

**PACIFIC COUNTY  
GRANT No. G1400525**

**NO NET LOSS REPORT**

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**Pacific County's Shoreline Master Program**



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# **NO NET LOSS REPORT**

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## **FOR PACIFIC COUNTY'S SHORELINE MASTER PROGRAM**

### **1 INTRODUCTION**

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The Shoreline Management Act guidelines (Guidelines) require local shoreline master programs (SMPs) to regulate new development to “achieve no net loss of ecological function.” This No Net Loss (NNL) Report provides a summary of how the development of the SMP and supporting documents, including the Shoreline Analysis Report (SAR), Shoreline Restoration Plan (SRP), and Cumulative Impacts Analysis (CIA), will ensure that ecological functions will not be degraded over time as the SMP is implemented.

### **2 SHORELINE JURISDICTION**

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As defined by the Shoreline Management Act of 1971, shorelines include certain waters of the state plus their associated “shorelands.” At a minimum, the waterbodies designated as shorelines of the state are streams whose mean annual flow is 20 cubic feet per second (cfs) or greater, lakes whose area is greater than 20 acres, and all marine waters. 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 200 feet therefrom. Any city or county may also include in its master program land necessary for buffers for critical areas” (RCW 90.58.030).

In Pacific County, there are 42,007 acres in the shoreline jurisdiction. Shorelines of Statewide Significance in the County include the Columbia River, North River, Willapa River downstream from the confluence with the South Fork Willapa River, and all areas seaward of the OHWM along the Pacific Ocean coastline, including harbors, bays, estuaries, inlets, and all shorelands associated with these waters.

## 3 SHORELINE ENVIRONMENT DESIGNATIONS

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The assignment of shoreline designations is an important step in achieving no net loss of ecological function. It can help minimize impacts by concentrating development in lower functioning areas that are not likely to experience significant function degradation with incremental increases in new development or redevelopment.

The SAR evaluated existing conditions in the County's shorelines. The inventory of shoreline conditions and evaluation of ecological functions was completed using 11 assessment units with a total of 113 reaches. Assignment of environment designations was based on existing ecological function, existing land use, and anticipated future land use according to the County's Comprehensive Plan and zoning map.

The County's proposed SMP establishes 11 environment designations, including six upland and five aquatic designations. Upland designations include Natural, Rural Conservancy, Shoreline Residential, High Intensity, Coastal Conservancy, and Willapa Bay Conservancy. Aquatic designations include Coastal Ocean, Coastal Ocean High Intensity, Willapa Bay Estuary, Columbia River Estuary, and Freshwater Aquatic.

### 3.1 Natural

The Natural environment designation is proposed for shorelines that are ecologically intact and performing important ecological functions, or are considered to represent ecosystems and geologic types that are of particular scientific and educational interest. Additionally, shorelines unable to support development without significant adverse impacts to ecological functions or risk to human safety are proposed for designation as Natural shorelines. The Natural designation is intended to protect those shoreline areas that are relatively free of human influence or that include intact or minimally degraded shoreline functions. Management policies focus on the specific low-intensity uses permitted on Natural shorelines, and emphasize that such uses will only be allowed provided they do not result in significant adverse ecological impacts.

### 3.2 Rural Conservancy

The Rural Conservancy environment designation is proposed for shoreline areas outside incorporated municipalities and urban growth areas that either support lesser-intensity, resource-based uses or residential uses, or that are subject to

environmental limitations or of high recreational value. The Rural Conservancy designation is intended to protect ecological functions, conserve existing natural resources and valuable historic and cultural areas in order to provide for sustained resource use, achieve natural floodplain processes, and provide recreational opportunities. Management policies emphasize limiting uses within the Rural Conservancy designation to those which sustain the shoreline area's physical and biological resources.

### **3.3 Shoreline Residential**

The Shoreline Residential environment designation is intended to accommodate residential development and appurtenant structures. The Shoreline Residential designation is applied to areas that are denser and support predominantly single-family or multi-family residential development, or are planned or platted for residential development. Management policies emphasize developments that assure no net loss of ecological function, consider comprehensive planning, and provide public access, utilities, and public services, including recreation.

### **3.4 High Intensity**

The High Intensity environment designation is intended to provide areas for high-intensity, water-oriented commercial, transportation, and industrial uses while protecting existing ecological functions and seeking to restore ecological functions where they are degraded. The High Intensity designation is assigned to those shoreline areas owned or managed by the public Ports of Pacific County or other areas which support high-intensity uses related to commerce, transportation, or navigation or that are suitable or planned for such water-oriented uses. Management policies emphasize giving priority to water-dependent, water-related, and water-enjoyment uses; providing public access to the shoreline; and minimizing impacts by utilizing existing developed areas before expanding into new areas.

### **3.5 Coastal Conservancy**

The purpose of the Coastal Conservancy environment designation is to protect to the highest degree possible, and where feasible, restore coastal ocean shorelands within Pacific County; conserve wildlife; and manage the unique characteristics and resources of the shorelands areas landward of the ordinary high water mark on the Pacific Ocean shorelines of Pacific County. The Coastal Conservancy designation is assigned to areas that provide high recreational value and present environmental limitations to development, such as: beaches, dunes, wetlands, sediment sources, and/or cliffs. Management policies emphasize development that considers the ecological functions of the coastal ocean shorelands, including dunes.

### **3.6 Willapa Bay Conservancy**

The purpose of the Willapa Bay Conservancy environment designation is to protect to the highest degree possible, and where feasible, restore Willapa Bay shorelands; conserve wildlife; and manage the unique characteristics and resources of the shoreland areas landward of the OHWM in Willapa Bay. Together with the Willapa Bay Estuary designation, this designation provides an additional purpose of providing for the diverse uses of the interconnected shorelines within the Willapa Bay, which support aquaculture, residential, agriculture, forestry, and refuge/conservancy uses. The Willapa Bay Conservancy designation is applied to those shoreline areas adjacent to Willapa Bay that support lesser-intensity resource-based uses, low-intensity water-dependent uses, low-density residential development, or shorelines of high recreational or cultural value. Management policies emphasize uses and modifications that would not adversely impact the ecological functions of the critical saltwater and freshwater habitats; preventing degradation of water quality and alteration of hydrographic conditions; consideration of surrounding uses outside of the shoreline space; using Highest Astronomical Tide (HAT) as a benchmark for setbacks and buffers; and designing new development that precludes the need for shoreline stabilization.

### **3.7 Coastal Ocean**

The purpose of the Coastal Ocean environment designation is to recognize the biological productivity of the ocean environment and to protect and conserve to the highest degree possible established pot, line, and net fishing grounds; migratory bird flyways; marine migration routes; fish and invertebrate habitat; and beaches through sand and littoral drift management below the OHWM. The Coastal Ocean designation is assigned to those areas waterward of the OHWM along the County's Pacific Coast, excluding Willapa Bay shorelines and those areas designated as Coastal Ocean High Intensity (see below). Characteristics of the Coastal Ocean environment include: documented fishing grounds; flyways and migration routes; Endangered Species Act-listed wildlife; estuaries that support Endangered Species Act-listed salmonid rearing; intact drift cell processes; documented forage fish spawning habitats; intertidal and subtidal shellfish areas; and migratory waterfowl under United States treaties. Management policies emphasize structures and uses that would not interfere with the ecological functions and that are designed to prevent degradation of water quality and alteration of natural hydrographic conditions.

### **3.8 Coastal Ocean High Intensity**

The purpose of the Coastal Ocean High Intensity designation is to recognize the intensely-managed and closely-monitored shipping channel connecting the

Columbia River and the Pacific Ocean, and to provide for commercial and recreational vessel traffic, dredging, and the disposal of dredge materials. The Coastal Ocean High Intensity designation is applied to an area waterward of the OHWM and bounded by the County's southern boundary, River Mile Three of the Columbia River, and a line drawn west from the westernmost base of North Head and extending westward to include shallow water disposal sites. Management policies emphasize ocean disposal that complies with all applicable local, state and federal laws and regulations, and uses and activities that assure no net loss of shoreline ecological functions, including the passage of fish and wildlife.

### **3.9 Willapa Bay Estuary**

The purpose of the Willapa Bay Estuary designation is to protect to the highest degree possible and, where feasible, restore Willapa Bay waters and their underlying bedlands deemed vital for salmon and shellfish, and to manage the unique characteristics and resources of the areas waterward of the OHWM in Willapa Bay. Together with the Willapa Bay Conservancy designation, the environment designation also serves to provide for the diverse uses of the interconnected shorelines within Willapa Bay, including aquaculture, residential, agriculture, forestry, and refuge/conservancy uses. The Willapa Bay Estuary designation is proposed for areas waterward of the OHWM in Willapa Bay, including tidal marshes and waters extending upstream to the upper extent of tidal influence. Management policies focus on uses that would not adversely impact the ecological functions of critical saltwater and freshwater habitats, and uses and modifications that are designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.

### **3.10 Columbia River Estuary**

The purpose of the Columbia River Estuary designation is to protect and restore the ecological functions of the Columbia River waterway within Pacific County, including its associated wetlands, open space, floodplain, and other sensitive lands where they exist in both urban and developed settings, which allowing for a variety of compatible uses. Additionally, the Columbia River Estuary designation recognizes and provides for priority uses, including transportation, public access, and commercial and recreational uses. Management policies emphasize prioritizing transportation, public access, recreation, fishing, other commercial uses, public access, and public recreation.

### **3.11 Freshwater Aquatic**

The purpose of the Freshwater Aquatic environment designation is to protect, restore and manage the unique characteristics and resources of the areas waterward of the OHWM, and outside of the designations of the Willapa Bay

Estuary, Columbia River Estuary, Coastal Ocean, or Coastal Ocean High Intensity designations. Management policies emphasize giving preference to shoreline uses that would avoid adverse impacts to ecological functions of critical freshwater habitats.

## 4 POLICIES AND REGULATIONS

The SAR evaluated existing conditions, with particular attention to ecological conditions, in the County’s shorelines. The overarching purpose of recording baseline conditions is to ensure that the adopted regulations achieve no net loss of shoreline ecological function. The SAR includes recommendations for translating findings into shoreline designations, SMP policies and regulations, and restoration strategies. Key recommendations for SMP policies and regulations related to no net loss goals are presented in Tables 4-1 through 4-3, with a brief description of how those recommendations are addressed in the proposed SMP.

**Table 4-1. Implementation of key Shoreline Analysis Report general policy and regulation recommendations related to no net loss.**

Report Recommendation Summary	Recommendation Implementation
<i>Critical Areas</i>	
Consider whether the County’s critical areas regulations should be incorporated into the SMP by reference or through direct inclusion.	The County’s Critical Areas Regulations are adopted and incorporated in the SMP with specific exclusions and modifications in Subsection 4.2(B)(2).
Review critical area buffers to assess if changes are needed to recognize existing shoreline conditions and accommodate preferred uses consistent with no net loss of ecological functions.	Shoreline buffers are defined in Table 5-2 of the SMP and are based on existing conditions and protection of ecological functions.
Address the use of mitigation banking to offset unavoidable impacts.	Provisions for the use of wetland mitigation banks are included in the County’s Critical Areas Regulations.
Recognize that some interdunal wetlands are hydrologically associated with the shoreline and should be considered as shoreline jurisdictional wetlands (associated wetlands), even beyond 200 feet from the shorelines OHWM.	All wetlands, whether or not they are within shoreline jurisdiction, are protected under the County’s Critical Areas Regulations. Determination of hydrologic association with the shoreline (and shoreline jurisdictional

Report Recommendation Summary	Recommendation Implementation
	determination) will be achieved in the field.
Give careful consideration for protection for the many rare and endangered plant species and their associated fauna in interdunal wetlands.	Interdunal wetlands are protected under the County’s Critical Areas Regulations. Compensation for impacts to interdunal wetlands must be in the form of interdunal wetlands.
Shoreline geological hazard area regulations should include provisions to address future development in areas where rapid erosion is likely, including the areas characterized by recent coastal accretion and the weathering of shoreline and new landslide risks on properties.	Shoreline Erosion Hazard Areas are designated and protected under the County’s Critical Areas Regulations.
Recognize the hazards inherent in a shoreline location, such as geological hazards, channel migration zones and tsunamis.	The County’s Critical Areas Regulations define and regulate development in Shoreline Erosion Hazard Areas as well as Tsunami Hazard Areas.
<b><i>Flood Hazard Reduction</i></b>	
Review and update provisions to provide maximum flexibility for developing and maintaining flood hazard reduction measures consistent with direction in WAC 173-26-221(3) to emphasize maintaining existing ecological functions.	Section 4.4 of the proposed SMP includes provisions that: prohibit new development or actions in the channel migration zone (CMZ) or floodway that would be inconsistent with the SMP and the County’s Flood Damage Prevention Ordinance; require mitigation sequencing for new flood control works; and require that flood control works are located and designed to protect and restore natural floodway functions.
Clearly identify how the maintenance of flood hazard reduction measures is regulated to protect ongoing uses.	Section 4.4(B)(2)(g) of the proposed SMP allows repair and maintenance as long as it does not cause a significant ecological impact or increase flood hazards to other uses.
<b><i>Shoreline Vegetation and Conservation</i></b>	
Build on the existing critical areas protections, paying special attention to measures that will promote retention of	Section 4.5 of the proposed SMP, “Vegetation Management,” requires that all new development minimize

Report Recommendation Summary	Recommendation Implementation
<p>shoreline vegetation and development of a well-functioning shoreline that does not impair physical and habitat-forming processes.</p>	<p>vegetation clearing to the amount necessary and requires mitigation planning and sequencing. Vegetated buffers are required to protect and maintain shoreline vegetation consistent with Section 4.2, "Environmental Protection and Critical Areas."</p>
<p>Ensure that vegetation provisions allow for appropriate modifications to accommodate preferred uses, particularly water-oriented uses and public access.</p>	<p>Section 4.5(B)(1) of the proposed SMP calls for vegetation clearing that is limited to the minimum necessary to accommodate approved shoreline development.</p>
<p>Include clear standards for fill, grading, and excavation by environment designation.</p>	<p>Fill, grading and excavation activities are allowed by environment designation in the proposed SMP Table 5-1. Section 5.11 of the proposed SMP contains standards specific to fill, excavation, and grading.</p>
<p>Ensure that vegetation management standards, including those applicable to trees, are clear regarding thinning, trimming and pruning of nearshore vegetation to maintain views and minimize safety hazards.</p>	<p>Sections 4.5(B)(5) through (8), of the proposed SMP provide standards for the tree removal (including hazard trees), selective pruning, and removal of invasive vegetation.</p>
<p>Ensure that vegetation standards allow adequate provisions to allow for treatment and removal of invasive vegetation that poses a threat to shoreline ecological functions</p>	<p>Sections 4.5(B)(8) and (9) of the proposed SMP include standards for hand-removal or spot-spraying of invasive or noxious weeds and control of aquatic weeds.</p>
<p>Ensure vegetation standards for coastal dunes acknowledge the habitat value of sparsely vegetated dune communities.</p>	<p>Section 4.5(B)(7) of the proposed SMP prohibits the removal of vegetation from dunes without approval of the Administrator. Section 5.10(B)(2) of the proposed SMP defines a no-touch buffer that encompasses the entire primary dune; building setbacks from the dune buffer will be defined in the County's Zoning Ordinance.</p>
<p><b><i>Water Quality, Stormwater, and Nonpoint Pollution</i></b></p>	
<p>Consider incorporating regulations to</p>	<p>Section 4.6(B)(1) of the proposed SMP</p>

Report Recommendation Summary	Recommendation Implementation
facilitate maximum implementation of TMDL plans and controlling introductions of 303(d)-listed pollutants.	requires that all shoreline uses and activities incorporate measures to protect and maintain surface and groundwater quality and quantity, including compliance with NPDES general permit requirements.
Consider adding clarifying statements noting that the policies of the SMP will also be policies of the County’s comprehensive plan, and that the policies also apply to activities outside of shoreline jurisdiction that affect water quality within shoreline jurisdiction.	Not included in the proposed SMP.
Consider special emphasis on controlling runoff adjacent to, and upland of, aquaculture facilities.	Section 5.3(B)(4) of the proposed SMP includes provisions that apply to development in upland areas and that are intended to protect water quality near aquaculture areas.

**Table 4-2. Implementation of key Shoreline Analysis Report shoreline modification recommendations related to no net loss.**

Report Recommendation Summary	Recommendation Implementation
<i>Shoreline Stabilization</i>	
Separate shoreline armoring structures from regulations pertaining to breakwaters, jetties, groins, and weirs.	The proposed SMP contains regulations for shoreline stabilization in Section 5.21 and regulations for breakwaters, jetties, groins and weirs in Section 5.7.
Ensure “replacement” and “repair” definitions, standards, and thresholds are consistent with WAC 173-26-231(3)(a).	Section 5.21(B)(2) defines replacement consistent with WAC 173-26-231(3)(a). Section 2 provides a definition for “maintenance or repair.”
Reference appropriate exemptions found in the WAC related to “normal maintenance and repair” and “construction of the normal bulkhead common to single-family residences.”	Section 8.10 of the proposed SMP references exemptions related to procedures for construction of a bulkhead at existing single-family residences.
Give preference to those types of shoreline modifications that have a lesser	Section 5.21(B)(4) requires that, when shoreline stabilization is permitted, soft

Report Recommendation Summary	Recommendation Implementation
<p>impact on ecological functions, promoting “soft” over “hard” measures.</p>	<p>stabilization measures be used unless demonstrated not to be sufficient to protect primary structures.</p>
<p>Consider requiring a Conditional Use permit for any new hard shoreline stabilization.</p>	<p>In Table 5-1 of the SMP, a conditional use permit is required in Rural Conservancy, Shoreline Residential, and High Intensity designations and stabilization measures are prohibited in Natural, Coastal Conservancy, and Willapa Bay Conservancy designations.</p>
<p>Incentives should be included in the SMP that would encourage modification of existing armoring, where feasible, to improve habitat while still maintaining necessary site use and protection.</p>	<p>Replacement of hard shoreline stabilization with soft stabilization is permitted in all environments, and new soft stabilization is more broadly permitted than hard stabilization (SMP Table 5-1).</p>
<p>Consider only permitting shoreline stabilization measures where there is a demonstrated need to protect a primary structure.</p>	<p>Section 5.21(B)(1)(a) of the proposed SMP permits structural stabilization measure where there is a demonstrated need to protect an existing primary structure.</p>
<p>Consider prohibiting new structures that will require shoreline stabilization and identifying areas with high erosion potential, and consider more stringent setbacks in these areas.</p>	<p>Section 5.3(B)(2) requires that new development be located and designed to avoid the need for future shoreline stabilization. Section 5.3(B)(4) requires that new development on steep slopes or bluffs be set back sufficiently to ensure that shoreline stabilization is unlikely to be necessary during the life of the structure, as demonstrated by a geotechnical analysis.</p>
<p><b><i>Piers and Docks</i></b></p>	
<p>Provide specific standards for piers and docks separate from standards for bulkheads, breakwaters, jetties, groins and weirs.</p>	<p>Specific standards for piers and docks are included in 5.6(B)(7), “Docks, Piers and Floats.” Specific standards for shoreline stabilization are included in 5.21, “Shoreline Stabilization.” Specific standards for breakwaters, jetties, groins, and weirs are included in 5.7, “Breakwaters, Jetties, Groins, and Weirs.”</p>

Report Recommendation Summary	Recommendation Implementation
<p>Develop detailed dimensional and material standards for new and replacement/modified piers and docks, emphasizing custom standards for marine/estuarine, riverine and lacustrine environments. Be consistent, to the extent practicable, with WDFW and Corps design standards.</p>	<p>Section 5.6(B)(7) of the proposed SMP includes standards for new piers and docks, including dimensional standards based on provisions WAC 173-26-231(3)(b).</p>
<p>Consider customizing the standards separately for marine/estuarine, riverine and lacustrine environments. If established separately, determine and define how to break between estuarine and riverine environments.</p>	<p>The proposed Shoreline Environment Designation (SED) system designates separate environments for estuarine and freshwater environments (e.g. Willapa Bay Estuary and Freshwater Aquatic). Table 5-1 permits and prohibits uses by SED.</p>
<p>Be consistent with WDFW and Corps design standards, and local issues or circumstances for requirements for no net loss.</p>	<p>Section 5.6(B)(7) of the proposed SMP includes standards for new piers and docks, including dimensional standards based on provisions WAC 173-26-231(3)(b).</p>
<p>Emphasize joint-use or community piers and docks over single-use structures.</p>	<p>Section 5.6(B)(7)(g)(iii) of the proposed SMP calls for joint-use for dock, pier and float facilities for new residential development of two or more dwellings.</p>
<p>Ensure repair activities are defined to include a replacement threshold.</p>	<p>Section 5.6(B)(4) defines thresholds for replacement that apply generally to all boating facilities.</p>
<p>Address maintenance and repair of existing floating homes.</p>	<p>Section 5.19(B)(10)(c) addresses maintenance and repair of existing floating homes.</p>
<p>Prohibit additional floating homes.</p>	<p>Section 5.19(B)(10)(a) of the proposed SMP prohibits new floating homes.</p>
<b><i>Fill</i></b>	
<p>Encourage restoration fills.</p>	<p>In Table 5-1, fill waterward of the ordinary high water mark is coded “P” for ecological restoration in the Freshwater Aquatic, Willapa Bay Estuary, and Columbia River Estuary environments (and is otherwise coded</p>

Report Recommendation Summary	Recommendation Implementation
	<p>“C”). Section 5.11(B)(3) of the proposed SMP lists approved restoration projects, mitigation actions, environmental restoration, beach nourishment, or enhancement projects as permissible uses for fill in aquatic areas.</p>
<p>Prohibit fills waterward of the OHWM, and allow fills landward of the OHWM only when they are consistent with requirements to protect shoreline ecological functions and ecosystem-wide processes.</p>	<p>Section 5.11(B)(3) prohibits fill waterward of the OHWM unless it is associated with certain water-dependent uses (listed). Upland fills must be located, designed, and constructed to protect ecological functions, and must be the minimum necessary to accomplish the proposed use (SMP 5.11(B)(1)).</p>
<p><b><i>Breakwaters, Jetties, Groins and Weirs</i></b></p>	
<p>Consider prohibiting new breakwaters, jetties, groins, and weirs except where essential to restoration or maintenance of existing water-dependent uses or where they would reduce long-term ecological degradation.</p>	<p>Chapter 5.7(B)(1) of the proposed SMP permits new, expanded or replacement structures if it can be demonstrated that they will not result in a net loss of shoreline ecological functions and that they support water-dependent uses, public access, shoreline stabilization or other public purpose.</p>
<p><b><i>Dredging and Dredge Material Disposal</i></b></p>	
<p>Establish provisions to allow for continued dredging while addressing long term ecological issues.</p>	<p>Section 5.9(B) of the proposed SMP includes provisions to minimize and mitigate ecological issues associated with dredging, and limits maintenance dredging to previously authorized locations, depths, and widths.</p>
<p>Consider allowing the use of flow-path disposal where it is demonstrated to minimize disturbance to epibenthic organisms and result in a net benefit to shoreline functions.</p>	<p>Table 5-1 of the proposed SMP requires a conditional use for Enhanced, Rainbow Spray, and Alamo Spray disposal methods in the Columbia River Estuary; all others are coded “P” in that environment.</p>
<p>Consider a preference for dredge disposal that will distribute sediment directly to the coastal shoreline of the</p>	<p>Section 6.3(A)(2) of the proposed SMP suggests that ocean dredge disposal be designed to supplement sediment</p>

<b>Report Recommendation Summary</b>	<b>Recommendation Implementation</b>
Long Beach Peninsula.	transport to provide sand on the Long Beach Peninsula.
Continue to prohibit dredging and fill in tidal wetlands.	Section 5.9(B)(1)(e) prohibits dredging and fill activities that adversely affect tidal marshes, tidal flats and other wetlands.
Continue to require upland disposal at approved sites of any dredged materials not meeting EPA standards for toxic sediments.	Section 5.9(B)(3)(e) of the proposed SMP requires dredged materials that exceed the EPA standards for toxic sediments to be disposed of in an approved upland location.
Require that new development be sited and designed to avoid or, if that is not possible, to minimize the need for new and maintenance dredging.	Section 5.3(B)(2) of the proposed SMP requires that new development be located and designed to avoid the need for maintenance dredging.
<b><i>Shoreline Habitat and Natural Systems Enhancement Projects</i></b>	
Consider incentives to encourage restoration projects.	Restoration projects are permitted in all environment designations (SMP Table 5-1); certain shoreline modifications are also more broadly permitted when associated with shoreline ecological restoration.
<b><i>Beach and Dunes Management</i></b>	
Consider policies that emphasize the protection of dunes outside of designated public access locations in order to protect the dunes from anthropogenic impacts.	Section 5.10(A)(9) states an intent to manage beaches and dunes to reduce hazards from natural or human-induced actions.
Ensure that vegetation standards for coastal dunes acknowledge that habitat value of sparsely vegetated dune communities. The Dune Modification Plan should continue to be included and modified in the new SMP.	Not included in the proposed SMP.
Recognize that management of European beach grass has different management processes relative to public and federal lands.	Policy 5.10(A)(10) addresses the unique management considerations for non-native dune grasses.

Report Recommendation Summary	Recommendation Implementation
Recognize that coastal beach accretions have increased the value and amount of open space.	Section 5.10(A)(5) of the proposed SMP recognizes that accretions have increased the value and amount of open space.
Consider whether the foredune area should be designated as a geologic hazard area.	Section 5.10(A)(6) of the proposed SMP considers the future of dunal accretion and commits to amending land use policies that respond to refinements in technical research. Section 3.1(A)(7) incorporates FEMA-mapped Coastal High Hazard Areas as part of shoreline jurisdiction, and the Critical Areas Regulations recognize these areas as geologically hazardous areas.
<i>Ocean Resources</i>	
Manage shoreline modifications and uses that affect ocean resources consistent with WAC 173-26-360.	Chapter 6 of the proposed SMP includes policies and regulations for ocean uses and modifications consistent with WAC 173-26-360. These uses and modifications are also included in Table 5-1.
Develop enforceable policies for marine uses and modifications to help maintain sustainable marine fisheries in the County and adjacent offshore waters.	The policies and regulations in Chapter 6 emphasize protection of existing resource-based coastal ocean uses, including fishing.

**Table 4-3. Implementation of key Shoreline Analysis Report shoreline use recommendations related to no net loss.**

Report Recommendation Summary	Recommendation Implementation
<i>Agriculture</i>	
Recognize maintenance of existing agriculture and support for new agriculture are commercially and locally important to Pacific County.	Policy 5.4(A)(1) of the proposed SMP recognizes that maintaining existing agricultural activities in Pacific County are commercially and locally important.
Continue to allow low-intensity agricultural uses in the Natural	Table 5-1 shows permitted uses in the Natural environment, which are limited

Report Recommendation Summary	Recommendation Implementation
environment.	to low-intensity agricultural uses.
Consider whether any special provisions are needed to allow for continued viability of cranberry bogs.	Not included in the proposed SMP.
<b><i>Aquaculture</i></b>	
Recognize that the maintenance of existing aquaculture and support for new aquaculture are commercially and locally important to Pacific County.	Section 5.5(A) contains several policies which recognize the commercial and local importance of aquaculture in Pacific County.
Differentiate between commercial aquaculture and species restoration aquaculture.	Table 5-1 permits net-pens for salmonid enhancement in the Willapa Bay Estuary and Columbia River Estuary environments and conditionally permits them in the Freshwater Aquatic environment (prohibited in all others).
<b><i>Commercial Development</i></b>	
Recognize commercial uses and provide for a clear priority for water-dependent, water related and water-oriented uses.	Section 5.8(B)(1) gives preference to commercial uses in descending order of priority: water-dependent, water-related/water-enjoyment, and non-water-oriented.
Consider incentives to attract water-oriented uses in appropriate locations along the shoreline.	Section 5.8(A)(1) of the proposed SMP encourages commercial development on shorelines where existing, consistent uses are in place and that will minimize sprawl.
Ensure water-dependent uses are not restricted by other regulatory setbacks/buffers.	Section 5.2(C)(2) and 5.2(D)(3) state that water-dependent uses are not subject to shoreline buffers and building setbacks, respectively.
Make provisions for the public access and ecological restoration requirements for non-water-dependent uses for those areas where water-dependent uses are not practical. Identify mitigation sites or consider provisions for mitigation banking.	Section 5.8(B)(9) requires new commercial development to provide appropriate public access. Per Section 5.8(B)(2), new non-water-oriented commercial uses are prohibited outside of the High Intensity designation unless part of a mixed-use project that includes water-dependent uses or provides public access and/or ecological restoration.
<b><i>Forest Practices</i></b>	

Report Recommendation Summary	Recommendation Implementation
Recognize maintenance of existing forest practices is commercially and locally important to Pacific County.	Section 5.12(A)(1) of the proposed SMP recognizes the commercial and cultural importance of forestry in Pacific County.
Include specific limits on clear-cutting provided in RCW 90.58.150.	Section 5.12(B)(3) of the proposed SMP provides limits to timber cutting on shorelines of statewide significance.
Apply SMP standards to Class IV General Forest Practices where shorelines are being converted to non-forestry uses.	Section 5.12(B)(4) of the proposed SMP requires a Class IV Conversion Forest Practices Permit for conversion of forest land to non-forestry uses.
Require or prescribe specific shoreline conservation measures for forest conversions to residential uses.	Not included in the proposed SMP.
<b>Industry</b>	
Recognize industrial uses and provide for a clear priority for water-dependent, water-related and water-oriented uses.	Section 5.13(A)(5) gives preference to water-dependent industrial uses over non-water-dependent industrial uses in shoreline jurisdiction, and preference for water-related and water-enjoyment uses over non-water-oriented uses.
Consider incentives to attract water-oriented uses in appropriate locations along the shoreline.	Section 5.13(A)(3) of the proposed SMP encourages industrial development within incorporated Urban Growth Areas, areas of more intense development and existing Port-owned and/or operated parcels.
Ensure water-dependent uses are not restricted by other regulatory setbacks/buffers.	Section 5.2(C)(2) and 5.2(D)(3) state that water-dependent uses are not subject to shoreline buffers and building setbacks, respectively.
Make provisions for the public access and ecological restoration requirements for non-water-dependent uses for those areas where water-dependent uses are not practical.	Section 5.13(B)(4) of the proposed SMP provides regulations for non-water-oriented industrial including: development may be permitted only when part of a mixed use project or navigability is severely limited and the development provides a significant public benefit, such as public access and/or ecological restoration.

Report Recommendation Summary	Recommendation Implementation
<b><i>In-stream Structural Uses</i></b>	
Allow existing in-stream structural uses while ensuring continued protection and preservation of ecosystem functions.	Section 5.15(B) of the proposed SMP includes provisions allowing in-water structures that consider and maximize protection and preservation of ecosystem functions.
Consider distinguishing appropriate areas for in-stream structures based on environment designation or ecological conditions.	Table 5-1 of the proposed SMP permits and prohibits in-water structures by environment designation.
<b><i>Mining</i></b>	
Ensure consistency with the SCA of Washington State Parks policies addressing mining of sand along the ocean beaches.	Washington State Parks comments were incorporated into the SMP. Per those comments, the SMP does not regulate mining of sand along ocean beaches; instead, Table 5-1 contains a footnote specifying that recreational mining of sand requires a Hydraulic Permit Approval issued by WDFW.
Provide policies and regulations according to SMP Guidelines.	Section 5.16 of the proposed SMP provides policies and regulations for mining in accordance with the WAC.
Consider policies which emphasize relocating mining away from shorelines, floodplains and streams.	Policy 5.16(A)(4) of the proposed SMP encourages activities that are properly sited, designed, conducted and completed to ensure no net loss of ecological functions of the shoreline. Table 5-1 restricts mining to only certain environment designations.
Clearly differentiate between upland and aquatic mining.	Table 5-1 provides permit allowances for each environment designation.
<b><i>Recreational Development</i></b>	
Ensure that policies and regulations related to parks management provide clear preferences for shoreline restoration consistent with public access needs and uses.	Section 5.18 of the proposed SMP includes several policies aimed at protection and enhancement of shoreline recreation areas.
Coordinate with federal, State, County and private park owners regarding applicable environment designations,	Incorporated into the public SMP development process.

Report Recommendation Summary	Recommendation Implementation
<p>existing and future land uses/developments, and restoration opportunities to ensure policies and regulations do not conflict with ongoing or future recreational developments and park management plans.</p>	
<p>Recreation access is a priority and should recognize that water-dependent recreation is a preferred use in shoreline jurisdiction. Include provisions for existing and potential recreational uses, including boating, kayaking, swimming and fishing.</p>	<p>Section 5.18(B)(4) of the proposed SMP prioritizes access for recreational uses.</p>
<p>New shoreline access should be located and designed to maintain ecological functions.</p>	<p>Table 5-1 of the proposed SMP defines recreational development as a permitted, conditionally permitted, or prohibited use by environment designation. Section 5.18(B)(1) requires that recreation facilities ensure no net loss of ecological functions.</p>
<p><b><i>Residential Development</i></b></p>	
<p>Ensure that planned shoreline residential uses demonstrate adequate provision of services and utilities as appropriate to allow for shoreline recreation and ecological protection.</p>	<p>Section 5.19(A)(1) encourages residential development to locate where there are adequate provisions for utilities, circulation, and access. Section 5.19(B) includes regulations to implement this policy.</p>
<p>Incorporate clear dimensional criteria, including setbacks/buffers, lot coverage, height limits, etc.</p>	<p>Table 5-2 of the proposed SMP defines dimensional standards, including buffers, building setbacks, maximum height, and maximum frontage width for all environment designations. Environment designations were assigned based on existing and future development patterns and ecological functions.</p>
<p>Require that new development, including lot subdivision, not require new shoreline stabilization.</p>	<p>Section 5.19(B)(2) of the proposed SMP requires that new residential development, including subdivisions, be designed such that no shoreline stabilization measures are necessary.</p>

Report Recommendation Summary	Recommendation Implementation
For residential subdivisions that create five or more lots, require public or community access to the shoreline where consistent with the County's public access plan.	Section 4.3(B)(1)(d) requires public access for residential developments of more than four dwelling units or for subdivision of land into more than four lots.
Include provisions to ensure that a single-family residential development meets the no-net-loss standard.	Regulation 5.19(B)(1) of the proposed SMP states that single-family residential development is a priority use when designed and developed to ensure no net loss and when in compliance with the proposed SMP requirements.
<b><i>Transportation and Parking</i></b>	
Ensure that SMP provisions direct development proposals for the expansion of the Willapa Harbor Airport to areas that will avoid and minimize impacts to the connectivity and restoration potential of the surrounding wetlands and ensure that any associated unavoidable impacts are mitigated.	Section 5.22(B)(3) of the proposed SMP includes a regulation specific to Airport developments and their associated facilities, including locating in areas where adverse impacts to habitat used by resident waterfowl and other birds are minimized. Under the proposed SMP, the Willapa Harbor Airport is designated as High Intensity in order to draw clear borders around expansion of its facilities.
For necessary new roads and parking areas, ensure that alternatives are considered that evaluate the feasibility of locating outside of shoreline jurisdiction.	Section 5.22(A) of the proposed SMP includes policies that encourage roads and parking outside of the shoreline jurisdiction, where possible. Section 5.22(B)(4)(a) requires that parking lots be located outside of shoreline jurisdiction except to support an authorized shoreline use.
Consider policies to address uses of the abandoned railways throughout the County, considering they could provide opportunities for restoration or public access.	Not included in the proposed SMP.
<b><i>Utilities</i></b>	
Ensure that location of new utilities considers location outside of shoreline jurisdiction. Provide standards for necessary new utilities where locations	Section 5.23(B)(2) requires that such facilities be located outside of shoreline jurisdiction unless infeasible.

Report Recommendation Summary	Recommendation Implementation
outside of shoreline jurisdiction are not feasible.	
Provide performance standards for necessary new utilities where other locations outside of shoreline jurisdiction are not feasible.	Section 5.23(B) contains regulations that ensure that utilities in shoreline jurisdiction be located, designed, and operated to ensure no net loss of ecological function.
Continue to maintain shoreline setbacks for septic drainfields and require connection to a public sewer if one is available.	Section 4.6(B)(5) contains regulations for sewage collection and treatment that ensure setbacks and connection to public sewer systems in order to protect water quality.

## 5 RESTORATION OPPORTUNITIES

The Shoreline Restoration Plan (SRP) prepared as part of the SMP update will serve as a valuable resource for the County and its restoration partners to improve impaired ecological functions on the County’s shorelines. The SRP focuses on restoration opportunities primarily in publicly-owned open spaces and natural areas within the County.

The plan focuses on restoration projects that are reasonably likely to occur in the foreseeable future. It identifies restoration opportunities based on existing regional plans, such as *the Water Resource Inventory Area (WRIA) 24 Lead Entity Manual (2015)*, *the Washington Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (2010)*, *the Willapa National Wildlife Refuge Comprehensive Conservative Plan (2011)*, *the City of Long Beach Dune Management Report (2000)*, and *the Climate Change Action Team Work Plan (2010)*.

The plan provides an implementation framework by identifying existing and ongoing plans and programs as well as potential restoration partners at the federal, state, regional, and local levels. The framework builds on local and regional planning coordination among these programs and partners, identifying mechanisms for implementation including development incentives for restoration; landowner outreach and engagement; maximizing mitigation outcomes; and monitoring the effectiveness of restoration actions.

## 6 CUMULATIVE IMPACTS

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The CIA evaluated the effects of foreseeable development under the proposed SMP and demonstrated that the goals, policies and regulations in the proposed SMP, combined with recommendations in the SRP, will prevent degradation of ecological functions relative to the existing conditions documented in the County's SAR.

The CIA determined that on its own, the proposed SMP is expected to maintain existing shoreline functions within Pacific County. Other local, state and federal regulations, which supplement the SMP, will provide further mechanisms and assurances of maintaining shoreline ecological functions over time. Additionally, the SRP, and the voluntary actions described therein, will ensure that incremental losses that could occur despite the SMP provisions do not result in a net loss of functions. Therefore, the SMP, along with supporting documents and regulations, is expected to protect and improve shorelines within Pacific County while accommodating reasonably foreseeable future shoreline development, resulting in no net loss of shoreline ecological function.

Emphasis is placed on achieving no net loss of ecological function throughout the SMP, with all uses and modifications subject to general and/or specific standards addressing the control of non-native and invasive species, adapting to changes associated with sea-level rise, ocean acidification, climate change; and managing coastal shorelines in the face of a diminished sediment supply from the Columbia River Littoral Cell (CLRC). The following are some of the key features identified in the CIA that protect and enhance shoreline ecological functions to ensure that the no net loss standard is met:

- Shoreline environment designations were assigned to shorelines to minimize use conflicts and designate appropriate areas for specific uses and modifications.
- General provisions designed to maintain shoreline ecological functions apply to all shoreline uses and modifications. These provisions provide the basis for achieving no net loss of shoreline ecological functions, and include mitigation sequencing requirements, critical areas protection, flood hazard regulations, and vegetation conservation standards.
- Shoreline use, shoreline modification, and coastal ocean uses were individually determined to be permitted, conditionally permitted, or prohibited according to each environment designation. The SMP

includes provisions specific to each use or modification to ensure no net loss of ecological functions.

## 7 CONCLUSIONS REGARDING NO NET LOSS

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The SMP update process has provided the opportunity to identify existing environmental conditions, anticipate future impacts to shoreline functions, and identify restoration opportunities within the County's shoreline jurisdiction. The SAR enabled the SMP update process to rely on current, comprehensive information about the shoreline environment. The CIA evaluated the effects of reasonably foreseeable development that may occur under the SMP. The SRP identified planned actions and other opportunities to improve impaired ecological function in the County's shorelines. These elements facilitated the development of regulations that directly and fully consider the protection of ecological functions in order to achieve no net loss.

Major elements of the SMP that ensure no net loss of ecological functions include: 1) environment designations; 2) general policies and regulations; 3) critical areas regulations; and 4) shoreline and coastal ocean use and modifications regulations. Each of these elements were subject to an analysis of potential ecological impacts and developed with the goal of achieving no net loss of function and improving shoreline function where the opportunity exists. Additionally, the SRP identifies ongoing and planned voluntary restoration that will provide an opportunity to improve shoreline conditions over time.

Given the above, implementation of the proposed SMP is anticipated to achieve no net loss of shoreline ecological functions in Pacific County.