to be made of creosote wood or concrete, though some riprap is present. One property owner has participated in Washington Dept. Fish and Wildlife's bulkhead removal incentive program.

Currently, the City has no available utilities in the area, so the residents rely on private wells and septic systems. The well logs supplied by the Dept. of Ecology are incomplete, largely due to incomplete information provided by the well driller; the earliest well log was completed in 1966 and the most recent in 2006. Because of the age of many homes, a few of the wells may be located too close to existing septic drainfields. In at least one instance, County septic system records indicate that the well is located only about 30 feet from the septic drainfield.

The on-site septic system records received from Clallam County are also incomplete, though the County has some records associated with most of the parcels. Septic repairs and indications of failure are fairly common in this area. The Washington Dept. of Health Sanitation Survey (1999) noted that several homes in this area appeared to have failed or failing systems and a

number of homes have had their systems repaired or replaced. Other systems are completely undocumented. The Table below summarizes the on-site septic system data for 18 parcels with County septic record information within this reach. The County has no records for five parcels located within this reach, and the rest are vacant.

Table 16. Reach 3 - Septic System Summary

Number of Systems	Number of Repairs	Repair Percentage	Percent Unknown
18	10	56%	28%

Of these five parcels without septic records, one was listed as a "suspected pollution site" in the 1999 Sanitary Survey of Sequim Bay conducted by the Dept. of Health. Four other sites were listed as "suspected pollution sites" in the Survey, and one parcel had records indicating that 2004 loan certification inspection document that indicated drainfield or pump/timer failure. The County has no records that the homeowner has taken steps to repair the system.

The soils in this area are rated as "very limited" by the U.S.D.A Websoil Survey for septic tank absorption, indicating that the soil has one or more features that make the soil unfavorable for septic use. The soils may not adequately filter the effluent, particularly when the system is new, which can result in groundwater contamination. It also indicates that poor septic performance and high maintenance is to be expected, and the above summary appears to support this assertion.

Table 17. Reach 3 - Process and Function Summary

Shoreline Processes & Functions	Alterations	Function Rating
<u>Hydrologic</u> Sediment transport Attenuating wave energy Nutrient/toxic compounds removal <u>Vegetative</u> Maintaining temperature Large woody debris Sediment transport Attenuating wave energy <u>Habitat</u> Physical space and conditions Food production and delivery Resting and foraging Migration	Armoring Docks, piers and other overwater structures Impervious surfaces associated with homes, garages, and other residential uses Septic systems	**<u>Hydrologic</u>** **LOW/MODERATE** **<u>Vegetative</u>** **LOW/MODERATE** **<u>Habitat</u>** **MODERATE**

Shoreline processes and functions within Reach 3 have been impacted by the following activities:

- Shoreline armoring, including wooden and concrete bulkheads that cover much of the area;
- Reliance on septic systems in an area with soils of limited absorption/filtration capabilities;

- Septic system failures;
- Large overwater structures and private beach access staircases; and
- High percentage of impervious surfaces because of the large number of residences and associated outbuildings.

Effects on the nearshore environment include:

- Increased wave energy from armoring coarsens beach substrate. Forage fish, such as sand lance and surf smelt, require certain beach substrate composition to spawn, and herring rely on the presence of eelgrass, which is also affected by substrate composition.
- Excessive nutrients found in the soil from septic systems or other nonpoint source pollution can cause an overgrowth of algae, which can block light and cause an imbalance in nutrient and gas exchange.
- Overwater structures, particularly large structures, interfere with sediment transport and creosote may leak toxins into the water;
- High flow rates and volumes resulting from increased runoff from impervious surfaces can alter the formation and function of nearshore features.

Opportunity areas may include:

- Protecting marine riparian vegetation by adopting clearing and grading regulations designed to avoid/minimize vegetation loss, and require replanting with multiple native species.
- Encouraging alternate or “soft” armoring methods.
- Avoiding or minimizing construction of additional overwater structures by encouraging mooring buoys and shared docks and moorage.
- Encouraging or requiring ‘grated’ decking or other similar measures to allow light penetration.
- Removing old creosote and treated overwater structures.

Reach 4 – Pacific Northwest National Laboratories/Battelle Marine Research Facilities

Table 18. Reach 4 - Shoreline Summary

Land Use and Zoning	Habitat	Hazards	Public Access
Land Use Marine Research facilities Zone SRII – Residential (County) 100% Research and Development Park (City) 100%	Shellfish Kelp/eelgrass Drift cell (L to R) Eagle Zones 1 and 2 Shorebirds Waterfowl Wildlife Corridor Forage fish High gravel bluffs Barrier beach	Intermediate slope stability Unstable slopes Landslide areas Critical Aquifer Recharge Area	Marine shores, no known upland access

This area encompasses about 45.5 acres and consists of five parcels, all of which are owned by Battelle, which operates the Pacific Northwest National Laboratory for the US Department of Energy. The facility conducts research in the marine environment in a variety of areas, such as coastal ecosystem research, marine biotechnology, coastal biogeochemistry, and sensory information systems. The facility has structures located upland and on the shoreline. The facility was built in 1982 and consists of several large buildings, ranging from approximately 520 square feet to over 22,000 square feet. It also has over 60,000 square feet of asphalt and 9,000 square feet of concrete. The shoreline location is essential to PNNL/Battelle's research on the marine environment.

Figure 10 - PNNL/Battelle Marine Shoreline Facility

The area now home to the shoreline lab was modified in the late 1960s or early 1970s with about three to four feet of fill because the site was previously a peat bog and historically contained a lagoon and tidal marsh. However, the entire base of the South Spit had already been completely modified by about 1926 to accommodate a cannery. The area has one large dock and the entire shoreline edge of the facility has a concrete bulkhead approximately 600 feet in length.

With the exception of the PNNL/Battelle facilities, the rest of the reach is largely undeveloped, though this area is also a site identified for future development. PNNL/Battelle is currently expanding at about 10% per year. PNNL/Battelle must dramatically increase the number of their

employees by 2012 in response to a Dept. of Energy contract. They plan to expand the shoreline labs, but intend to expand vertically rather than enlarging their building footprint.

Further upland is another area that may be the site of future laboratory expansion, as indicated in the photo below. PNNL/Battelle has plans to attract similar research companies to the site, though none have been specifically identified. It is unclear whether there would be any potential use conflicts between the Research and Development Park zoning designation and allowed uses and the Shoreline Management Act.

Figure 11 - PNNL/Battelle Potential Development

Because of the nature of the research and clientele, this location is an attractive area for expansion. The area between the bluff and the tree line is approximately 90 vertical feet lower than the area above the tree line. As such, it provides natural screening for the research and development projects that would be developed on this site. Before expansion, however, PNNL/Battelle will annex into the City and work with the City to extend water and sewer facilities to the area.

While it may appear the expansion may cause a conflict with the neighboring residential uses, PNNL/Battelle own a parcel adjacent to the northernmost residential parcel, and there are no plans to develop that parcel. PNNL/Battelle intend to keep that parcel undeveloped to act as a natural buffer.

As noted in previous sections, this area is also subject to erosion and sloughing. The high levels of water saturation have caused several large trees to die, and these trees have subsequently been removed to eliminate the hazard to area buildings and parking areas. Increased impervious surfaces from future development, absent adequate storm drainage control, will only increase the water saturation and erosion. Water saturation and erosion make the likelihood of additional bulkheads or other forms of armoring very high.

Table 19. Reach 4 - Process and Function Summary

Shoreline Processes & Functions	Alterations	Function Rating
<u>Hydrologic</u> Sediment transport Attenuating wave energy Nutrient/toxic compounds removal <u>Vegetative</u> Maintaining temperature Large woody debris Sediment transport Attenuating wave energy <u>Habitat</u> Physical space and conditions Food production and delivery Resting and foraging Migration	Armoring Docks, piers and other overwater structures Impervious surfaces associated with marine research uses Fill at base of South Spit and at site of shoreline facilities	**<u>Hydrologic</u>** **MODERATE/HIGH** **<u>Vegetative</u>** **MODERATE/HIGH** **<u>Habitat</u>** **MODERATE/HIGH**

Shoreline processes and functions within Reach 4 have been impacted by the following activities:

- Shoreline armoring, which includes approximately 600 feet of wood bulkhead in front of the shoreline facility;
- Shoreline modification and fill, which reduced the length of the South Spit by approximately 33%;
- One large overwater dock; and
- Impervious surfaces from the large number of structures and associated outbuildings and parking area located at the shoreline facility.

Effects on the nearshore environment include:

- Increased wave energy from armoring coarsens beach substrate. Forage fish, such as sand lance and surf smelt, require certain beach substrate composition to spawn, and herring rely on the presence of eelgrass, which is also affected by substrate composition.
- Overwater structures, particularly large structures, may interfere with sediment transport.
- High flow rates and volumes resulting from increased runoff from impervious surfaces can alter the formation and function of nearshore features.

Opportunity areas may include:

- Encouraging vertical expansion in the shoreline area and in upland areas away from nearshore habitats.
- Address stormwater runoff to prevent additional water saturation.
- Avoiding/minimizing additional overwater structures and armoring.
- Preserving existing nearshore and wildlife habitats.
- Opening public access to Travis Spit, which is also owned by PNNL/Battelle. This portion of land, however, falls under Clallam County's jurisdiction and is not an area identified for annexation into the City of Sequim.

Reach 5 – Washington Harbor

Table 20. Reach 5 - Shoreline Summary

Land Use and Zoning	Habitat	Hazards	Public Access
Land Use Marine Research facilities Zone SRII – Residential (County) 100% Research and Development Park (City) 100%	Undefined drift cell Bald Eagle Zones 1 and 2 Eelgrass Falcon Shorebirds Barrier estuary Salt Marsh	Critical Aquifer Recharge Area Intermediate slope stability	View

This area is also owned by PNNL/Battelle and encompasses the inner shoreline area from the tip of South Spit and running approximately one-half mile along the public portion of Washington Harbor Rd. The parking lot for the shoreline facility is accessed via Washington Harbor Rd., and there is a small public lot located just before the entrance to the research facility. The public parking lot is surrounded by approximately 100 feet of riprap.

The photo demonstrates that a large portion of the Reach is heavily vegetated on the south side of Washington Harbor Rd. These are large trees and are home to bald eagle nesting sites. Though PNNL/Battelle is looking to expand their facilities, the facility manager indicated that there are no current plans to develop within the approximately seven acres of forested area.

Regionally, Washington Harbor and Bell Creek, which drains into Washington Harbor, are affected by a number of impacts. Bell Creek, for example, is listed on the Dept. of Ecology's water quality 303(d) list for impaired waters. It is listed for high levels of bioassessment, dissolved oxygen, and fecal coliform. Moreover, Bell Creek's hydrology has been significantly

altered by irrigation operations, urban storm drainage and runoff, and filled wetlands associated with the creek. Perhaps the most impairment comes from the road that was constructed for the City's wastewater treatment plant outfall. This road bisects the Harbor and cuts off tidal exchange to the rest of the Harbor. Along with tidal exchange, erosion and fluvial sediment deposition, which are critical habitat forming processes, have been impaired. There has been some discussion with the City of Sequim, the Jamestown Tribe, and the property owner along Gibson Spit to remove the access road for the City's outfall and replace the road with a bridge to facilitate greater tidal exchange and improve habitat functions.

Table 21. Reach 5 - Process and Function Summary

Shoreline Processes & Functions	Alterations	Function Rating
Hydrologic Sediment transport Attenuating wave energy Nutrient/toxic compounds removal Vegetative Maintaining temperature Large woody debris Sediment transport Attenuating wave energy Habitat Physical space and conditions Food production and delivery Resting and foraging Migration	Armoring Impervious surfaces associated with marine research uses and Washington Harbor Rd.	**Hydrologic** **MODERATE** **Vegetative** **MODERATE** **Habitat** **MODERATE**

Shoreline processes and functions within Reach 5 have been impacted by the following activities:

- Shoreline armoring, which includes the 100' of riprap surrounding a small public parking lot;
- Shoreline modification and fill, which reduced the length of the South Spit by approximately 33%;
- Impervious surfaces from Washington Harbor Rd., which runs parallel to the Harbor's edge; and
- Regional armoring and upland irrigation operations and land uses.

Effects on the nearshore environment include:

- Increased wave energy from armoring coarsens beach substrate.
- High flow rates and volumes resulting from increased runoff from impervious surfaces can alter the formation and function of nearshore features.
- Stormwater runoff and irrigation operations transport upland pollutants and contaminants to the nearshore.
- Large numbers of shorebirds and waterfowl in the Harbor may also contribute to the high levels of fecal coliform in the water.

Opportunity areas may include:

- Encouraging regional efforts to improve environmental processes and functions.
- Remove riprap from in front of public parking area; explore "soft" armoring techniques.

CONCLUSIONS

Data Gaps

In terms of land use, data gaps include the lack of septic records for some parcels located on the shoreline. With many of these systems constructed in the 1930s, it is important to know the overall condition of the septic systems to address potential environmental hazards. The number of individual wells is also a data gap, as most of the available well logs date from the 1970s. During this time, well logs are generally incomplete or missing, and no well logs seem to pre-date the 1970s, so there is no way to properly establish the full effect permit-exempt wells have on the aquifer. In addition, the City currently does not have the capability to determine the percentage of impervious surfaces, and attempts to determine these percentages would be estimations at best because of the lack of available records.

In terms of environmental gaps, information regarding sand lance and surf smelt is generally lacking, as little is known about either species. These species are located near areas of anticipated future growth, so it may be worthwhile to monitor the long-terms effects of upland development. In addition, sediment input, fine sediment, mass wasting, and sediment supply are data gaps for Johnson Creek.

Summary

The shoreline area has remained stable over the past two decades or more, with W. Sequim Bay Rd. and the John Wayne Marina constructed decades earlier and limited residential development. Extensive armoring throughout the shoreline area has affected sediment transport and may have long-term, adverse effects on the beaches and substrate. The armoring along W. Sequim Bay Road and John Wayne Marina is the most significant source of sediment transport interference and beach coarsening due to increased wave energy. Both of these uses, however, are well established and it is unlikely that enough armoring will ever be removed to allow sediment transport to return to its natural state. Nonetheless, the habitat within the area appears relatively stable and only moderately impaired, on the whole, despite the presence of the Marina. The Marina, however, also provides the only existing public access within the shoreline area, as most of the tidelands are held in private ownership. Recreational opportunities abound here, with the picnic areas, boating facilities, and beach access offering a wide variety of ways in which the public may enjoy the shoreline. Restoration opportunities would most likely be limited to the Marina, such as creosote piling removal or fish passage enhancement.

Future development within the shoreline jurisdiction and at the watershed scale, however, may provide some challenges in achieving no net loss and resolving use conflicts in the coming years. The commercial zoning designation will need to address the priority uses as outlined in the Shoreline Management Act (SMA), RCW 90.58.020, and WAC 173-26-181. In addition, uses within the Research and Development Park zoning district should make clear that uses within SMA jurisdiction are the preferred uses under the SMA. On the other hand, future development may provide the means to address a number of environmental impacts along the shoreline, such as limiting or reducing the number of on-site septic systems within the area. It may also provide opportunities to address stormwater runoff issues, as well as provide opportunities to encourage shared boating facilities. Restoration opportunities and additional public access sites may be available as a means of off-setting identified environmental impacts. Because of the City's limited shoreline area, the benefits from any restoration, however, will be

limited without regional coordination with Clallam County, the Jamestown S'Klallam Tribe, and other organizations.

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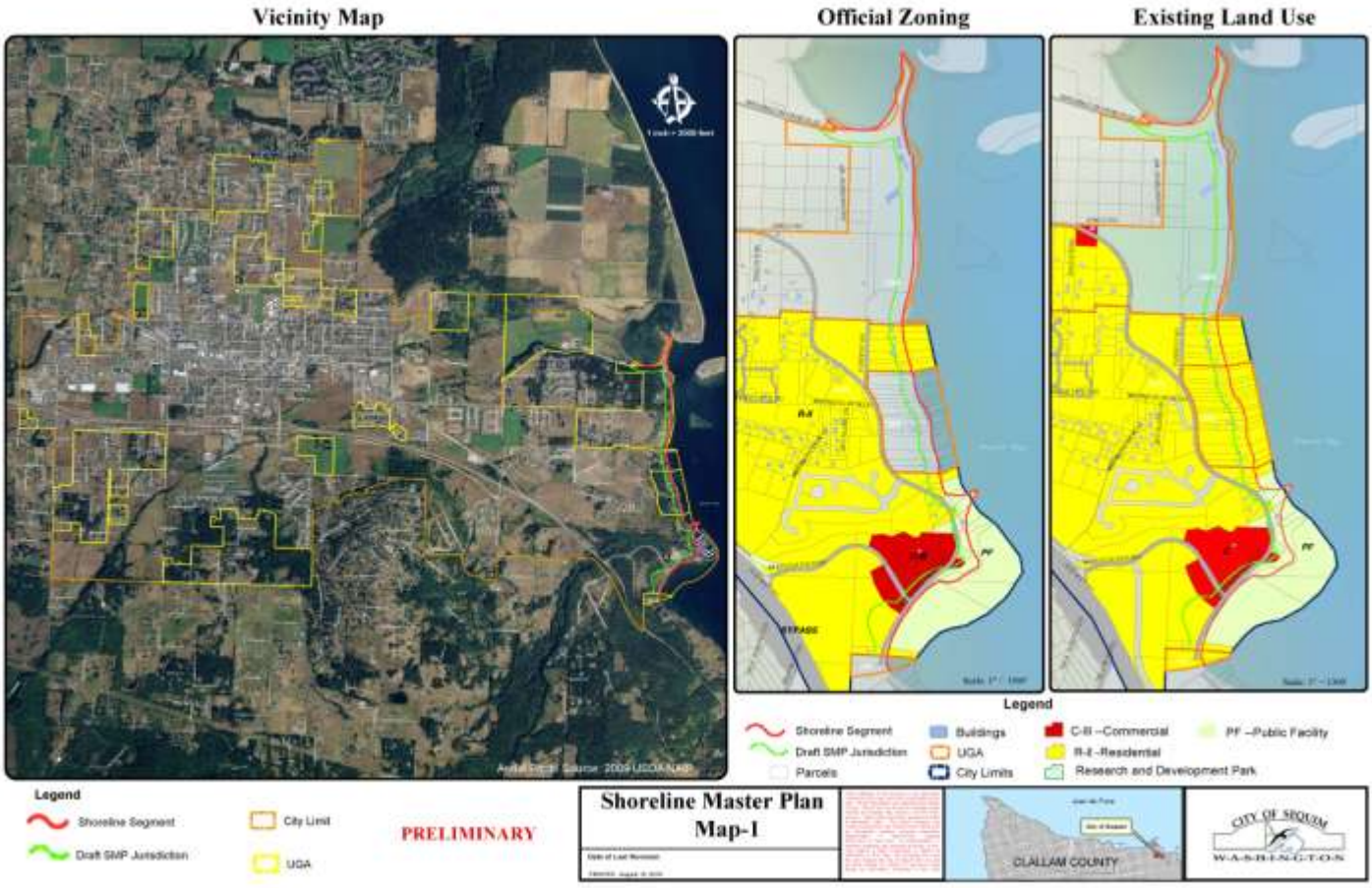
MAP FOLIO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Existing Land Use
Legend
Shoreline Segment
Draft SMP Jurisdiction
Parcels
Buildings
UGA
City Limits
C-II –Commercial
R-E -Residential
Research and Development Park
PF –Public Facility
Legend
Shoreline Segment
Draft SMP Jurisdiction
City Limit
UGA
PRELIMINARY
Shoreline Master Plan
Map-I
CLALLAM COUNTY
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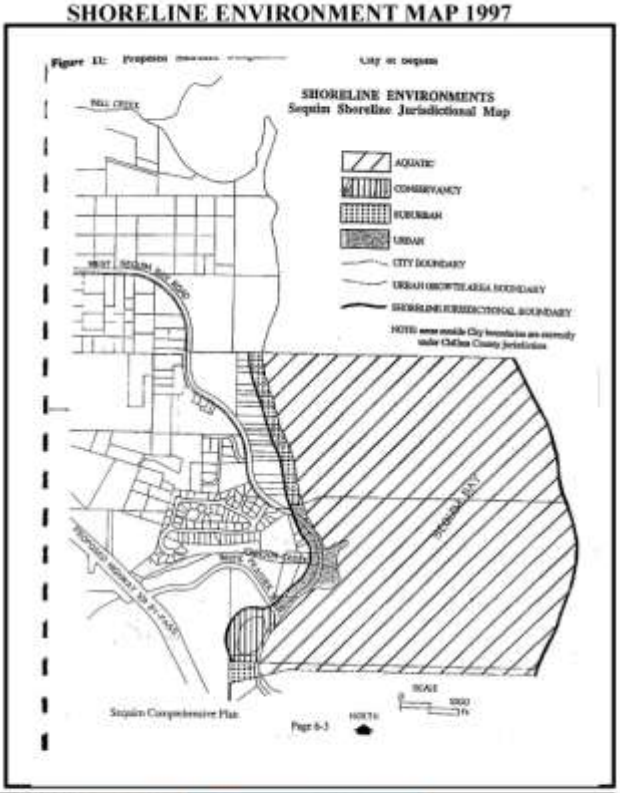
FORECASTED DELOPMENT

SHORELINE ENVIRONMENT MAP 1997



Legend

- Shoreline Segment
- Draft SMP Jurisdiction
- City Limit
- UGA

Shoreline Master Plan Map-2

CITY OF SEQUIM
WASHINGTON


Legend
Existing Wells
Stream
Stream Buffer
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Landslide and Erosion Hazard Areas
Wetlands
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R3
R4
R5
Dock
Dock
Private Access
Dock
Dock/Public Access
Public Access
UGA
UGA
CITY
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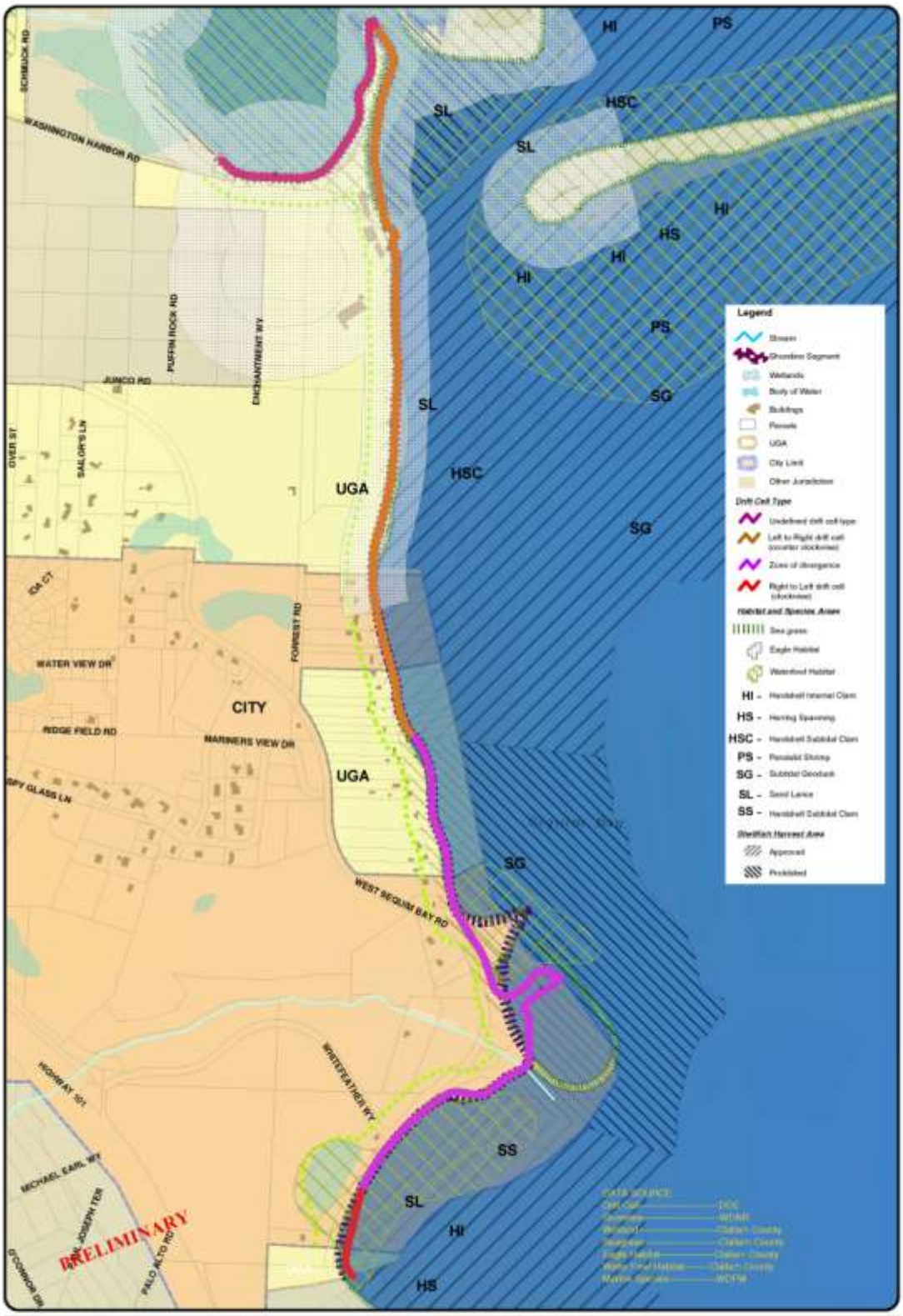
PUFFIN ROCK RD
JUNCO RD
SAILORS LN
FORSYTH RD
MARINERS VIEW DR
SPY GLASS LN
WEST SEQUIM BAY RD
WHITEBARK PINE WY
HIGHWAY 101
PAUL JOSEPH TER
PALO ALTO RD
PRELIMINARY
Shoreline Jurisdiction/ Designations
Shoreline Master Plan
Map-3
CITY OF SEQUIM
W-A-S-H-I-N-G-T-O-N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WASHINGTON HARBOR RD
PUFFIN ROCK RD
ENCHANTMENT WY
JUNCO RD
GIVER ST
SAILORY'S LN
IDA CT
WATER VIEW DR
FORREST RD
RIDGE FIELD RD
MARINERS VIEW DR
SPY GLASS LN
WEST SEQUIM BAY RD
WHITEFEATHER WY
HIGHWAY 101
MICHAEL EARL WY
ST JOSEPH TER
O'CONNOR DR
PALO ALTO RD
PRELIMINARY
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Stream
Shoreline Segment
Wetlands
Body of Water
Buildings
Parcels
UGA
City Limit
Other Jurisdiction
Drift Cell Type
Undefined drift cell type
Left to Right drift cell (counter clockwise)
Zone of divergence
Right to Left drift cell (clockwise)
Habitat and Species Areas
Sea grass
Eagle Habitat
Waterfowl Habitat
HI - Hardshell Intertidal Clam
HS - Herring Spawning
HSC - Hardshell Subtidal Clam
PS - Penaeid Shrimp
SG - Subtidal Geoduck
SL - Sand Lance
SS - Hardshell Subtidal Clam
Shellfish Harvest Area
Approved
Prohibited
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WDNR
Clallam County
Clallam County
Clallam County
Clallam County
WDFW
Biological Resources
Shoreline Master Plan
Map-4
1 inch = 650 feet
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Ecology Grant #G1000054
October 2013

Appendix C

City of Sequim Restoration Plan

Exhibit C

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SHORELINE MASTER PROGRAM UPDATE
SHORELINE RESTORATION PLAN

1. INTRODUCTION

A jurisdiction's Shoreline Master Program applies to activities in the jurisdiction's shoreline zone. Activities that have adverse effects on the ecological functions and values of the shoreline must provide mitigation for those impacts. By law, the proponent of that activity is not required to return the subject shoreline to a condition that is better than the baseline level at the time the activity takes place.

How then can the shoreline be improved over time in areas where the baseline condition is severely, or even marginally, degraded? Section 173-26-201(2)(f) WAC of the Shoreline Master Program Guidelines says:

> "master programs shall include goals and policies that provide for restoration of suchimpaired ecological functions. These master program provisions shall identify existing policies and programs that contribute to planned restoration goals and identify any additional policies and programs that local government will implement to achieve its goals. These master program elements regarding restoration should make real and meaningful use of established or funded nonregulatory policies and programs that contribute to restoration of ecological functions, and should appropriately consider the direct or indirect effects of other regulatory or nonregulatory programs under other local, state, and federal laws, as well as any restoration effects that may flow indirectly from shoreline development regulations and mitigation standards."

Degraded shorelines are not just a result of pre-Shoreline Master Program activities, but also of unregulated activities and exempt development. The new Guidelines also require that "local master programs shall include regulations ensuring that exempt development in the aggregate will not cause a net loss of ecological functions of the shoreline." While some actions within shoreline jurisdiction are exempt from a permit, the Shoreline Master Program should clearly state that those actions are not exempt from compliance with the Shoreline Management Act or the local Shoreline Master Program. Because the shoreline environment is also affected by activities taking place outside of a specific local master program's jurisdiction (e.g., outside of city limits, outside of the shoreline zone within the city), assembly of out-of-jurisdiction actions, programs and policies can be essential for understanding how the City fits into the larger watershed context. The latter is critical when establishing realistic goals and objectives for dynamic and highly inter-connected environments.

As directed by the Guidelines, the following discussions provides a summary of baseline shoreline conditions, lists restoration goals and objectives, and discusses existing or potential programs and projects that positively impact the shoreline environment. Finally, anticipated scheduling, funding, and monitoring of these various comprehensive restoration elements are provided. In total, implementation of the Shoreline Master Program (with mitigation of project related impacts) in combination with this Restoration Plan (for restoration of lost ecological functions that occurred prior to a specific project) should result in a net improvement in the City of Sequim's shoreline environment in the long term. In addition to meeting the requirements of the Guidelines, this Restoration Plan is also intended to support the City's or other non-governmental organizations' applications for future grant funding to implement elements of this Restoration Plan.

2. SHORELINE INVENTORY SUMMARY

2.1 Introduction

The City prepared a comprehensive inventory of the shoreline within its City limits and within its Urban Growth Management Area (UGA) in December of 2010. This inventory drew upon many resources, including the Jamestown S'Klallam Tribes shoreline inventory of Sequim Bay. The purpose of the inventory was to facilitate the City of Sequim's compliance with the provisions of the State Shoreline Management Act (SMA). This inventory helps to establish the base line in which to determine "no net loss" of shoreline functions from new development proposed after the adoption of a new Shoreline Master Program (SMP) for Sequim. The inventory describes the existing physical and biological conditions in the Sequim Bay and Washington Harbor shoreline zone within the City limits and its urban growth area (UGA). This includes recommendations for restoration of ecological functions that were degraded.

2.2 Shoreline Boundary

As defined by the Shoreline Management Act of 1971, shorelines include certain waters of the state plus their associated "shorelands." Shorelands are defined as:

> "those lands extending landward for 200 feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward 200 feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters which are subject to the provisions of this chapter...Any county or city may determine that portion of a one-hundred-year floodplain to be included in its master program as long as such portion includes, as a minimum, the floodway and the adjacent land extending landward two hundred feet therefrom (RCW 90.58.030)"

Shorelands in the City of Sequim include only areas within 200 feet of the marine ordinary high water mark of Sequim Bay and Washington Harbor and any associated wetlands within shoreline jurisdiction. As part of the shoreline jurisdiction assessment, one (1) wetland; Pitship Marsh, was identified within the shoreline jurisdiction area. Shoreline areas in Sequim do not have any identified floodway or floodplain.

2.3 Inventory

The shoreline inventory is divided into eight (8) main sections: Introduction, Current Regulatory Framework Summary, Watershed Natural Characteristics, Nearshore Land Use Patterns, Nearshore Physical Characterization, Nearshore Biological Characterization, Reach Summaries, Assessment, and Opportunity Areas, and Conclusions. The City's shoreline designations are divided into five designations based upon existing land uses and zoning. These designations are Natural, Research District, Shoreline Residential, Urban, and Urban Conservancy.

2.3.1 Land Use and Physical Conditions

1. Existing Land Use:

   Approximately 13,700 lineal feet of the shoreline of Sequim Bay/Washington Harbor lies within Sequim's City limits or its urban growth area (UGA). In general, only 25% of the shoreline is relatively untouched by development. The majority of the shoreline has been developed or impacted in some form by roads, structures, riprap, bulkheads or a marina.

   The major area of untouched shoreline is contained within Reaches 4 and 5. Reach 4, contains approximately 2,500 linear feet of shoreline within its southern portion and the area north of the Pacific Northwest National Laboratories/Battelle Marine Research Facilities on South Spit. Reach 5 contains approximately 1,000 linear feet along Washington Harbor along the South Spit.

   Approximately 39% of the shoreline covered in the study area is within the City limits of Sequim. The remainder (61%) are within the City's UGA, but will continue to be regulated under Clallam County's SMP until they are annexed into the City. Clallam County's has two (2) proposed shoreline designations within Sequim's UGA (as of February 2013 – See Figure 1) which are listed as follows:

   - The "Shoreline Residential-Conservancy" designation which is applied to the base of South Spit.
   - The "Natural" designation which takes in all of South Spit.

Approximately 20% of the shoreline is developed as residential. Commercial development, including the John Wayne Marina incorporates approximately 29% of the shoreline. Marine research facilities account for approximately 10% of the shoreline development with approximately 16% developed with public roads (West Sequim Bay Road and Washington Harbor Road).

Figure 1 Proposed Clallam Co. Shoreline Designations (February 2013)

2. Parks and Open Space/Public Access:

No public parks are located within Sequim's SMP area, however; public access is provided by the Port of Port Angeles at it's John Wayne Marina facility. Public access incorporates approximately 575 feet of shoreline which includes a picnic area and a public boat ramp.

3. Shoreline Modifications:

Approximately 44% of the shoreline within Sequim's SMP has been modified with shoreline armoring. This armoring includes riprap and wood/concrete bulkheads. The most highly modified shoreline is in Reach No. 2 which includes the John Wayne Marina. The John Wayne Marina has approximately 10 docks, including a refueling dock, and contains 300 mooring slips. Approximately 10% of these slips are used as primary residences. For the rest of the shoreline, three (3) docks are found within the SMP area. Two (2) are residential docks of approximately 300 feet and 210 feet in length are found in Reach 3. In Reach 4, one commercial dock of approximately 120 feet serves the Pacific Northwest National Laboratory (PNNL)/Battelle Marine Research facility. All three docks are private docks.

Two (2) areas of the shoreline have been filled. These are the John Wayne Marina and Pacific Northwest National Laboratory (PNNL/Battelle Marine Research Facility sites.

The full shoreline inventory in the "Inventory and Characterization Report" provides a detailed discussion of the condition of the shorelines in Sequim SMP area.

Figure-2 Pitship Marsh

2.3.2 Critical Areas and Biological Resources

The shoreline contains a number of biological resources and critical areas. Two estuarine wetlands are located within Sequim's SMP. One is the Pitship Marsh of approximately 2.7 acres and is rated as a "Class I Wetland" in Sequim's critical areas regulations. The second is the SW portion of the Washington Harbor estuary on South Spit. Other critical areas include a significant area of relatively untouched marine bluffs on the Battelle National Marine Facility site. This includes approximately 1,500 linear feet of near vertical bluffs.

Kelp and eelgrass beds are found within the Sequim SMP area. Patchy kelp beds are found from the tip of Pitship Point (John Wayne Marina) to the southern tip of Reach 3 and are also present along most of Reach 4.

Figure 3 Marine Bluffs

Eelgrass beds form a continuous fringe in Reach 1 and extends to the southern tip of Reach 2. Eelgrass beds are found in all reaches of the Sequim SMP area.

One stream, Johnson Creek, is located in Reach 2. This stream and its confluence with Sequim Bay was modified as part of the John Wayne Marina construction. A detailed inventory of the Critical Areas and Biological Resources are found in the "Inventory and Characterization Report".

3. RESTORATION GOALS AND OBJECTIVES

The results of the City's "Inventory and Characterization Report", the direction of the Department of Ecology's "Shoreline Master Program Guidelines" and input from

the public all provide the foundation for the goals and policies for the City of Sequim's restoration strategy. Key goals and policies include the following:

Goals

- Protect, preserve, and/or enhance shoreline resources (i.e., wetlands and other fish/wildlife habitats) for their ecological functions and values, and aesthetic and scenic qualities.

- Manage designated critical areas (i.e., wetlands, bluffs, fish and wildlife conservation areas, flood hazard areas, and streams) that are located within the City's shoreline jurisdiction to protect existing ecological functions and ecosystem-wide processes and, where possible, restore degraded ecological functions and ecosystem-wide processes to ensure no net loss of ecological functions.

- Preserve or develop shorelines in a manner that assures a balance of shoreline uses with minimal adverse effect on the quality of life, water and the environment. Recognize that land use and water management activities on adjacent uplands affect the quality of the City's shorelines.

Policies

- Implement policies that can help reverse impacts caused by existing or past development activities that adversely affect ecological or shoreline functions, such as untreated stormwater discharges.

- Maintain natural dynamic processes of shoreline formation and sustainability through effective stewardship, management, and use of shorelines.

Implementation of these goals and policies will help with the restoration of shoreline habitat and functions.

4. LIST OF EXISTING AND ONGOING PROJECTS AND PROGRAMS

The following series of existing projects are generally organized from the larger watershed scale to the City-scale, including City projects and programs and finally non-profit organizations that are also active in the City of Sequim area.

4.1 Water Resource Inventory Area (WRIA) 17 & 18 Participation and Ongoing Efforts

The City of Sequim falls into two (2) Water Resource Inventory Areas: Areas 17 & 18. These are the Quilcene/Snow (WRIA 17) and Elwa/Dungeness (WRIA 18) Water Resource Inventory Areas. Two creeks within these WRIA's (Johnson Creek – 17 and Bell Creek – 18), are partially located within Sequim's City limits and drain into either Sequim Bay or Washington Harbor.

Figure 4 Outlet from Pitship Marsh

The City of Sequim is a participating member of both WRIA's. The City's preparation of the "Inventory and Characterization Report" and " Restoration Plan" are important steps to further goals and objectives of WRIA's 17 and 18 and the Management Plan. The City's Shoreline Master Program update materials rely in part on the science included in the WRIA 17 and 18 plans. One restoration project recommended by the "Elwa-Dungeness Watershed Plan" has been completed by the City in coordination with the Jamestown S'Klallam Tribe and the North Olympic Peninsula Lead Entity (NOPLE). This is the removal of the culvert under West Sequim Bay Road that drained the Pitship Marsh to Sequim Bay. This culvert was replaced by a bridge that provides a more natural tidal exchange between Pitship Marsh and Sequim Bay, thus restoring habitat functions to the marsh.

4.2 Dungeness River Management Team (DRMT)

The City of Sequim is a participating member of the Dungeness River Management Team (DRMT). The DRMT was originally formed in the 1980's and reactivated in 1995 and was a participant in developing the "Dungeness River Area Watershed Management Plan". The DRMT now functions as the watershed council for east Water Resources Area 18 (WRIA 18) and acts as a clearing house for technical advice for habitat and water quantity/quality issues.

Figure 5 Culvert under Sewer Outfall Causeway

4.3 North Olympic Peninsula Lead Entity (NOPLE)

The City of Sequim participates

with the North Olympic Peninsula Lead Entity (NOPLE). NOPLE is a local, watershed-based organization that develops local salmon habitat recovery strategies which then recruits organizations to do habitat protection and restoration projects that will implement the strategies. The City is coordinating with the Jamestown S'Klallam Tribe to implement one project on NOPLE's work plan (#5 on the 2012 Work Plan) as well as item (c.) under Strategic Element #7 of Dungeness Watershed Proposed Project List for WRIA 18. This is the Washington Harbor Restoration project. While not within Sequim' SMP, the project will help restore natural tidal exchange functions to the northern portion of Washington Harbor. A causeway for the City of Sequim's sewage outfall into the Strait was built over the northern portion of Washington Harbor in the mid 60's. Only two culverts where provided for tidal exchange to the north portion of Washington Harbor. These culverts were inadequate in size, which impacted habitat functions. The Jamestown S'Klallam Tribe, which is the lead agency on the project, will be removing the culverts and constructing a bridge in their place to provide better tidal exchange with the northern portion of Washington Harbor and restoring habitat.

Figure 6 Washington Harbor – Photo Courtesy, Dept. of Ecology


Figure 7 Beginning Construction - Removal of Culverts

4.4 Strait of Juan de Fuca Ecosystem Recovery Network (Strait ERN)

The City of Sequim is a participating member of the Strait ERN. The Strait ERN is the "Local Integrating Organization" (LIO) for the Strait Action Area, and leads the

prioritization and implementation of the Action Agenda strategies in the Strait Action Area. The Strait Action Area includes approximately 217 linear miles of shoreline. Strategic priorities of the Strait ERN include, but are not limited to:

- Shoreline Master Program (SMP) Updates, Implementation, and Intergovernmental Coordination.
- Critical Areas Ordinances (CAO's) – Update, implement, and enforce CAO's.

The City is currently moving towards completion of the SMP update and has recently adopted Critical Areas regulations in accordance with State requirements. The City will be a continuing member of the Strait ERN.

4.5 Comprehensive Plan Policies

The City of Sequim most recently updated its Comprehensive Plan in 2006. The "Shorelines" element and "Environment and Open Space" elements contain a number of goals and policies that provide direction to the City to permit and condition new development in such a way to protect the shoreline and natural environment. These goals and policies include, but are not limited to, the following:

Shoreline Element Goals and Policies

A. Goals

SLG-1 - Provide for compatible residential, commercial and tourism uses of the shorelines and water areas while enhancing, preserving and maintaining the quality of the shoreline.

SLG-5 - Ensure that public access will not have adverse effects on fragile natural features of the shoreline or water areas.

SLG-6 - Encourage diverse and appropriate water-oriented recreational opportunities, which are compatible with over-water and shoreline locations and the environmental conditions of the natural site.

SLG-7 - Assure preservation of the scenic and non-renewable natural resources of the various shoreline environments for the benefit of existing and future generations.

SLG-8 - Preserve, protect and/or restore shoreline or water areas to their natural states, which have archaeological, historic, cultural, educational, or scientific value.

SLG-11- Prohibit activities and or uses that would strip native vegetation from the shorelines, or could cause erosion or sedimentation, or otherwise adversely impact the local wildlife or aquatic habitats.

B. Policies

SLP-3 - Direct new development on or near the urban shorelines already developed areas to the extent possible.

SLP-9 - Locate site design and maintain residential and other development to protect, enhance, and be compatible with the shoreline environment.

SLP-12 - Designate preferred uses of shoreline environments that are non-consumptive of physical and biological resources and do not substantially degrade or alter the existing character of the shoreline area.

SLP-13 - Prohibit activities or uses that would strip the shoreline of vegetative cover, cause substantial erosion or sedimentation, or adversely affect wildlife or aquatic life without mitigation.

Environment and Open Space Element

A. Goals

ENVG-1: Require that new development within the City of Sequim and its Urban Growth Area protect the environment; preserve critical areas; minimize development of hazardous slopes; and enhance the area's high quality of life, including air and water quality, and the availability of water.

ENVG-8: Include appropriate siting of infrastructure [urban services] that avoids critical areas, does not bisect wildlife corridors and allows for fish and wildlife passage when feasible and when it does not deny an appropriate use by an individual property owner.

OSG-1: Retain important open space to conserve fish and wildlife habitats; increase access to natural resource lands and water; and develop passive parks to include open space purposes.

B. Policies

ENVP-1: Promote "innovative lot design" and "low impact development" techniques, which provides protection of critical areas and buffers while allowing for reasonable use and development of property.

ENVP-3: Continue to implement regulations to protect designated critical area habitats for fish and wildlife by enforcing protective buffers and regulating construction practices.

ENVP-7: Continue to provide for protection of the groundwater resources (and its aquifer recharge areas) through effective stormwater management and erosion control methods, water quality education programs and other best management practices.

ENVP-8: Continue to promote the efficient and effective use of "innovative lot design" to reduce impervious surfaces so as to preserve critical areas, wetlands and the groundwater resources.

ENVP-9: Promote "low impact development" and "*green* construction methods" as another way to reduce impervious surfaces, protect the aquifer and conserve natural resources.

These goals and policies will be reviewed and possibly updated as part of Sequim's 2012 Comprehensive Plan updates to reflect current conditions and state requirements.

4.6 Critical Areas Regulations

The City of Sequim recently adopted new critical areas regulations (Ordinance 2012-001). These regulations are intended to meet the most recent requirements of the Growth Management Act (GMA). The regulations are based on "best available science" (BAS) and where closely vetted by the Department of Ecology, Department of Fish and Wildlife, and the Jamestown S'Klallam Tribe. These regulations provide a high level of protection to streams, wetlands, and other critical areas. Setbacks from streams range from 25 to 150 feet dependent on the Type of stream. For wetlands, setbacks of 25 to 200 feet are required dependent on the category of wetland. Management of the City's critical areas using these regulations should help insure that ecological functions and values are not degraded and that impacts to critical areas are mitigated. The critical areas regulation is one important tool the City will use to help meet is restoration goals. The City's critical areas regulations are adopted by reference into the Shoreline Master Program to regulate critical areas found within the shoreline environments (such as Pitship Marsh) and the wetland in Washington Harbor.

4.7 Tertiary Sewage Waste Treatment

In April 1997, the City of Sequim received special funding from the state to develop a water reuse demonstration pilot project. This project included the development of a tertiary sewage treatment system to, in part, achieve the following:

- To maximize the reuse of the City's wastewater in order to reopen a shellfish closure area in Sequim Bay.
- Improve stream flows in the Dungeness.
- To provide a sustainable water supply for irrigation purposes.
- To provide supplemental stream flows to Bell Creek (for habitat purposes), which flows into Washington Harbor.

As part of this project, the City constructed approximately six and one-half (6 ½) miles of "Class A" water pipeline. These lines provide irrigation water for a number of City properties and one subdivision. This reduces the demand on the potable water supplies that are pulled from the Dungeness River aquifer and reduces withdrawals from the Dungeness River.

4.8 Stormwater Management and Planning

Under Chapter 13.104 Stormwater Management, of the Sequim Municipal Code (SMC), the City adopts the State Department of Ecology's (DOE) Stormwater Management Manual by reference. The purpose of this chapter is to achieve the following:

- Minimize water quality degradation and sedimentation in streams, ponds, lakes, wetlands and other water bodies;
- Minimize the impact of increased runoff, erosion and sedimentation caused by land development and maintenance practices;
- Maintain and protect ground water resources;
- Minimize adverse impacts of alterations on ground and surface water quantities, locations and flow patterns;
- Decrease potential landslide, flood and erosion damage to public and private property;
- Promote site planning and construction practices that are consistent with natural topographical, vegetational and hydrological conditions;
- Maintain and protect the city stormwater management infrastructure and those downstream;
- Provide a means of regulating clearing and grading of private and public land while minimizing water quality impacts in order to protect public health and safety; and
- Provide minimum development regulations and construction procedures which will preserve, replace or enhance, to the maximum extent practicable, existing vegetation to preserve and enhance the natural qualities of lands, wetlands and water bodies.

The City will continue to enforce the provisions of this chapter.

4.9 Public Education

The City provides educational materials and references to other agencies regarding development "best management practices" (BMP's) to help preserve critical areas and the shoreline environment. Information provided includes, but is not limited to:

- "Low Impact Development" (LID) options.
- Preservation of wetland areas.
- Referrals to other agencies regarding livestock practices along stream corridors.

5. LIST OF ADDITIONAL PROJECTS AND PROGRAMS TO ACHIEVE LOCAL RESTORATION GOALS

The following series of additional projects and programs are on a City or regional scale. The timing of such projects is dependent on obtaining funding sources for the projects.

5.1 Recommended Projects

The following is partially developed from a list of opportunity areas identified within the "Inventory and Characterization Report" for shoreline reaches within Sequim's SMP. The list of potential projects was created after assessing field conditions, and is intended to contribute to improvement of impaired functions.

Reach 1

Approximately 47% of the shoreline in Reach 1 is armored with riprap or a wooden bulkhead. Most of this armoring is found along West Sequim Bay Road. Removing the "hard" armoring and replacing it with "soft" armoring would help restore habitat functions. This would include techniques that would more closely mimic natural functions such

Figure 8 Soft Armoring

as logs and/or other woody debris to act as a bulkhead. This could be achieved through a variety of mechanisms, including development incentives and/or public education or outreach or through grant funding.

Reach 2

This reach contains the John Wayne Marina and the outlet of Johnson Creek into Sequim Bay. One hundred (100%) percent of the shoreline in this reach has hard armoring (riprap). A range of restoration opportunities exist in the reach. They include the following.

- Replace hard armoring with soft armoring.
- Restoring marine vegetation and habitat diversity.
- Replacing creosote pilings.
- Improving and/or restoring tidal connectivity between Johnson Creek and Sequim Bay.
- Increasing public access through better signage to the beach access ramp.
- Reducing and/or limiting new overwater structures and/or improve habitat function with overwater structures.
- Reducing nonpoint source pollution from parking lots, marina activities, and stormwater runoff.
- Studying and/or monitoring the effects of overwater structures within the Marina.

The Port of Port Angeles and John Wayne Enterprises (Wayne Enterprises) are the major landowners in this reach. Wayne Enterprises has indicated that they would like to re-locate a portion of West Sequim Bay Road and restore approximately 500 feet of shoreline as part of a commercial and residential development proposal. The restoration would provide public access to the shoreline. The City can work closely with Wayne Enterprises and other agencies (Fish & Wildlife, Dept. of Ecology, the Jamestown S'Klallam Tribe) to determine the best methods to restore the shoreline.

Another potential project identified by the Jamestown S'Klallam Tribe is the restoration of Pitship Marsh to its original configuration. This would require the removal of approximately ½ acre of fill and a structure just south of the intersection of Whitefeather Way and West Sequim Bay Road (See Figure 9). Restoration of this part of Pitship Marsh could provide additional near shore habitat for Jimmycomelately Creek summer chum salmon. This would require the cooperation of Wayne Enterprises, which is the owner of the property. Funding of this restoration project could be provided under the Estuary and Salmon Restoration Program (ESRP) administered by the Washington Dept. of Fish and Wildlife (See Table 2). The program provides in part, grant funds for restoration of salmon habitat and estuaries. This could be a joint effort by the City, Jamestown S'Klallam Tribe, and Wayne Enterprises

Figure 9 Potential Pitship Marsh Restoration Area

Funding of other shoreline improvements could be achieved through a variety of mechanisms, including development incentives with Wayne Enterprises and/or public education or outreach, or pursuing grant funding as cited above or reference in Table 2 of this document (possibly with the Port of Port Angeles and Jamestown S'Kallam Tribes as participants).

Reach 3

Reach 3 is primarily single-family residential development. Approximately 65% of this reach has hard armoring, consisting of wood or concrete bulkheads. Two (2) docks of approximately 300 and 210 feet are located in this reach. Homes in this reach are on septic systems. Septic repairs and indications of failure are fairly common in this area. Restoration opportunities include:

- Protecting marine riparian vegetation by adopting clearing and grading regulations designed to avoid/minimize vegetation loss, and require replanting with multiple native species.
- Encouraging alternate or "soft" armoring methods.
- Avoiding or minimizing construction of additional overwater structures by encouraging mooring buoys and shared docks and moorage.
- Encouraging or requiring 'grated' decking or other similar measures to allow light penetration.
- Removing old creosote and treated overwater structures.
- Extending sewer lines to the area and abandoning existing septic systems.

Funding of improvements could be achieved through a variety of mechanisms, including development incentives and/or public education or outreach. Improvements can also be required as bulkheads or docks are repaired or replaced by property owners. Regarding septic systems, as properties are annexed into the City, an LID could be an option to extend sewers to the residences in this area.

Reach 4

The southern half and the extreme northern portion (South Spit) of this reach is relatively untouched. Only 14% of the shoreline has hard armoring (concrete bulkheads). The most extensive development (and shoreline armoring) is associated with the Pacific Northwest National Laboratories/Battelle Marine Research Facilities which has major facilities adjacent to the shoreline, including a dock and facilities just within shoreline jurisdiction on the bluffs above. Restoration opportunities include the following:

- Address stormwater runoff to prevent additional water saturation.
- Convert hard armoring to soft armoring.

Funding of improvements could be achieved through a variety of mechanisms, including development incentives and/or public education or outreach.

Reach 5

Reach 5 includes the inner portion of South Spit facing Washington Harbor. Only 4% of the shoreline has hard armoring (riprap), which is located adjacent to a public parking lot. Washington Harbor Road runs east/west to the Battelle facility at the base of South Spit. Potential restoration efforts include the following:

- Replacing the hard armoring by the public parking lot with soft armoring, and:

- The removal of approximately 1/3 acre of fill located at the base of South Spit (as identified by the Jamestown S'Klallam Tribe) (See Figure 10). This fill area is currently utilized as a parking lot for Battelle NW for their research facilities. Removal of this fill will require the cooperation of Battelle and the ability to move the parking lot to a suitable upland location. Restoration of this area would provide additional near shore habitat for salmon.

Funding of improvements could be achieved through a variety of mechanisms, including development incentives and/or public education or outreach or grant funding. Grant funding could potentially be provided through the National Coastal Wetlands Conservation Grant Program or through the Salmon Recovery Funding Board and Estuary and Salmon Restoration Program (ESRP) (See Table 2).

Figure 10 South Spit Potential Restoration Project

Other Projects – Reclaimed Water Engineering Plan for Aquifer Recharge & Distribution System Expansion

In April 1997, the City of Sequim received special funding from the state to develop a water reuse demonstration pilot project. This project included:

- The development of a tertiary sewage treatment system;
- To maximize the reuse of the City's wastewater in order to reopen a shellfish closure area in Sequim Bay;
- Improve stream flows in the Dungeness, and;
- To provide a sustainable water supply for irrigation purposes.

In 2010, the City received a Department of Ecology (DOE) grant (G0800564) to design and implement improvements to the system. These improvements include the following.

- Augmenting the Dungeness River aquifer through the construction and expansion of infiltration ponds to recharge the Dungeness aquifer at the Water Reuse Park in Sequim.
- Reducing demand on the potable water supply by expanding the reclaimed water (Class A) distribution system.

- Providing additional stream flow augmentation of Bell Creek.

Figure 11 Water Reuse Storage Pond

The goals of the project include the following:

- To reduce the amount of reclaimed water being discharged to the marine outfall (up to a 100% reduction).
- Repurpose the reclaimed water towards recharging the Dungeness Watershed.
- Provide a conceptual design of a distribution system to achieve and sustain maximum beneficial use of reclaimed water.

While the plan considers projects not within shoreline jurisdiction, the outcome of improvements proposed within the plan would enhance habitat values within the shoreline environment and on a watershed basis. The plan was intended to be a "shovel ready" plan which includes detailed construction plans. This would enable construction to commence as funds became available. The City will diligently pursue funds to implement the improvements outlined within this document.

A detailed analysis of the proposed improvements are contained in the *"Draft Reclaimed Water Engineering Plan for Aquifer Recharge & Distribution Expansion"* prepared by Skillings Connolly Inc., dated April 2011.

5.2 Public Education/Outreach

Chapter 3.7 of the WRIA 18 Watershed Plan identifies a number of public education and conservation efforts that can be effective in promoting greater awareness of environmental issues, water conservation, and private resource management. The WRIA 18 plan also identifies a number of actions that could contribute to the restoration of ecosystem health. Potential education outreach recommendations, in part, include the following:

- Provide a central clearinghouse for all conservation and environmental outreach.
- Provide educational curriculum within WRIA 18 school districts in coordination with nonprofit agencies and local agencies.
- Provide information on services and resources that are available to assist landowners in watershed resource management and shoreline management.

- Establish a water resource conservation education program including "life style" changes.
- Educate Planning Commission's and City Council members, real estate agents, recreation groups, agriculturalists (commercial and hobby), and other regarding watershed resource management and shoreline management.

Specific details about public education and outreach recommendations are found at http://www.clallam.net/environment/assets/applets/W18_3.7-Education.pdf.

Another source of education and outreach is the Clallam County Conservation District (CCD). The CCD provides an number of education workshops and provides technical assistance. Educational workshops and technical assistance, in part, include the following:

Education

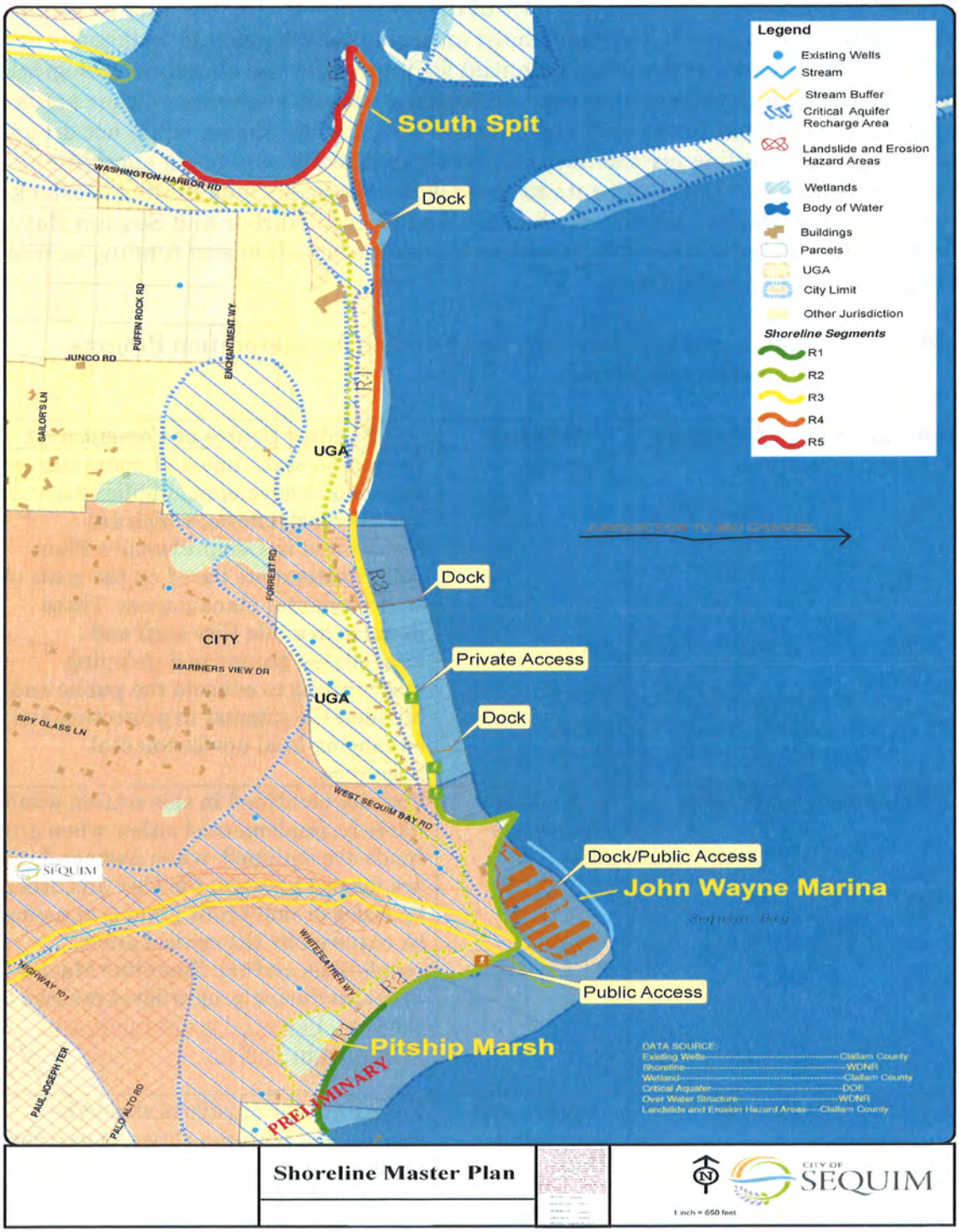
- Natural Landscaping Short Course
- Landscaping with Native Plants Field Workshop
- Educate youth regarding natural resource conservation
- Educate the he public on natural resource conservation

Technical Assistance

- Wildlife habitat enhancement
- Forest stewardship
- Farm conservation planning and implementation
- Stormwater management, which in part, would assist cities and the County with the development and promotion of low impact development programs.
- Irrigation water management

Detailed information regarding the above can be found at http://www.clallamcd.org/. To assist Sequim residents in finding these sites, a link to these, or other sites providing educational material, can be added to the City's website.

Figure 12
Shoreline Reach



6. PROPOSED IMPLMENTATION TARGETS AND MONITORING METHODS

As noted previously, approximately 44% of the shoreline within the City of Sequim or its urban growth area (UGA) have hard armoring (wood/concrete bulkheads or riprap). This provides restoration potential for improving the shoreline ecological functions through the removal of hard armoring with soft armoring. Other areas of improvements related to the Bell and Johnson Creek watersheds, while not directly located within shoreline jurisdiction, can result in directly benefiting shoreline ecological functions. Improvements to these watersheds, such as limited lifestock intrusion in the creeks, can directly benefit Washington Harbor and Sequim Bay. The following tables (Tables 1 & 2) outline a possible schedule and funding sources to implement a variety of efforts.

Table 1: Implementation Schedule and Funding for Restoration Projects, Programs, and Plans

Restoration Project/Program	Schedule	Funding Source or Commitment
4.9 Public Education	Ongoing	Currently, staff time and materials are provided in developing public education and outreach efforts, which are highlighted in Comprehensive Plan policy statements based on the goals of environmental management. These items help guide City staff and local citizen groups in developing mechanisms to educate the public and broaden the interest in protecting and enhancing local environmental resources.
5.1 Recommended Projects	As funds and opportunity allow	Projects identified in this section would likely be implemented either when grant funds are obtained, when partnerships are formed between the City and other agencies or non-profit groups, or as may be required by the critical areas regulations and the Shoreline Master Program during project-level reviews by the City. Potential grant funds are identified in Table 2.
5.2 Public Education & Outreach	As funds and opportunity allow	Future education efforts should be coordinated with the City and partnering agencies, including funding sources (grant funding, monetary donations, volunteer hours).

Table 2: Possible Grant Programs

Grant Program	Targeted Projects
National Coastal Wetlands Conservation Grant Program - U.S. Department of the Interior, Fish and Wildlife Service (Service)Wildlife and Sport Fish Restoration Program (WSFR) and Fisheries and Habitat Conservation Program (FHC)	• Acquisition of real property interest (e.g., conservation easement or fee title) in coastal lands or waters (coastal wetland ecosystems) from willing sellers or partners for long-term conservation. • Restoration, enhancement, or management of coastal wetland ecosystems.
Salmon Recovery Funding Board - Estuary and Salmon Restoration Program (ESRP) (Washington State Recreation & Conservation Office)	• Protection of near-shore and wetland habitat. • Restoration of salmon habitat and estuaries. • Removing or breaching dikes. • Removing bulkheads to restore sediment supply and transport to beaches. • Feasibility and design. • Decommissioning roads and removing fill.
Salmon Recovery Funding Board - Aquatic Lands Enhancement Account (ALEA) (Washington State Recreation & Conservation Office)	Provides funding to buy, protect, and restore aquatic lands habitat and to provide public access to the waterfront.
Salmon Recovery Funding Board - Washington Wildlife and Recreation Program (WWRP) (Washington State Recreation & Conservation Office)	• Critical Habitat • Farmland Preservation • Local Parks • Natural Areas • Riparian Protection • State Lands Development • State Lands Restoration • State Parks • Trails • Urban Wildlife Habitat • Water Access

The City is required to monitor development under the Shoreline Master Program to ensure no net loss. The City has already set up a tracking program of all permits, including exemptions, for all new land use and development activity within shoreline jurisdiction. This program will be expanded under the Shoreline Management Program to track the permits and exemptions and to determine if there is a net loss to shoreline functions. It is proposed in the City's SMP that this determination will be done in the form of an annual report and that the report be done in consultation with applicable state and tribal agencies. The contents of the

report have not yet been finalized, but may include the following data categories to use to determine if there is a net loss:

- Square feet of non-native vegetation removed.
- Square feet of native vegetation removed.
- Square feet of native vegetation replanted.
- Linear feet of shoreline armoring removed.

7. RESTORATION PRIORITIES

7.1 Priority 1– Improve Water Quality and Reduce Pollutant Delivery

Maintaining and improving water quality within Sequim Bay or Washington Harbor is necessary for shellfish harvesting. Water quality is therefore a major priority. Johnson Creek drains into Sequim Bay. Bell Creek drains into Washington Harbor. Both creeks have shown high counts of fecal coliform. This is attributed to failing septic systems, livestock in creeks, and contaminated irrigation water. Methods to control fecal coliform pollution loads are necessary. Such methods may include, in part;

- Fencing cattle from creeks.
- Provide fenced stream crossings for livestock to limit areas of bank erosion.
- Provide watering troughs for livestock outside of stream corridors.

Figure 13 Fenced Cattle Stream Crossing

Such methods can help reduce fecal coliform counts and sedimentation in stream corridors, which in turn can impact shoreline habitat.

7.2 Priority 2 – Develop, Expand and Implement Public Education and Involvement Programs

Public education and involvement should be a high priority in the City of Sequim. Public education and involvement could be targeted to two groups; one group would be the property owners located adjacent to Johnson and Bell Creeks and; the second group, property owners located within shoreline jurisdiction.
Bell and Johnson Creeks drain into Washington Harbor (Bell) and Sequim Bay (Johnson). Both creeks have experienced elevated levels of fecal coliform. Educational programs to teach

property owners with livestock along the creeks, methods in which to limit livestock intrusions in the waters of the creeks would help lesson fecal coliform counts. Educational programs through the Clallam County Conservation District (CCP) would be a prime source of education materials.

Educational opportunities with residential property owners could result in a no net loss of habitat or increase in habitat on their properties (planting of native vegetation, not cutting trees, or reducing the use of herbicides, pesticides or reducing the use of fertilizers). Providing education opportunities and involving the public are keys to success, and would possibly entail coordinating the development of a long-term Public Education and Outreach Plan to gain public support. This could include local workshops to educate shoreline property owners and other shoreline users on maintaining healthy shoreline environments, promoting enhancement and restoration opportunities and use of low impact development techniques. Other educational opportunities include coordination with other agencies and the school district to set up educational curriculum to teach students to be future stewards of the shoreline environment.

7.3 Priority 3 – Reduce Shoreline Armoring along Sequim Bay, Create or Enhance Natural Shoreline Conditions

The greatest opportunity to reduce shoreline armoring is along residential properties, West Sequim Bay Road, or adjacent to the public pull-out on Washington Harbor Road just west of the entrance to the parking lot for the Pacific Northwest National Laboratories/Battelle Marine Research Facilities (PNNL). No specific project to reduce shoreline armoring has yet to be identified, however, future development proposals that involve or have the potential to include shoreline restoration, should be required or encourage to do so through development incentives. The Jamestown S'Klallam Tribe has identified two (2) potential restoration projects that would enhance near shore habitat for salmon which are on properties owned by two of the largest landowners in the area. When the economy recovers and these property owners expand development on their properties, the City and the Jamestown S"Klallam Tribe should open up dialogue with these owners to restore the near shore habitat identified by the Tribe.

7.4 Priority 4 – Pursue Funding to Expand the Aquifer Recharge and Distribution System

Expanding the system as specified in the *"Draft Reclaimed Water Engineering Plan for Aquifer Recharge & Distribution Expansion"* prepared by Skillings Connolly Inc. will help provide habitat benefits within and beyond the boundaries of the City of Sequim's SMP. Funding of these system improvements is a high priority of the City.

7.5 Priority 5 – Continue Water Resource Inventor Area (WRIA) 17 & 18, the Dungeness River Management Team (DRMT), and Strait ERN Participation

The City should continue to participate in WRIA 17and 18, the DRMT, and with the Strait ERN processes. Participation in these processes provides the City the opportunity to keep in touch with its role on a basin-wide scale to provide its input on habitat conditions beyond its borders, which, in turn, come back to influence water quality and quantity and habitat issues in the City.

7.6 Priority 6 – City Zoning, Regulatory, and Planning Policies

City Zoning, Regulatory, and Planning Policies are listed as being of lower priority in this case simply because they have been the subject of a review and have recently been updated accordingly. Notably, the City's Critical Areas Ordinance was updated in early 2012 consistent with the Best Available Science for critical areas, including those within the shoreline zone. The City will is currently undertaking a major updating the Comprehensive Plan that will include the revised policy direction in the updated SMP.

8. REFERENCES

City of Sequim, 2006, City of Sequim Comprehensive Plan

Skillings Connolly Inc., City of Sequim, 2011, "Draft Reclaimed Water Engineering Plan for Aquifer Recharge & Distribution Expansion"

City of Sequim, 2010, City of Sequim "Inventory and Characterization Report"

Clallam County, WRIA 18 – Elwa-Dungeness Water Shed Plan, 2005, http://www.clallam.net/environment/html/wria_18_draft_watershed_plan.htm

Clallam County Conservation District Website - http://www.clallamcd.org/

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Appendix D

City of Sequim SMP Cumulative Impact Analysis

City of Sequim
Cumulative Impacts Analysis
for the
City of Sequim Shoreline Master Program

Preparation of a Shoreline Master Program requires an assessment of cumulative environmental impacts by development. This assessment is intended to assure that new development results in no net loss of shoreline environmental functions. This analysis must consider and evaluate the cumulative impacts of reasonably foreseeable (typically within a 20-year time period) development on shoreline environmental functions. In the analysis, the Shoreline Master Program environmental designations, policies, and regulations must reflect no net loss of environmental functions and address these impacts in a manner that fairly allocates this burden among development opportunities. The analysis must include a review of current conditions, the environmental functions at risk, future development, and the beneficial effects of regulations, policies, or other programs under federal, state, and local laws.

This information is summarized from the City's *Inventory and Characterization* document, which gives a more detailed analysis of current conditions, and the City's Shoreline Master Program regulations.

Current Conditions

Current land use has been quite stable over the years; John Wayne Marina was established in the early 1980s, as was the PNNL/Battelle shoreline facilities. Also, many of the homes along the shoreline were built prior to passage of the Shoreline Management Act in 1972 and are located on under-utilized lots. All of these areas rely on wells and on-site septic systems because the City does not have water or sewer facilities in place. West Sequim Bay Road (formerly a state highway) runs along most of the shoreline currently located in the City limits, dividing the shoreline from the upland areas. There are three docks located outside the Marina, all of which have been in place for many years. Reaches 1-3 have mostly low to low-moderate environmental functions because of these alterations. Reaches 4 and 5 have moderate to moderate-high functions because PNNL/Battelle, an environmental research facility and sole landowner in these Reaches, has not developed large portions of its property. Reaches 4 and 5, however, are currently within the City's Urban Growth Area and are not subject to the City's SMP until annexation.

Ecological functions at risk include sediment transport, beach coarsening, and attenuating wave energy because of extensive armoring along the shoreline and the presence of John Wayne Marina. Habitat, vegetation, and water quality may also be at risk because of the Marina, road, and associated impervious surfaces. Habitat in Reach 1, however, may improve over time because in 2009 a small, undersized culvert was removed and replaced with a bridge, which

allows greater tidal influence into Pitship Marsh and provides foraging and resting opportunities for fish. In Reach 4, the environmental functions at risk are primarily sediment transport; much of the bluff along Reach 4 is an eroding or "feeder" bluff, which drops sediment into Sequim Bay. Reach 5, located along the inside of Washington Harbor, is rated moderate because of Washington Harbor Road, some armoring, and a parking lot located within the shoreline jurisdiction.

Future Development

Reaches 1, 2, and 4 are areas identified for future development. The Sequim Bay RV Park, located upland from Reaches 1 and 2, have plans for a large development, consisting of more than 300 single family and transient residences, along with some higher intensity, commercial uses. The development also expects to create a park, which would increase public access along the City's shoreline. Most of this development would lie outside the shoreline jurisdiction, though the proposed park would be within the shoreline jurisdiction.

Reach 4 may also see some future development within the shoreline jurisdiction. The parcels in these reaches are owned by PNNL/Battelle. They have proposed plans that would expand the shoreline facility and possibly build new facilities near the bluff. Any plans to expand the shoreline facility would first look at expansion within the facility's existing footprint. At this time, PNNL/Battelle has plans to annex into the City to allow this expansion, but the process has been stalled for over a year at the time of this analysis.

Other development that could occur within the shoreline jurisdiction is new development or re-development in Reach 3. It is difficult to predict how much new development would actually occur, since there are only a few vacant lots; most re-development would likely involve tearing down an existing structure. It is unlikely that new development or re-development in the Shoreline Residential would be developed to its "full" density of 3-5 DU/acre because of the lot configuration; the lots are long and thin, making increased density on a single lot difficult. Most of this area also lies in the City's Urban Growth Area.

Beneficial Effects

The primary beneficial effect is in the form of the environmental designations chosen for these areas. The areas around Pitship Marsh and inside Washington Harbor are designated as "Urban Conservancy", which accounts for the existing roads, utility corridors, etc., and allows for parks and passive recreation, but does not allow higher intensity development. The residential areas are designated as "Shoreline Residential", and in both of these designations, a 75-foot buffer with a 10-foot setback are required. All buffers, both shoreline buffers and critical area buffers are also defined as vegetation conservation areas. Further, a study by a qualified professional must be provided to show that a new structure will not require shoreline stabilization for protection for the course of 100 years. The area with the eroding bluffs in Reach 4 is designated as "Natural".

This designation has a 100-foot buffer with a 10-foot setback, and limited types of structures are allowed within the designation only when location is not feasible outside the designation and when shoreline armoring will not be required to protect the structures.

Other protections include in the SMP pier and dock regulations that require grating and use of non-toxic materials for new structures, removal of creosote or other toxic materials during maintenance. Critical area regulations establish protective buffers for wetlands, streams, and geologically hazardous areas and limit the reduction of these buffers, among other things. New shoreline armoring also provides protection; soft armoring is preferred over hard armoring, and most new armoring is subject to a Conditional Use permit or prohibited. The City also created an "Exempt" permit review to assist in tracking exempt development and monitoring the environmental effects.

Other regulatory protections include federal, state, and local laws including water quality laws, the City's Comprehensive Plan, and other City ordinances. The City's underlying zoning is primarily R-II (3-5 dwelling units per acre), which is the City's lowest density, also provides protection. The R-II zoning designation limits the density and allowed uses within the shoreline jurisdiction and adjacent lands, and the remaining zoning designations (Research District and Commercial) reflect the existing uses on the shoreline (PNNL/Battelle and the John Wayne Marina). The following table provides a summary of the impacts in each reach and proposed mitigation measures within the proposed Shoreline Master Program goals, policies, and regulations to protect shoreline resources.

Table 1

Shoreline Reach	Ecological Function & Process	Current Performance	Alterations	Foreseeable Development	SMP Provisions & Existing Regulations	Future Performance
Reach 1	Hydrologic Sediment Transport, Attenuating wave energy, Nutrient/toxic compounds removal. Vegetative Maintaining temperature, Large woody debris, Sediment transport Attenuating wave energy. Habitat Physical space & conditions, Food production & delivery, Resting & foraging, Migration.	**LOW** **LOW/MODERATE** **LOW/MODERATE**	Armoring, septic systems & other land use alterations, impervious surfaces associated with W. Sequim Bay Rd. and residential land uses.	Large development with 250 single-family residences & 120 transient facilities.	Existing federal, state, and local environmental laws, City's Comprehensive Plan, zoning and building codes. SMP regulations include Chapter 6, more specifically sections 6.3.9 and 6.3.4. Area is designated Shoreline Residential, Urban and Urban Conservancy. Shoreline Res., Urban Conservancy & Urban – 75-foot buffers + 10-foot setback. SMP jurisdiction extended to encompass Pitship Marsh; SMP critical area regulations require a 200' buffer around the Marsh.	Specific impacts from future development will need to be addressed at the project level.

Table 1

Shoreline Reach	Ecological Function & Process	Current Performance	Alterations	Foreseeable Development	SMP Provisions & Existing Regulations	Future Performance
Reach 2	Hydrologic Sediment Transport, Attenuating wave energy, Nutrient/toxic compounds removal. Vegetative Maintaining temperature, Large woody debris, Sediment transport Attenuating wave energy. Habitat Physical space & conditions, Food production & delivery, Resting & foraging, Migration.	**LOW** **LOW** **LOW**	Armoring, docks, piers & other overwater structures, impervious surfaces associated with boat ramps, parking lots, and other hard surfaces, fill & other modification associated with Marina construction, septic systems for commercial and marina uses and facilities, including restaurants, laundry, and showers.	Upland portion of this reach is part of the foreseeable development described in Reach 1.	Existing federal, state, and local environmental laws, such as dredging and water quality, City's Comprehensive Plan, zoning and building codes. SMP regulations include Chapter 6, more specifically sections 6.3.4, 6.3.5, & 6.3.6 Area has urban designation. An urban buffer of 75 feet and 10 foot building setback is required.	This area has been stable over the years. Specific impacts from future development will need to be addressed at the project level.

Table 1

Shoreline Reach	Ecological Function & Process	Current Performance	Alterations	Foreseeable Development	SMP Provisions & Existing Regulations	Future Performance
Reach 3	Hydrologic Sediment Transport, Attenuating wave energy, Nutrient/toxic compounds removal. Vegetative Maintaining temperature, Large woody debris, Sediment transport Attenuating wave energy. Habitat Physical space & conditions, Food production & delivery, Resting & foraging, Migration.	**LOW/MODERATE** **LOW/MODERATE** **MODERATE**	Armoring, docks, piers, and other overwater structures, impervious surfaces associated with homes and other accessory structures, large number of residences and associated septic systems built/installed before 1972.	Fairly limited with only 4 vacant parcels, future re-development or subdivision of existing parcels is also unlikely because of parcel layout, future armoring also fairly limited with many parcels already having armoring in place, future additional docks and piers is also limited because demand appears to have stabilized.	Existing federal, state, and local environmental laws, City's Comprehensive Plan, zoning and building codes. SMP regulations include Chapter 6, specifically section 6.3.9 Area is designated shoreline residential. Prefer community docks over individual. Shoreline residential buffer is 75 feet + 10-foot building set back. New residential development sited to avoid need for shoreline stabilization for 100 years. Vegetative Conservation buffers required (Section 6.1.2)	This area has been stable over the years. Specific impacts from future development will need to be addressed at the project level.

Table 1

Shoreline Reach	Ecological Function & Process	Current Performance	Alterations	Foreseeable Development	SMP Provisions & Existing Regulations	Future Performance
Reach 4	Hydrologic Sediment Transport, Attenuating wave energy, Nutrient/toxic compounds removal. Vegetative Maintaining temperature, Large woody debris, Sediment transport Attenuating wave energy. Habitat Physical space & conditions, Food production & delivery, Resting & foraging, Migration.	**MODERATE/HIGH** **MODERATE/HIGH** **MODERATE/HIGH**	Armoring, docks, piers and other overwater structures, impervious surfaces associated with marine research uses, fill at the base to accommodate parking lot and shoreline facilities.	Possible expansion for additional research facilities within shoreline jurisdiction and upland areas.	Currently regulated by Clallam County regulations because property is in the Urban Growth Area. Upon annexation, Chapter 6, and specifically section 6.3.5 will apply. Area has eroding bluffs, natural designation and geohazard designation to avoid construction in area; parallel designation is research district. Research district has heightened environmental review. Area is designated research district and natural. Natural designation 100 to 160 wide. Research district requires 75 foot setback and 10 foot building setback. The natural	This area has been stable over the years. Specific impacts from future development will need to be addressed at the project level.

Table 1

Shoreline Reach	Ecological Function & Process	Current Performance	Alterations	Foreseeable Development	SMP Provisions & Existing Regulations	Future Performance
Reach 4					designation requires a 100 foot setback and 10 foot building setback.	
Reach 5	Hydrologic Sediment Transport, Attenuating wave energy, Nutrient/toxic compounds removal. Vegetative Maintaining temperature, Large woody debris, Sediment transport Attenuating wave energy. Habitat Physical space & conditions, Food production & delivery, Resting & foraging, Migration.	**MODERATE** **MODERATE** **MODERATE**	Armoring, impervious surfaces associated with marine research facilities and Washington Harbor Rd.	Though marine research facilities are looking to expand, they have no plans to develop here or in the upland area of this reach.	Currently regulated by Clallam County regulations because property is in the Urban Growth Area. Upon annexation, Chapter 6, and specifically, section 6.3.5 will apply. Area is designated as urban conservancy. A 75 foot buffer and 10 foot building setback is required. Critical areas regulations in Appendix A will protect steep slope and wetland areas.	This area has been quite stable over the years. Specific impacts from future development will need to be addressed at the project level.

Shoreline Reach

Conclusion

Foreseeable future uses in the shoreline jurisdiction are addressed through the policies and regulations of the City's Shoreline Master Program, the City's Comprehensive Plan, or other local, state, and federal laws and regulations. The City is fortunate that shoreline development has been quite stable over the years, and major re-development is unlikely. Recent removal of the undersized culvert at Pitship Marsh should offset some potential negative impacts as the ecological benefits of the restoration increase over time. Also, removal of a road inside Washington Harbor (outside the City's shoreline jurisdiction) may also provide increased environmental benefit within Washington Harbor. Future, specific impacts will be addressed at the permit level; negative impacts will require mitigation and may also consider beneficial impacts from restoration efforts. In sum, the City's Shoreline Master Program has adequate policies and regulations to assure no net loss of ecological function within the City's shoreline jurisdiction.