

**Table A-2 – East Whidbey: Current and Future Performance of Shoreline Ecological Functions – February 2013**

The following table describes the existing performance of shoreline ecological functions, the ecological functions at risk and the level of alteration along Island County shorelines as described in the Shoreline Inventory and Characterization Report. Regulations from the Island County Shoreline Master Program (Dec. 27, 2012) that protect ecological functions are identified along with programmatic opportunities from the Restoration Plan (Dec. 27, 2012). The future performance is then assessed based on the type and amount of expected development (*foreseeable development*) in the shoreline, the level of protection the proposed SMP regulations provide, and restoration opportunities. Specific opportunities for restoration are outlined in the Restoration Plan. Current performance of nearshore processes are ranked “least,” “less,” “moderate,” and “most” depending on the level of degradation along the shoreline (PSNERP, 2010). Future performance is ranked “No Cumulative Impacts” and “Potential for Cumulative Impacts” to shoreline ecological functions depending on the expected changes from existing conditions with implementation of the SMP over the next twenty years.

Existing Conditions by Reach <i>Shoreline Inventory and Characterization Report</i>	Level of Degradation <i>PSNERP, 2010 and Shoreline Alterations Impacting Processes and Functions</i>	Foreseeable Development <i>See Chapter 3 of report for methodology</i>	Ecological Functions at Risk	SMP Provisions Addressing Functions at Risk: Protection (Proposed SMP regulations) Restoration Plan	Anticipated Future Performance
<b>Aquatic</b>					
<p><b>Summary of Conditions:</b></p> <p>Northeast Whidbey Island marine shorelines include varied conditions that provide significant marine habitat to outmigrating anadromous salmonids, as well as numerous other fish and wildlife species. The Deception Pass shorelines support red sea urchin and Dungeness crab, and kelp and eelgrass areas. The opposite (mainland shoreline) of Skagit Bay consists of the broad Skagit River estuary; migratory patterns of juvenile salmon extend out from the estuary, with the nearshore areas of Northeast Whidbey Island providing significant habitat.</p> <p>Marine shorelines along East Whidbey Island provide habitat for outmigrating anadromous salmonids as well as numerous other fish and wildlife species. Coastal lagoons are presumed to be providing habitat to juvenile salmonids and are located throughout the east side of the island. The nearshore areas of Northeast Whidbey Island provide significant juvenile salmon habitat due to migratory patterns extending out from the Skagit River estuary. A primary pathway of outmigration is Dugualla Bay; the bay is associated with Dugualla Lake, historically coastal marsh / lagoon area associated with the marine environment. Possession Sound shorelines provide juvenile rearing habitat for Chinook salmon. Dozens of stream mouths drain along the marine shoreline, however only one at the head of Dugualla Bay is documented as supporting coho salmon and cutthroat trout.</p> <p>The bedrock shorelines of Deception Pass support red sea urchin and Dungeness crab, and kelp and eelgrass beds. Oak Harbor and Penn Cove shorelines support forage fish and hardshell clam habitat. Holmes Harbor shorelines provide habitat for forage fish and pandalid shrimp habitat, including contiguous eelgrass habitat, and is mapped as a marine haulout area. WDFW maps all of the Holmes Harbor aquatic area as an estuary. Aquatic areas along Possession Sound provide habitat for waterfowl, forage fish, Dungeness crab, hard shell clams, pandalid shrimp, and gray whale (seasonal feeding habitat).</p> <p>Penn Cove includes eight subtidal aquatic beds, including eelgrass, and supports a rich population of benthic invertebrates, including extensive mussel beds and numerous clam species. The cove’s main importance is as a winter foraging area for aquatic birds. Penn Cove is a well known commercial shellfish growing area, primarily for mussels as well as oysters and hardshell clams.</p> <p><b>Reaches:</b></p> <p>All areas waterward of the ordinary high water mark are designated Aquatic except areas designated High Intensity or existing public boat launches.</p>	<p><b>PSNERP Degradation Scores: For unincorporated County shoreline areas only.</b></p> <p>Refer to Map 17 from the Shoreline Inventory and Characterization report.</p> <p>No degradation: 0.1% (Baby Island)</p> <p>Least degraded: 50%</p> <p>Less degraded: 26%</p> <p>Moderately degraded: 5%</p> <p>More degraded: 19%</p> <p>East Whidbey Natural shorelines are generally unaltered, both along the waters’ edges and throughout jurisdiction. Majority of areas are publically owned and managed park lands – predominantly managed as open space. Limited areas of rural residential development set well back (200 feet or more) from the shoreline behind coastal bluffs.</p> <p>Several of the lagoons contain derelict piles, hydrologic alterations, and areas of fill associated with historic uses (Race Lagoon, Grasser’s Lagoon, others).</p>	<p>Potential for additional residential docks primarily in Mariners’ Cove. Potential for additional shellfish aquaculture in Penn Cove and Holmes Harbor. Potential for new beach public access.</p>	<p><b>Water Quality:</b> Development reduces soil infiltration and increases potential for nitrogen, phosphorus, and hydrocarbons. Increased sedimentation may occur below aquaculture facilities in areas of weak currents. Temporary increases in turbidity may occur from clam and geoduck harvesting. In Port Susan Bay, if suction or water jet activities were allowed sediment suspension is possible.</p> <p><b>Water and Sediment Movement:</b> Rapid erosion rates for bluff backed beaches and barrier beaches could be accelerated with faster stormwater flows. Loss of backshore due to shoreline armoring. Substrate modification due to piling placement (shellhash formation).</p> <p><b>Habitat:</b> Direct impacts limited due to minimal extent of permitted and foreseeable in-water and over-water uses. Aquatic habitat degradation susceptible to water quality inputs from contributing basins, especially in enclosed aquatic areas which receive inputs from residential and/or agricultural areas. Aquatic (subtidal and intertidal) and lagoon habitats susceptible to SLR.</p> <p><b>Shoreline Vegetation:</b> Low risk. Limited development potential due to existing and foreseeable use within</p>	<p><b>Protection</b></p> <p><b>Allowed uses and modifications:</b></p> <p><u>Residential Uses:</u> Single-family uses, accessory dwelling units (CUP), accessory structures, accessory beach access structures on private lots, and subdivisions</p> <p><u>Boating and Related Facilities:</u> Public boat launches, private and public piers, floats and docks, float plane docks, and marinas (CUP)</p> <p><u>Low intensity Agriculture:</u> CUP</p> <p><u>Aquaculture (On-land):</u> CUP</p> <p><u>Scientific, educational, historic, or archaeological uses:</u> Water-oriented and non-water-related uses (CUP)</p> <p><u>Transportation:</u> Ferry terminals, new and existing public vehicular routes and facilities, bridges, and culverts</p> <p><u>Utilities:</u> All types</p> <p><u>Recreational Uses:</u> Marine campgrounds, marine trails, undeveloped natural reserves/parks, unpaved non-vehicular trails and paths, passive recreation, and public parks</p> <p><u>Tourist Accommodations:</u> Hotels, motels, and inns (CUP)</p> <p><u>Shoreline stabilization:</u> Structural (CUP) and non-structural and shoreline restoration/beach enhancement</p> <p><u>Dikes, Grading, Dredging:</u> (CUP) For restoration or marina only</p> <p><u>Groins and jetties</u> for restoration or enhancement of natural resources, as part of an approved marina, or for navigational purposes (CUP)</p> <p><b>Prohibited uses and modifications:</b></p> <p><u>Residential Uses:</u> Mobile home parks and multi-family uses</p> <p><u>Commercial Uses:</u> Except tourist accommodations</p> <p><u>Industrial Uses:</u> All types</p> <p><u>Boating &amp; Related Facilities:</u> Float plane bases</p> <p><u>Resource Management and Extraction:</u> Mining</p> <p><u>Transportation:</u> Parking lots and railroads</p> <p><u>Recreational Uses:</u> Campgrounds, scenic overlooks, &amp; RV parks (i.e. private uses)</p> <p><u>Groins and jetties</u></p> <p><b>Additional standards:</b></p> <p>ICC 17.05A.090.N: Dock and pier components that may come into contact with the water must consist of non-toxic materials. <i>Hydrology</i></p> <p>ICC 17.05A.100.D: Long term moorage shall not be allowed in areas adjacent to shellfish beds, commercial aquaculture, or shallow water embayments with poor flushing action. <i>Habitat, Water Quality</i></p> <p>ICC 17.05A.100.B: Aquacultural facilities and activities shall be located and designed to avoid adverse impacts on eelgrass or macroalgae. Operation of the aquaculture facility or activity will not likely result in a net loss of shoreline ecological functions. <i>Habitat, Water Quality</i></p> <p>ICC 17.05A.100.B: Commercial geoduck aquaculture shall only be allowed where sediments, topography, land and water access support geoduck aquaculture operations without significant clearing or grading and shall not interfere with normal public use of surface waters or pose a threat to marine or nearshore habitat. <i>Habitat, Water Quality</i></p> <p>ICC 17.05A.100.J: Subdivisions and individual residential structures must be designed to ensure that surface runoff does not pollute adjacent waters or cause soil or beach erosion either during or after the construction phase. <i>Hydrology</i></p>	<p><b>No Cumulative Impacts</b></p> <p>No cumulative impacts due to limited extent of area where in-water and/or overwater use is permitted and anticipated, as well as use restrictions and development standards that ensure development and shoreline modification will only occur where appropriate, and in a fashion that impacts to adjacent aquatic areas will be mitigated. Floating structures for aquaculture viewed by some as aesthetically offensive.</p>

Existing Conditions by Reach <i>Shoreline Inventory and Characterization Report</i>	Level of Degradation <i>PSNERP, 2010 and Shoreline Alterations Impacting Processes and Functions</i>	Foreseeable Development <i>See Chapter 3 of report for methodology</i>	Ecological Functions at Risk	SMP Provisions Addressing Functions at Risk: Protection (Proposed SMP regulations) Restoration Plan	Anticipated Future Performance
			<p>aquatic areas. Long term risk of SLR resulting in ecological changes, especially threatening subtidal, intertidal aquatic vegetation and Mariners' Cove canal community.</p> <p><b>Hydrology (Water Quantity):</b> Low risk do to existing limited physical alteration within aquatic areas, as well as protections provided contiguous wetland areas and coastal lagoons. Primary pathway of degradation would occur through changes to contributing basin (land cover / land use changes) outside of shoreline jurisdiction.</p>	<p>ICC 17.05A.090.A: The use of chemicals to control invasive aquatic weeds is prohibited, except when applied by a licensed pesticide applicator and approved for aquatic use. <i>Shoreline Vegetation</i></p> <p>ICC 17.05A.090.C.13: Critical saltwater habitat protections. <i>Habitat</i></p> <p>ICC 17.05A.100.C: Beach access structures that extend waterward of the OHWM are limited to a small pier or pile-supported pedestrian landing platform of 25 sq .ft. or less. <i>Habitat</i></p> <p>ICC 17.05A.100.B: Aquaculture must avoid impacts to eelgrass and macroalgae. Floating aquaculture limited to 40 surface acres. Fish net pens may only include native species. Salmon net pens must not be located closer than 12 statute miles from the mouth of Skagit, Stillaguamish and Snohomish Rivers. Geoduck may not result in significant clearing and grading. Aquatic habitat must be minimized or mitigated. <i>Habitat</i></p> <p>ICC 17.05A.100.D.4: Mooring buoys must avoid critical saltwater habitats. Buoys must use state-approved designs that have minimal adverse effects on aquatic ecosystem and fish. See standards for docks, piers, floats, and boat launches below. <i>Habitat</i></p> <p>ICC 17.05A.110.B: New docks, piers, and floats shall be limited to the minimum size necessary for water-dependent uses, public access, or ecological restoration. <i>Habitat</i></p> <p>ICC 17.05A.110.B: New piers, docks, and floats on marine waters shall have a maximum width of four feet and a maximum walkway width of four feet. Walkways shall be grated to provide at least a forty-five percent open surface area. <i>Habitat</i></p> <p>ICC 17.05A.110.B: For new waterfront subdivisions, planned residential developments, multi-family residences, and inns, only joint use docks and piers may be permitted. <i>Habitat, Water and Sediment Movement</i></p> <p><b>Restoration</b> Opportunities include:</p> <p>EW02 Remove bulkhead and intertidal and backshore fill along Deception Pass State Park shore southwest of 2 piers</p> <p>EW03 Remove approximately 6 derelict piles</p> <p>EW03 Remove rock groin and concrete bulkhead</p> <p>EW04 Remove approximately 6 derelict piles</p> <p>EW04 Remove rock revetment and rock groin covering intertidal and backshore</p> <p>EW10 Remove probable spartina patch</p> <p>EW11 Remove concrete rock fill</p> <p>EW11 Remove dilapidated boathouse and railway</p> <p>EW11 Remove failed boathouse platform w rock</p> <p>EW11 Remove failed bulkhead for upper intertidal and backshore restoration</p> <p>EW11 Remove modification</p> <p>EW11 Remove pilings and rock fill</p> <p>EW11 Remove PVC sheet pile &amp; creosote WPW &amp; fill &amp; house</p> <p>EW12 Remove failed pier &amp; fill area w failing bulkhead</p> <p>EW12 Remove failed pier and creosote piles</p> <p>EW12 Remove failing bulkhead</p> <p>EW12 Remove failing bulkheads</p> <p>EW12 Remove failing bulkheads &amp; derelict piles by creek mouth</p> <p>EW13 Remove 4 failed bulkhds-1 here 3 to N (good modifications in between)</p> <p>EW13 Remove 6 small rock groins</p> <p>EW14 Remove concrete bulkhead &amp; fill</p> <p>EW14 Remove waterward failed bulkhead (old) fronting new bulkhead</p> <p>EW15 Remove abandoned creosote piles (~6)</p> <p>EW15 Remove abandoned creosote piles (1)</p> <p>EW15 Remove abandoned creosote piles (2)</p> <p>EW15 Remove derelict &amp; abandoned creosote piles</p> <p>EW15 Remove derelict creosote piles (35)</p> <p>EW15 Remove failing wooden groins (some creosote)</p>	

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<b>Natural</b>					
<p><b>Summary of Conditions:</b></p> <p>The Northeast Whidbey shorelines (reaches 1-4, and islands) are unique due to the proximity to Deception Pass and the strong tidal currents that flow through the area as well as the Skagit River delta. Maximum fetch is from the south, resulting in primarily northward net shore-drift. Southerly exposure is precluded by the north shore of Camano Island resulting in more moderate erosion rates. Common shoreforms include bluff backed beaches, barrier beaches and embayments as well as the only rocky shoretypes found within the County (excluding the small islands). South of Oak Harbor, there are two lagoons designated Natural: Grasser's Lagoon (Reach 7), the peninsula along Race Lagoon (Reach 10). South of Holmes Harbor, there are a few feeder bluffs and feeder bluff exceptional designated Natural (Reaches 13 and 15). Reaches 10, 11 and 13 are part of long northward drift cells. Reach 15 has an eastward drift cell that converges with a northward drift from Possession Point, to form Sandy Point (designated Shoreline Residential).</p> <p>Northeast Whidbey Island marine shorelines (reaches 1-4, and islands) include varied conditions that provide significant marine habitat to outmigrating anadromous salmonids, as well as numerous other fish and wildlife species. The Deception Pass shorelines are generally rocky and bluff backed, with areas of bedrock shoreline; these areas support red sea urchin and Dungeness crab areas through mapped kelp and eelgrass areas. The generally east facing shorelines of Northeast Whidbey form the western edge of Skagit Bay. The opposite (mainland shoreline) of Skagit Bay consists of the broad Skagit River estuary; migratory patterns of juvenile salmon extend out from the estuary, with the nearshore areas of Northeast Whidbey Island providing significant habitat.</p> <p>WDFW maps all of the Holmes Harbor marine aquatic area as an estuary; marine areas provide forage fish and pandalid shrimp habitat, including contiguous eelgrass habitat. Juvenile salmon rearing and migration is presumed in the nearshore, including associated coastal lagoon areas. Grasser and Race Lagoon are tidally influenced.</p> <p>Possession Sound (Reach 15) shoreline areas provide juvenile rearing habitat for Chinook salmon, other anadromous salmonids, as well as numerous other species. Aquatic areas and associated shorelines provide habitat for waterfowl, forage fish, Dungeness crab, pandalid shrimp, and gray whale (seasonal feeding habitat), as well as bald eagle nesting sites.</p> <p>Northeast Whidbey Island shoreline areas (reaches 1-4, and islands) consist predominantly of park areas and rural residential development, set back behind coastal bluffs. Saratoga Passage and Holmes Harbor shorelines (Reaches 10, 11, and 13) are primarily rural and rural residential. Development is characterized by widely-spaced houses on forested lots set back from the shoreline. Possession Sound shoreline areas are characterized by residents at the top of steep bluffs.</p> <p><b>Indicators:</b> Armoring (% of shoreline): 0.8 mi (3%)</p>	<p><b>PSNERP Degradation Scores:</b></p> <p>No degradation: 0%</p> <p>Least degraded: 50%</p> <p>Less degraded: 26%</p> <p>Moderately degraded: 5%</p> <p>More degraded: 19%</p> <p>East Whidbey Natural shorelines are generally unaltered, both along the waters' edges and throughout jurisdiction. Majority of areas are publically owned and managed park lands – predominantly managed as open space. Limited areas of rural residential development set well back (200 feet or more) from the shoreline behind coastal bluffs.</p> <p>Several of the Natural designated lagoons contain derelict piles, hydrologic alterations, and areas of fill associated with historic uses (Race Lagoon, Grasser's Lagoon, others).</p>	<p>Vacant lands: 19 ac (4%)</p> <p>Subdividable lands: 45 ac (9%)</p> <p>Potential residential units: 229</p>	<p><b>Water Quality:</b> Development reduces soil infiltration and increases potential for nitrogen, phosphorus, and hydrocarbons.</p> <p><b>Water and Sediment Movement:</b> Rapid erosion rates for bluff backed beaches and barrier beaches could be accelerated with faster stormwater flows.</p> <p><b>Habitat:</b> Aquatic habitat degradation susceptible to water quality inputs from contributing basin, especially in low-lying Natural areas which receive inputs from residential areas. Intact areas of riparian habitat protected, as large majority of associated wetland and riparian areas are protected as public open space. Lagoon, bluff, backshore, beach, nearshore, and subtidal habitats susceptible to SLR.</p> <p><b>Shoreline Vegetation:</b> Low risk. Limited development potential due to existing use and protection as public open space. Long term risk of SLR resulting in ecological changes, especially threatening aquatic and lagoon / wetland vegetation in low-lying Natural areas.</p> <p><b>Hydrology (Water Quantity):</b> Low risk throughout all public owned park areas. Limited development potential due to existing use and protection as public open space. Associated wetland areas (coastal lagoons and</p>	<p><b>Protection</b> <b>Allowed uses and modifications:</b> <b>Residential Uses:</b> Single-family uses, accessory dwelling units (CUP), accessory structures, accessory beach access structures (CUP) on private lots, and subdivisions <b>Boating and Related Facilities:</b> Public boat launches, private and public piers, floats and docks (CUP) <b>Scientific, educational, historic, or archaeological uses:</b> Water-dependent or –related uses <b>Resource Management and Extraction:</b> Low-intensity agriculture and forest practices <b>Transportation:</b> Parking lots associated with water-dependent uses, existing public vehicular routes and facilities, bridges, and culverts <b>Utilities:</b> Production facilities, tidal and wave energy production facilities, accessory utilities, and below and above ground transmission (CUP) <b>Recreational Uses:</b> Marine campgrounds, marine trails, undeveloped natural reserves/parks, unpaved non-vehicular trails and paths, passive recreation, and public parks (CUP) <b>Tourist Accommodations:</b> Bed and breakfast inns, country inns <b>Shoreline stabilization:</b> Structural (for existing residential structures at risk from erosion) and non-structural and shoreline restoration/beach enhancement (CUP) <b>Grading:</b> (CUP) <b>Dredging:</b> Restoration or enhancement of natural resources only (CUP) <b>Groins and jetties</b> as part of an ecological restoration project (CUP)</p> <p><b>Prohibited uses and modifications:</b> <b>Residential Uses:</b> Mobile home parks and multi-family uses <b>Commercial Uses:</b> Water-oriented and non-water-oriented uses <b>Industrial Uses:</b> Port facilities, water-oriented industry, log storage, and non-water-dependent industry <b>Boating &amp; Related Facilities:</b> Float plane bases, float plane docks, and marinas <b>Scientific, educational, historic, or archaeological uses:</b> Non-water–related uses <b>Resource Management and Extraction:</b> Mining and aquaculture on-land activities/structures/processing <b>Transportation:</b> Parking lots (except as permitted above), ferry terminals, new public vehicular routes and facilities, and railroads <b>Recreational Uses:</b> Campgrounds, scenic overlooks, &amp; RV parks (i.e. private uses) <b>Tourist Accommodations:</b> Hotels and motels</p> <p><b>Shoreline buffers, setbacks, maximum impervious surface and critical areas protection:</b> <b>Shoreline Marine Buffer:</b> 125 feet <b>Steep Slope Buffer:</b> 50 feet <b>Shoreline Setback:</b> 25 feet <b>Maximum Impervious Surface:</b> 10 percent <b>Critical Area Buffers:</b> Landslide Hazard Area or Steep Slope (50-100 foot setback); Streams (50-150 foot buffer); Wetlands (20-300 foot buffer); Nesting sites and territory (200-1000 ft .buffers); Washington Natural Heritage Program Areas (50 foot buffers)</p> <p><b>Additional standards</b> ICC 11.03 (Stormwater and Surface Water) <i>Hydrologic</i> ICC 17.05A.090A: General Shoreline Development standards limiting alteration of natural drainage features and prohibiting release of solid and liquid waste. <i>Hydrologic</i> ICC 17.05A.100.J: New residential development and subdivisions must be designed and built in a manner that avoids the need for structural shore armoring. <i>Hydrologic</i> ICC 17.05A.100.C: Beach access structures are prohibited on exceptional marine feeder bluffs. Beach access structures are not allowed if public beach access is available within 500 feet. <i>Hydrologic</i> ICC 17.05A.100.J: Joint use beach access is preferred in areas near unstable slopes, feeder bluffs or other geologically hazardous areas. Must be located in a manner that does not require shoreline stabilization. <i>Hydrologic</i></p>	<p><b>No Cumulative Impacts</b> No cumulative impacts due to low potential for development within majority of SED, marine shoreline and critical areas buffers, limited allowed uses and detailed standards to ensure only limited and appropriate development and use would occur. Protections extending outside of shoreline jurisdiction, including stormwater and surface water standards, will provide protection against cumulative impacts to hydrologic and habitat functions.</p>

<b>Existing Conditions by Reach</b> <i>Shoreline Inventory and Characterization Report</i>	<b>Level of Degradation</b> <i>PSNERP, 2010 and Shoreline Alterations Impacting Processes and Functions</i>	<b>Foreseeable Development</b> <i>See Chapter 3 of report for methodology</i>	<b>Ecological Functions at Risk</b>	<b>SMP Provisions Addressing Functions at Risk:</b> Protection (Proposed SMP regulations) Restoration Plan	<b>Anticipated Future Performance</b>
<p>Eelgrass: 11 occurrences and one large, contiguous eelgrass bed extending from Dugualla Bay south to the northern tip of Camano Island</p> <p>Culverts: 7</p> <p>Coastal Floodplain: 127 ac (24%)</p> <p>Forest Cover: 403 ac (77%)</p> <p>Impervious: 25 ac (5%)</p> <p>Overwater Structures: 6</p> <p>WDFW PHS – Priority Bird Species: Bald eagle (21 occurrences including a communal roost) and black oystercatcher (5 occurrences)</p> <p>Protected Lands: 154 ac (29%)</p> <p>Riparian Vegetation: 92%</p> <p>Road Lengths: 0.8 mi</p> <p>Wetlands: 45 ac (9%)</p> <p><b>Reaches:</b></p> <p>Reach 1 (27 acres)</p> <p>Reach 2 (45 acres)</p> <p>Reach 3 (56 acres)</p> <p>Reach 4 (115 acres)</p> <p>Deception Pass Islands (Strawberry and Deception Islands) (14 acres)</p> <p>Reach 7 (11 acres)</p> <p>Reach 10 (99 acres)</p> <p>Reach 11 (23 acres)</p> <p>Reach 13 (44 acres)</p> <p>Reach 15 (90 acres)</p>			<p>freshwater features) and required buffers further limit development that could impact shoreline vegetation. Primary pathway of degradation would occur through changes to contributing basin (land cover / land use changes) outside of shoreline jurisdiction, and impacts of SLR; these result in moderate risk within low-lying shoreline areas.</p>	<p>ICC 17.05A.090.J: Subdivisions containing marshes, swamps, lagoons, portions of floodplains, or similar wetlands must use those areas only for the purposes of parks, open space, or recreation facilities. <i>Hydrologic and Habitat</i></p> <p>ICC 17.05A.090D: Native vegetation within shoreline buffers must be maintained or, where lacking, enhanced. As a general guideline, the percentage of buffer to be enhanced should equal the percentage increase in impervious lot coverage on the site. <i>Shoreline Vegetation</i></p> <p>ICC 17.05A.090N: Low impact development techniques must be considered, materials that come into contact with water must be composed of non-toxic materials. <i>Habitat</i></p> <p><b>Restoration</b></p> <p>Opportunities include:</p> <p>EW03 Remove approximately 15 derelict piles</p> <p>EW04 Remove tide gate and outfall &amp; connect large lagoon with Skagit Bay to create estuarine/saltmarsh</p> <p>EW10 Restore tidal flow to saltmarsh (S of Race Lagoon) Check road to beach over marsh for connectivity</p> <p>EW15 Restore backshore marsh vegetation -vegetation appears damaged due to change in hydrology</p> <p>EW15 Remove abandoned creosote piles</p>	

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<b>High Intensity</b>					
<p><b>Summary of Conditions:</b></p> <p>There are three locations designated High Intensity (HI) on the East Whidbey Island shorelines: the marina at Cornet Bay, the boatyard at Freeland, and the ferry terminal at Clinton.</p> <p>Geomorphic processes in Cornet Bay (Reach 2) are primarily influenced by a long east to west drift cell transporting sediments from the east into the bay, feeding accretion shoreforms in areas of no appreciable drift. There are very few associated wetlands mapped within the reach.</p> <p>Geomorphic shoreline processes in Holmes Harbor (Reach 12) include two small areas of convergence at the end of the harbor from south-trending cells on the west and east shorelines.</p> <p>Geomorphic shoreline processes in Reach 15 are characterized by convergence of two drift cells at Sandy Point, including a very long north-trending cell extending from the south tip of Whidbey (Possession Point) along the entire Possession Sound shoreline.</p> <p>Documented aquatic habitat includes Dungeness crab, geoduck (Reach 12 and 15), kelp and eelgrass areas, offshore pandalid shrimp, and forage fish (Reach 12 and 15). WDFW maps all of the Holmes Harbor aquatic area as an estuary.</p> <p>Shoreline modifications in Cornet Bay are associated with fill and armoring for the public marina and boat launch. The only marinas located in Island County (outside of incorporated areas) are located in Cornet Bay. The parcel designated High Intensity in Holmes Harbors is currently in use as a boat building facility. The Clinton ferry terminal includes: overwater car holding area and 2 ferry landing areas [624 ft. long and 200 ft. wide].</p> <p><b>Indicators:</b></p> <p>Armoring (% of shoreline): 0.1 mi (41%)</p> <p>Eelgrass: None mapped</p> <p>Culverts: 1</p> <p>Coastal Floodplain: 3 ac (62%)</p> <p>Forest Cover: 0.3 ac (6%)</p> <p>Impervious: 0.7 ac (14%)</p> <p>Overwater Structures: 3</p> <p>WDFW PHS – Priority Bird Species: Great blue heron</p> <p>Protected Lands: 0 ac (0%)</p> <p>Riparian Vegetation: 54%</p> <p>Road Lengths: 0.2 mi</p> <p>Wetlands: 0.9 ac (18%)</p> <p><b>Reaches:</b></p> <p>Reach 2 (1 acre)</p> <p>Reach 12 (2 acres)</p> <p>Reach 15 (2 acres)</p>	<p><b>PSNERP Degradation Scores:</b></p> <p>No degradation: 0%</p> <p>Least degraded: 46%</p> <p>Less degraded: 54%</p> <p>Moderately degraded: 0%</p> <p>More degraded: 0%</p> <p>High Intensity shoreline areas are highly altered by existing water dependent development, including armoring, overwater structures, and associated shoreland modifications (parking facilities, maintenance and operations facilities) associated with Washington State Ferries Terminal at Clinton, the port facilities at Freeland, and the public marina / boat launch facility at Cornet Bay. All functions occur at low levels, although surrounding aquatic areas still provide important habitat.</p>	<p>Vacant lands: 0 ac (0%)</p> <p>Subdividable lands: 1 ac (25%)</p> <p>Potential residential units: 6</p>	<p><b>Water Quality:</b> Extensive impervious cover with potential of contamination from hydrocarbons.</p> <p><b>Water and Sediment Movement:</b> Extensive overwater structures with many piers, dolphins, and high velocity prop wash disturb sediments and aquatic plants.</p> <p><b>Habitat:</b> Moderate risk. Aquatic habitats threatened by water quality degradation – associated with accidental spills, stormwater, illegal dumping – common sources of contamination from high intensity boating facility uses.</p> <p><b>Shoreline Vegetation:</b> Low risk. Existing highly altered conditions limit potential for additional future loss of shoreline or aquatic vegetation.</p> <p><b>Hydrology:</b> Low risk. Existing highly altered conditions limit potential for additional future impairment; any major redevelopment of facilities may provide opportunity to improve hydrologic functions through implementation of mitigation requirements.</p>	<p><b>Protection</b> <b>Allowed uses and modifications:</b></p> <p><u>Residential Uses:</u> Single-family uses, accessory structures, accessory beach access structures on private lots, and subdivisions (CUP)</p> <p><u>Commercial Uses:</u> Water-oriented commercial, non-water-oriented commercial if part of a mixed-use development with a water-dependent use</p> <p><u>Industrial Uses:</u> Port facilities, water-oriented industry, and log storage (CUP)</p> <p><u>Boating and Related Facilities:</u> Boat launches, private and public piers, floats and docks, float plane bases and docks, and marinas</p> <p><u>Scientific, educational, historic, or archaeological uses:</u> Water-oriented and non-water-related uses</p> <p><u>Resource Management and Extraction:</u> Aquaculture on-land activities/structures/processing, aquaculture in-water, including mechanical or hydraulic harvest of shellfish and forest practices (CUP)</p> <p><u>Transportation:</u> Parking lots, ferry terminals, new and existing vehicular routes and facilities, bridges, and culverts</p> <p><u>Utilities:</u> All types (CUP)</p> <p><u>Recreational Uses:</u> Campgrounds, scenic overlooks and RV parks (i.e., private); undeveloped natural reserves/parks, unpaved non-vehicular trails and paths, passive recreation, and public parks,</p> <p><u>Tourist Accommodations:</u> Hotels, motels, and inns</p> <p><u>Breakwaters</u> (CUP)</p> <p><u>Shoreline stabilization:</u> Structural and non-structural and shoreline restoration/beach enhancement</p> <p><u>Dikes</u></p> <p><u>Grading</u></p> <p><u>Dredging</u></p> <p><u>Groins and jetties</u> for restoration or enhancement of natural resources, as part of an approved marina, or for navigational purposes (CUP)</p> <p><u>Dolphins</u> for water-dependent use</p> <p><b>Prohibited uses and modifications:</b></p> <p><u>Residential Uses:</u> Mobile home parks, accessory dwelling units, multi-family uses, floating homes, and floating homes and houseboats</p> <p><u>Commercial Uses:</u> Non-water-oriented commercial (except as permitted above)</p> <p><u>Industrial Uses:</u> Non-water-dependent industry</p> <p><u>Boating and Related Facilities:</u> Mooring buoys</p> <p><u>Resource Management and Extraction:</u> Low intensity agriculture and mining</p> <p><u>Transportation:</u> Railroads</p> <p><u>Recreational Uses:</u> Marine campgrounds and marine trails</p> <p><b>Shoreline buffers, setbacks, maximum impervious surface and critical areas protection:</b></p> <p><u>Shoreline Marine Buffer:</u> 30 feet</p> <p><u>Steep Slope Buffer:</u> 50 feet for slopes greater than 40%</p> <p><u>Shoreline Setback:</u> 20 feet</p> <p><u>Maximum Impervious Surface:</u> 80 percent</p> <p><u>Critical Area Buffers:</u> Landslide Hazard Area or Steep Slope (50-100 foot setback); Streams (50-150 foot buffer); Wetlands (20-300 foot buffer); Nesting sites and territory (200-1000 foot buffers); Washington Natural Heritage Program Areas (50 foot buffers)</p> <p><b>Additional standards</b></p> <p>ICC 11.03 (Stormwater and Surface Water) <i>Water Quality, Hydrology</i></p> <p>ICC 17.05A.090A: General Shoreline Development standards limiting alteration of natural drainage features and prohibiting release of solid and liquid waste. <i>Water Quality, Hydrology</i></p> <p>ICC 17.05A.100.E: Existing non-water-dependent and non-water-related commercial uses may not expand waterward of existing structures. Legally established existing commercial development may expand without a shoreline variance. Should the existing setback be less than 30 feet from the OHWM, the proposed expansion may not occur seaward, except for water-dependent uses. <i>Vegetation</i></p>	<p><b>No Cumulative Impacts</b></p> <p>No cumulative impacts due to limited area, reduced functions resulting from existing development, and requirements for mitigation with any expansion or redevelopment.</p>

Existing Conditions by Reach <i>Shoreline Inventory and Characterization Report</i>	Level of Degradation <i>PSNERP, 2010 and Shoreline Alterations Impacting Processes and Functions</i>	Foreseeable Development <i>See Chapter 3 of report for methodology</i>	Ecological Functions at Risk	SMP Provisions Addressing Functions at Risk: Protection (Proposed SMP regulations) Restoration Plan	Anticipated Future Performance
				<p>ICC 17.05A.100.G: Water-dependent industrial structures are allowed within required buffers provided mitigation is provided in the form of buffer enhancement (off-site mitigation is allowed). Industrial developments must minimize impacts on aquatic life. Adequate provisions to minimize the probability of spills must be made. Log storage must not be sited where dredging is required. <i>Hydrology, Vegetation and Habitat</i></p> <p>ICC 17.05A.110.D6 Disposal of dredged material shall be done only in approved upland disposal sites and shall not be allowed within critical areas or their buffers, except as part of an approved ecological restoration or enhancement project. <i>Hydrology, Water Quality, Vegetation and Habitat</i></p> <p>ICC 17.05A.110.D9 Proposals that cause substrate displacement or that involve substrate modification through dredging, trenching, or digging shall not be slowed in existing kelp or eelgrass beds without an approved mitigation plan. <i>Vegetation and Habitat</i></p> <p>ICC 17.05A.110 B. The location and design of new or replaced docks, piers, and floats shall minimize adverse effects to fish, shellfish, wildlife, and water quality and shall not result in a loss of shoreline ecological function.</p> <p>ICC 17.05A.100 D. Surface runoff from marina areas shall be controlled so that pollutants will not be carried into water bodies.</p> <p>ICC 17.05A.100 D. Fill shall only be allowed when necessary to support water dependent portions of the marina facility and not for parking.</p> <p>ICC 17.05A.100 D. Marinas shall be sited to minimize degradation of commercial and recreation shellfish beds, water quality, existing geohydraulic shoreline processes and shall be consistent with the Washington Department of Health's guidelines.</p> <p><b>Restoration</b> Project recently completed at Cornet Bay.</p>	

**Rural Conservancy**

<p><b>Summary of Conditions:</b></p> <p>Much of the East Whidbey Island shoreline is designated Rural Conservancy (RC). While rural in character, much of the shoreline of East Whidbey Island has low density residential development with associated clearing of vegetation and shoreline armoring.</p> <p>The Northeast Whidbey shorelines are unique due to the proximity to Deception Pass and the strong tidal currents that flow through the area as well as the Skagit River delta. Maximum fetch is from the south, resulting in primarily northward net shore-drift. The Oak Harbor and Penn Cove have variable shore orientation resulting in more complex patterns of net shore-drift. The Saratoga Passage and Holmes Harbor shorelines have a relatively long net shore drift cell with northward drift. Many bluff backed beaches throughout this area are feeder bluffs that supply sediment to down drift barrier beaches. Drift on the southern end of Possession Sound shorelines is northward and drift on the north end is southward resulting in a barrier beach created at Sandy Point (designated Shoreline Residential). Common shoreforms include bluff backed beaches, barrier beaches and embayments (excluding Possession Sound shorelines). Northwest Whidbey shorelines have the only rocky shoretypes found within the County (excluding the small islands).</p> <p>Marine shorelines along East Whidbey Island provide habitat for outmigrating anadromous salmonids as well as numerous other fish and wildlife species. Coastal lagoons are presumed to be providing habitat to juvenile salmonids and are located throughout the east side of the island. The nearshore areas of Northeast Whidbey Island provide significant juvenile salmon habitat due to migratory patterns extending out from the Skagit River estuary. A primary pathway of outmigration is Dugualla</p>	<p><b>PSNERP Degradation Scores:</b></p> <p>No degradation: 0%</p> <p>Least degraded: 52%</p> <p>Less degraded: 21%</p> <p>Moderately degraded: 17%</p> <p>More degraded: 9%</p> <p>Shorelines are primarily unmodified. Rural residential shoreline development is the primary use (occurring in 'Rural' zoning areas), with development occurring landward of high bank shorelines. Many Rural Conservancy designated areas are minimally altered within 200 feet or more of the shoreline.</p>	<p>Vacant lands: 91 ac (9%)</p> <p>Subdividable lands: 63 ac (6%)</p> <p>Potential residential units: 329</p> <p>New residential development and some potential housing redevelopment is anticipated resulting in an increase of septic systems and impervious cover accelerating stormwater runoff.</p>	<p><b>Water Quality:</b> Development reduces soil infiltration and increases potential for nitrogen, phosphorus, and hydrocarbons.</p> <p><b>Water and Sediment Movement:</b> Rapid erosion rates for bluff backed beaches and barrier beaches could be accelerated with faster stormwater flows.</p> <p><b>Habitat:</b> Direct impacts primarily limited to upland forest habitat; however land cover alterations and conversion to residential development may indirectly alter nearshore environments. Significant amounts of new residential shoreline armoring not expected.</p> <p><b>Shoreline vegetation:</b> Moderate risk. Riparian loss could occur thru potential future subdivision and infill residential development;</p>	<p><b>Protection</b> <b>Allowed uses and modifications:</b> <u>Residential Uses:</u> Single-family uses, accessory dwelling units (CUP), accessory structures, accessory beach access structures on private lots, and subdivisions <u>Boating and Related Facilities:</u> Public boat launches, private and public piers, floats and docks, float plane docks, and marinas (CUP) <u>Low intensity Agriculture:</u> CUP <u>Aquaculture (On-land):</u> CUP <u>Scientific, educational, historic, or archaeological uses:</u> Water-oriented and non-water-related uses (CUP) <u>Transportation:</u> Ferry terminals, new and existing public vehicular routes and facilities, bridges, and culverts <u>Utilities:</u> All types <u>Recreational Uses:</u> Marine campgrounds, marine trails, undeveloped natural reserves/parks, unpaved non-vehicular trails and paths, passive recreation, and public parks <u>Tourist Accommodations:</u> Hotels, motels, and inns (CUP) <u>Shoreline stabilization:</u> Structural (CUP) and non-structural and shoreline restoration/beach enhancement <u>Dikes, Grading, Dredging:</u> (CUP) For restoration or marina only <u>Groins and jetties</u> for restoration or enhancement of natural resources, as part of an approved marina, or for navigational purposes (CUP) <b>Prohibited uses and modifications:</b> <u>Residential Uses:</u> Mobile home parks and multi-family uses <u>Commercial Uses:</u> Except tourist accommodations <u>Industrial Uses:</u> All types <u>Boating &amp; Related Facilities:</u> Float plane bases <u>Resource Management and Extraction:</u> Mining <u>Transportation:</u> Parking lots and railroads <u>Recreational Uses:</u> Campgrounds, scenic overlooks, &amp; RV parks (i.e. private uses) <u>Groins and jetties</u></p> <p><b>Shoreline buffers, setbacks, maximum impervious surface and critical areas protection:</b> <u>Shoreline Marine Buffer:</u> 75 feet</p>	<p><b>No Cumulative Impacts</b></p> <p>Additional homes and redevelopment potential impacts with further clearing of vegetation.</p> <p>No cumulative impacts due to required marine shoreline and critical areas buffers, impervious cover restrictions on allowed uses and detailed standards to ensure only appropriate development and use will occur. Structural shoreline stabilization only allowed for necessary and imminent protection of existing structures and priority uses. Protections extending outside of</p>
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Existing Conditions by Reach <i>Shoreline Inventory and Characterization Report</i>	Level of Degradation <i>PSNERP, 2010 and Shoreline Alterations Impacting Processes and Functions</i>	Foreseeable Development <i>See Chapter 3 of report for methodology</i>	Ecological Functions at Risk	SMP Provisions Addressing Functions at Risk: Protection (Proposed SMP regulations) Restoration Plan	Anticipated Future Performance
<p>Bay; the bay is associated with Dugualla Lake, historically coastal marsh / lagoon area associated with the marine environment. Possession Sound shorelines provide juvenile rearing habitat for Chinook salmon. Dozens of stream mouths drain along the marine shoreline, however only one at the head of Dugualla Bay is documented as supporting coho salmon and cutthroat trout.</p> <p>The bedrock shorelines of Deception Pass support red sea urchin and Dungeness crab, and kelp and eelgrass beds. Oak Harbor and Penn Cove shorelines support forage fish and hardshell clam habitat. Holmes Harbor shorelines provide habitat for forage fish and pandalid shrimp habitat, including contiguous eelgrass habitat, and is mapped as a marine haulout area. Aquatic areas along Possession Sound provide habitat for waterfowl, forage fish, Dungeness crab, hard shell clams, pandalid shrimp, and gray whale (seasonal feeding habitat). Bald eagle nesting sites are mapped throughout East Whidbey shorelines.</p> <p>Penn Cove includes eight subtidal aquatic beds, including eelgrass, and supports a rich population of benthic invertebrates, including extensive mussel beds and numerous clam species. The cove's main importance is as a winter foraging area for aquatic birds. Penn Cove is a well known commercial shellfish growing area, primarily for mussels as well as oysters and hardshell clams.</p> <p>Land use along East Whidbey shorelines consist predominately of residential development with park areas located in Northeast Whidbey Island. Residences are located on both low-lying areas near the shore, and atop steep bluffs. Riparian conditions are less altered in areas behind coastal bluffs than those areas with low-bank residential development. Higher levels of shoreline armoring occur in low-bank areas than bluff backed beach reaches. Small areas of dense residential development occur at Snakelum Point and Race Lagoon. Snakelum Point is mapped as wetland and therefore no further development would likely be permitted. Homes along race lagoon generally provide some intact riparian vegetation adjacent to the lagoon that should be protected.</p> <p>Dugualla Lake (See Lakes table A-4) is being studied as a major restoration area, which, if restored, would be converted back to a tidal marsh.</p> <p><b>Indicators:</b>  Armoring (% of shoreline): 3.5 mi (10%)  Eelgrass: 13 occurrences and one large, contiguous eelgrass bed extending from Dugualla Bay south to the northern tip of Camano Island  Culverts: 75  Coastal Floodplain: 148 ac (15%)  Forest Cover: 426 ac (43%)  Impervious: 180 ac (18%)  Overwater Structures: 33  WDFW PHS – Priority Bird Species: Bald eagle (22 occurrences), western toad (1 occurrence) and a Great blue heron colony  Protected Lands: 59 ac (6%)  Riparian Vegetation: 65%  Road Lengths: 9.4 mi</p>			<p>development will maintain a riparian buffer, however will likely result in forest loss in areas outside of the buffer. Additional alteration associated with private shoreline access and view maintenance. Continued introduction and competition from invasive vegetation.</p> <p><b>Hydrology (Water Quantity):</b> Low to moderate risk. Substantial potential for additional shoreline residential development – conversion of forested land cover to residential has potential to impact hydrologic conditions. Additional conversion to agricultural use not anticipated.</p>	<p><u>Steep Slope Buffer:</u> 30 feet for slopes greater than 40%, 50 feet for exceptional feeder bluffs  <u>Shoreline Setback:</u> 25 feet  <u>Maximum Impervious Surface:</u> 10 percent  <u>Critical Area Buffers:</u> Landslide Hazard Area or Steep Slope (50-100 foot setback); Streams (50-150 foot buffer); Wetlands (20-300 foot buffer); Nesting sites and territory (200-1000 foot buffers); Washington Natural Heritage Program Areas (50 foot buffers)</p> <p><b>Additional standards</b>  ICC 11.03 (Stormwater and Surface Water) <i>Hydrology</i>  ICC 17.05A.090A: General Shoreline Development standards limiting alteration of natural drainage features and prohibiting release of solid and liquid waste. <i>Hydrology, Water Quality</i>  ICC 17.05A.100.J: New residential development and subdivisions must be designed and built in a manner that avoids the need for structural shore armoring. <i>Hydrology, Water and Sediment Movement</i>  ICC 17.05A.100.C: Beach access structures are prohibited on exceptional marine feeder bluffs. Beach access structures are not allowed if public beach access is available within 500 feet. <i>Hydrology, Water and Sediment Movement</i>  ICC 17.05A.100.J: Joint use beach access is preferred in areas near unstable slopes, feeder bluffs or other geologically hazardous areas. Must be located in a manner that does not require shoreline stabilization. <i>Hydrology</i>  ICC 17.05A.090D: Native vegetation within shoreline buffers must be maintained or, where lacking, must be enhanced. As a general guideline, the percentage of buffer to be enhanced should equal the percentage increase in impervious lot coverage on the site. <i>Shoreline Vegetation, Water Quality</i>  ICC 17.05A.090K: Native vegetation within shoreline jurisdiction should be retained. If removal is necessary, it should be minimized and mitigated. If non-native is removed, it should be replaced with native vegetation. Tree topping is prohibited. <i>Shoreline Vegetation</i>  ICC 17.05A.090H: Where buffer enhancement is required, buffer areas must be enhanced with native species, noxious weeds and impervious surfaces must be removed from the enhanced buffer, and 90% vegetative cover achieved within 5 years. <i>Habitat</i></p> <p><b>Restoration</b>  Opportunities include:  EW04 Remove tidegate, pump system, &amp;riprap to restore channel, tidal wetland, saltmarsh, and beach  EW07 Lagoon-Restore tidal flow to reestablish saltmarsh  EW07 Remove fill and roadway to restore tidal flow to lagoon.  EW08 Lagoon-restore tidal flow by widening partially filled inlet  See Aquatic for additional opportunities in adjacent waters</p>	<p>shoreline jurisdiction, including stormwater and surface water standards, provide additional protection.</p> <p>If Dugualla Lake is restored, shorelands may be better designated as Natural.</p>

Existing Conditions by Reach <i>Shoreline Inventory and Characterization Report</i>	Level of Degradation <i>PSNERP, 2010 and Shoreline Alterations Impacting Processes and Functions</i>	Foreseeable Development <i>See Chapter 3 of report for methodology</i>	Ecological Functions at Risk	SMP Provisions Addressing Functions at Risk: Protection (Proposed SMP regulations) Restoration Plan	Anticipated Future Performance
<p>Wetlands: 210 ac (21%)</p> <p><b>Reaches:</b>            Reach 2 (13 acres)            Reach 3 (14 acres)            Reach 4 (95 acres)            Reach 5 (24 acres)            Deception Pass Islands (Ben Ure Island) (10 acres)            Reach 6 (41 acres)            Reach 7 (165 acres)            Reach 8 (47 acres)            Reach 9 (6 acres)            Reach 10 (173 acres)            Reach 11 (76 acres)            Reach 12 (60 acres)            Reach 13 (141 acres)            Reach 14 (39 acres)            Reach 15 (88 acres)</p>					
<b>Shoreline Residential Designation</b>					
<p><b>Summary of Conditions:</b></p> <p>The Northeast Whidbey shorelines are unique due to the proximity to Deception Pass and the strong tidal currents that flow through the area as well as the Skagit River delta. Maximum fetch is from the south, resulting in primarily northward net shore-drift. The Oak Harbor and Penn Cove have variable shore orientation resulting in more complex patterns of net shore-drift. The Saratoga Passage and Holmes Harbor shorelines have a relatively long net shore drift cell with northward drift. Many bluff backed beaches throughout this area are feeder bluffs that supply sediment to down drift barrier beaches. Drift on the southern end of Possession Sound shorelines is northward and drift on the north end is southward resulting in a barrier beach created at Sandy Point. Common shoreforms include bluff backed beaches, barrier beaches and embayments (excluding Possession Sound shorelines). Northwest Whidbey shorelines have the only rocky shoretypes found within the County (excluding the small islands).</p> <p>Marine shorelines along East Whidbey Island provide habitat for outmigrating anadromous salmonids as well as numerous other fish and wildlife species. Coastal lagoons are presumed to be providing habitat to juvenile salmonids and are located throughout the east side of the island. The nearshore areas of Northeast Whidbey Island provide significant juvenile salmon habitat due to migratory patterns extending out from the Skagit River estuary. A primary pathway of outmigration is Dugualla Bay; the bay is associated with Dugualla Lake, historically coastal marsh / lagoon area associated with the marine environment. Possession Sound shorelines provide juvenile rearing habitat for Chinook salmon. Dozens of stream mouths drain along the marine shoreline, however only one at the head of Dugualla Bay is documented as supporting coho salmon and cutthroat trout.</p> <p>The bedrock shorelines of Deception Pass support red sea urchin and Dungeness crab, and kelp and eelgrass beds. Oak Harbor and Penn Cove shorelines support forage fish and</p>	<p><b>PSNERP Degradation Scores:</b></p> <p>No degradation: 0%            Least degraded: 44%            Less degraded: 33%            Moderately degraded: 8%            More degraded: 15%</p> <p>Small lot (~1/4 acre) residential shoreline development is the primary use. Significant areas of low bank development with existing hard armoring. Land cover substantially altered (limited forest cover) both within 'buffer' / shoreline setback areas and throughout shoreline jurisdiction.</p> <p>Also substantial areas of smaller lot residential development where shoreline functions remain more intact (limited armoring and development landward of moderate-bank shoreline).</p>	<p>Vacant lands: 18 ac (5%)            Subdividable lands: 24 ac (7%)            Potential residential units: 264</p> <p>Limited potential for infill of the Historic Beach Communities because they are primarily built-out. Potential for continuing redevelopment with larger building footprints and heights.</p> <p>Potential for single-family docks and piers in Holmes Harbor. Mariners' Cove and Sandy Point mostly or fully built out with docks/piers.</p>	<p><b>Water Quality:</b>            Development reduces soil infiltration and increases potential for nitrogen, phosphorus, and hydrocarbons.</p> <p><b>Water and Sediment Movement:</b> Rapid erosion rates for bluff backed beaches and barrier beaches could be accelerated with faster stormwater flows.</p> <p><b>Habitat:</b> Potential for limited number of new docks (Holmes Harbor) would create new overwater structures, degrading aquatic habitat. Aquatic habitats additionally threatened by water quality degradation – associated with untreated stormwater, failing and/or high density of septic systems, illegal dumping, and normal use of chemicals in residential landscaping. Restrictions on shoreline armoring should limit future degradation associated with these structures.</p> <p><b>Shoreline vegetation:</b> Low risk for impact to riparian habitat – some opportunity for additional impact through redevelopment and</p>	<p><b>Protection</b>  <b>Allowed uses and modifications:</b>  <u>Residential Uses:</u> Single-family and multi-family uses, accessory dwelling units, accessory structures, accessory beach access structures on private lots, and subdivisions  <u>Commercial Uses:</u> Water-oriented commercial, non-water-oriented commercial if part of a mixed-use development with a water-dependent use  <u>Boating and Related Facilities:</u> Boat launches, private and public piers, floats and docks, float plane bases and docks, and marinas (CUP)  <u>Scientific, educational, historic, or archaeological uses:</u> Water-oriented and non-water-related uses (CUP)  <u>Resource Management and Extraction:</u> Low intensity agriculture and forest practices  <u>Transportation:</u> Parking lots, new and existing vehicular routes and facilities, bridges, and culverts (CUP)  <u>Utilities:</u> All types some subject to a CUP  <u>Recreational Uses:</u> Marine campgrounds, marine trails, undeveloped natural reserves/parks, unpaved non-vehicular trails and paths, passive recreation, and public parks  <u>Tourist Accommodations:</u> Hotels &amp; motels (CUP), and inns  <u>Shoreline stabilization:</u> Structural (CUP) and non-structural and shoreline restoration/beach enhancement  <u>Dikes (CUP)</u>  <u>Grading and Dredging</u>  <u>Groins and jetties</u> for restoration or enhancement of natural resources, as part of an approved marina, or for navigational purposes (CUP)</p> <p><b>Prohibited uses and modifications:</b>  <u>Residential Uses:</u> Mobile home parks  <u>Commercial Uses:</u> Non-water-oriented commercial (except tourist accommodations)  <u>Industrial Uses:</u> All types  <u>Resource Management and Extraction:</u> Aquaculture on land activities/structures/processing and mining  <u>Transportation:</u> Ferry terminals and railroads  <u>Recreational Uses:</u> Campgrounds, scenic overlooks, &amp; RV parks (i.e. private uses)  <u>Groins and jetties</u> (except as permitted above)  <u>Dolphins</u></p> <p><b>Shoreline buffers, setbacks, maximum impervious surface and critical areas protection:</b>  <u>Shoreline Marine Buffer:</u> 30 feet; 0 feet for Mariner's Cove canal community; 20 ft. Historic Beach Community (SRHBC)</p>	<p><b>No Cumulative Impacts</b></p> <p>No cumulative impacts due to existing degraded ecological functions and potential for improvement as new development meets SMP buffer, setback, and use standards (including mitigation). Heights restricted to maximum 35 feet, but may partially block some existing views.</p> <p>Structural shoreline stabilization only allowed for necessary and imminent protection of existing structures. New residential development subject to buffers and setbacks to minimize adverse impacts. Impervious coverage restriction imposed to address stormwater impacts.</p>

Existing Conditions by Reach <i>Shoreline Inventory and Characterization Report</i>	Level of Degradation <i>PSNERP, 2010 and Shoreline Alterations Impacting Processes and Functions</i>	Foreseeable Development <i>See Chapter 3 of report for methodology</i>	Ecological Functions at Risk	SMP Provisions Addressing Functions at Risk: Protection (Proposed SMP regulations) Restoration Plan	Anticipated Future Performance
<p>hardshell clam habitat. Holmes Harbor shorelines provide habitat for forage fish and pandalid shrimp habitat, including contiguous eelgrass habitat, and is mapped as a marine haulout area. Aquatic areas along Possession Sound provide habitat for waterfowl, forage fish, Dungeness crab, hard shell clams, pandalid shrimp, and gray whale (seasonal feeding habitat). Bald eagle nesting sites are mapped throughout East Whidbey shorelines.</p> <p>Penn Cove includes eight subtidal aquatic beds, including eelgrass, and supports a rich population of benthic invertebrates, including extensive mussel beds and numerous clam species. The cove's main importance is as a winter foraging area for aquatic birds. Penn Cove is a well known commercial shellfish growing area, primarily for mussels as well as oysters and hardshell clams.</p> <p>Land use along East Whidbey shorelines consist predominately of residential development. Residences are located on both low-lying areas near the shore, and atop steep bluffs. Riparian conditions are less altered in areas behind coastal bluffs than those areas with low-bank residential development. Higher levels of shoreline armoring occur in low-bank areas than bluff backed beach reaches. Dense residential development occurs in the Mariner's Cove community, Harrington Lagoon, Sandy Point, and shorelines extending north and south from the Clinton Ferry terminal.</p> <p>Harrington Lagoon has high habitat value (documented Pigeon Guillemot nesting colonies, waterfowl concentration, herring spawning) although its shorelands are highly modified.</p> <p><b>Indicators:</b></p> <p>Armoring (% of shoreline): 6.0 mi (38%)</p> <p>Eelgrass: 6 occurrences and one large, contiguous eelgrass bed extending from Dugualla Bay south to the northern tip of Camano Island</p> <p>Culverts: 147</p> <p>Coastal Floodplain: 136 ac (38%)</p> <p>Forest Cover: 108 ac (30%)</p> <p>Impervious: 109 ac (31%)</p> <p>Overwater Structures: 76</p> <p>WDFW PHS – Priority Bird Species: Bald eagle (8 occurrences) and a Great blue heron colony</p> <p>Protected Lands: 1 ac (0.3%)</p> <p>Riparian Vegetation: 57%</p> <p>Road Lengths: 9.2 mi</p> <p>Wetlands: 24 ac (7%)</p> <p><b>Reaches:</b></p> <p>Reach 2 (14 acres)</p> <p>Reach 4 (55 acres)</p> <p>Reach 7 (31 acres)</p> <p>Reach 8 (7 acres)</p> <p>Reach 9 (17 acres)</p>			<p>encroachment from existing uses; however little intact shoreline vegetation remains. In pockets of Shoreline Residential areas where intermittent forest canopy remains intact, there is significant potential for loss – these areas include portions of the north shore of Penn Cove, areas surrounding Harrington Lagoon, south of Race Lagoon, and the east and west shores of Holmes Harbor.</p> <p><b>Hydrology (Water Quantity):</b> Moderate risk. Moderate potential for infill development within shoreline jurisdiction due to existing pattern (relatively few undeveloped lots).</p>	<p><b>Steep Slope Buffer:</b> 30 feet for steep slope buffers; 0 feet for Mariner's Cove canal community</p> <p><b>Shoreline Setback:</b> 45 feet, 40 feet for Mariner's Cove canal community; 10 ft. Historic Beach Community (SRHBC)</p> <p><b>Maximum Impervious Surface:</b> 30 percent; 40 percent for Mariner's Cove canal community</p> <p><b>Critical Area Buffers:</b> Landslide Hazard Area or Steep Slope (50-100 foot setback); Streams (50-150 foot buffer); Wetlands (20-300 foot buffer); Nesting sites and territory (200-1000 foot buffers); Washington Natural Heritage Program Areas (50 foot buffers)</p> <p><b>Additional standards</b></p> <p>ICC 11.03 (Stormwater and Surface Water) <i>Hydrology</i></p> <p>ICC 17.05A.090A: General Shoreline Development standards limiting alteration of natural drainage features and prohibiting release of solid and liquid waste. <i>Hydrology</i></p> <p>ICC 17.05A.100.J: New residential development and subdivisions must be designed and built in a manner that avoids the need for structural shore armoring. <i>Hydrology</i></p> <p>ICC 17.05A.100.C: Beach access structures are prohibited on exceptional marine feeder bluffs. Beach access structures are not allowed if public beach access is available within 500 feet. <i>Hydrology</i></p> <p>ICC 17.05A.100.J: Joint use beach access is preferred in areas near unstable slopes, feeder bluffs or other geologically hazardous areas. Must be located in a manner that does not require shoreline stabilization. <i>Hydrology</i></p> <p>ICC 17.05.A.090D: Native vegetation within shoreline buffers must be maintained or, where lacking, must be enhanced. As a general guideline, the percentage of buffer to be enhanced should equal the percentage increase in impervious lot coverage on the site. <i>Shoreline Vegetation</i></p> <p>ICC 17.05A.090K: Native vegetation within shoreline jurisdiction should be retained. If removal is necessary, it should be minimized and mitigated. If non-native is removed, it should be replaced with native vegetation. Tree topping is prohibited. <i>Shoreline Vegetation</i></p> <p>ICC 17.05A.090E and 17.05A.090G: Development in the setback or buffer for constrained lots is allowed provided buffer enhancement is installed. <i>Vegetation</i></p> <p>ICC 17.05A.090H: Where buffer enhancement is required, buffer areas must be enhanced with native species, noxious weeds and impervious surfaces must be removed from the enhanced buffer, and 90% vegetative cover achieved within 5 years. <i>Vegetation</i></p> <p>ICC 17.05A.090.E: Septic drainfields are required to be located landward of SFR whenever possible. <i>Habitat</i></p> <p>ICC 17.05A.100.J: Subdivisions and individual residential structures must be designed to ensure that surface runoff does not pollute adjacent waters or cause soil or beach erosion either during or after the construction phase. <i>Habitat</i></p> <p>ICC 17.05A.090.N: Herbicides, fungicides, pesticides, and fertilizers must not be applied within 25 feet of a shoreline of the state except by a qualified professional. <i>Habitat</i></p> <p>ICC 17.05A.090N: Low impact development techniques must be considered, materials that come into contact with water must be composed of non-toxic materials. <i>Habitat</i></p> <p>17.05A.100D: Private boat launches allowed only when public launches are unavailable within 1 mi. Rail and track systems preferred. Mooring buoys must avoid critical saltwater habitats. <i>Habitat</i></p> <p>17.05A.110B: Single-family residential docks, floats and piers approved only if existing shared, public or community facilities are shown to be inadequate and possibility of multi-owner/user has been investigated and is not feasible. Cumulative impacts on water circulation and quality and fish and wildlife must be assessed. New docks, piers and floats must not extend further waterward than 90 feet for single-use and 110 feet for shared use. New docks, piers and floats must have a maximum width of four feet. Existing docks, piers and floats may be replaced or reconstructed to the existing dimensions provided they include measures that increase light transmission, maximize the height of piers above water surface, reduce the overall number or size of piles, and enhance shoreline vegetation. Design standards must be met to limit impacts. For docks, piers and floats facing the canal in Mariner's Cove lagoon community, design standards must be consistent with an approved master plan. Prior to adoption of master plan, interim standards apply limiting expansion and length and a CUP is required. <i>Habitat</i></p> <p><b>Restoration</b></p>	

<b>Existing Conditions by Reach</b> <i>Shoreline Inventory and Characterization Report</i>	<b>Level of Degradation</b> <i>PSNERP, 2010 and Shoreline Alterations Impacting Processes and Functions</i>	<b>Foreseeable Development</b> <i>See Chapter 3 of report for methodology</i>	<b>Ecological Functions at Risk</b>	<b>SMP Provisions Addressing Functions at Risk:</b> Protection (Proposed SMP regulations) Restoration Plan	<b>Anticipated Future Performance</b>
Reach 10 (37 acres) Reach 11 (45 acres) Reach 12 (33 acres) Reach 13 (46 acres) Reach 15 (69 acres)				Opportunities include: EW11 Restore Lagoon EW11 Recreate inlet and restore portions of partially filled coastal wetland EW15 Remove portion of bulkhead and house immediately north of Glendale Creek to restore good salmon access EW15 Restore Deer Lake Creek mouth across backshore and bch - purchase one lot with small cabin See Aquatic for additional opportunities in adjacent waters	

Existing Conditions by Reach <i>Shoreline Inventory and Characterization Report</i>	Level of Degradation <i>PSNERP, 2010 and Shoreline Alterations Impacting Processes and Functions</i>	Foreseeable Development <i>See Chapter 3 of report for methodology</i>	Ecological Functions at Risk	SMP Provisions Addressing Functions at Risk: Protection (Proposed SMP regulations) Restoration Plan	Anticipated Future Performance
<b>Urban Conservancy</b>					
<p><b>Summary of Conditions:</b></p> <p>Geomorphic shoreline processes in Holmes Harbor (Reach 12) include two small areas of convergence at the end of the harbor from south-trending cells on the west and east shorelines. Geomorphic shoreline processes in Reach 15 are characterized by convergence of two drift cells at Sandy Point, including a very long north-trending cell extending from the south tip of Whidbey (Possession Point) along the entire Possession Sound shoreline.</p> <p>Documented aquatic habitat includes Dungeness crab, geoduck, kelp and eelgrass areas, offshore pandalid shrimp, and forage fish. WDFW maps all of the Holmes Harbor aquatic area as an estuary.</p> <p>Shoreline uses include a golf course in Holmes Harbor and residential development behind feeder bluffs in Holmes Harbor and near Sandy Point. Shoreline modifications associated with residential development include shoreline armoring.</p> <p><b>Indicators:</b></p> <p>Armoring (% of shoreline): &lt;0.1 mi (3%)</p> <p>Eelgrass: None mapped</p> <p>Culverts: 7</p> <p>Coastal Floodplain: 8 ac (24%)</p> <p>Forest Cover: 12 ac (37%)</p> <p>Impervious: 7 ac (22%)</p> <p>Overwater Structures: 1</p> <p>WDFW PHS – Priority Bird Species: None mapped</p> <p>Protected Lands: 7 ac (21%)</p> <p>Riparian Vegetation: 66%</p> <p>Road Lengths: 0.5 mi</p> <p>Wetlands: 9 ac (28%)</p> <p><b>Reaches:</b></p> <p>Reach 12 (28 acres)</p> <p>Reach 15 (5 acres)</p>	<p><b>PSNERP Degradation Scores:</b></p> <p>No degradation: 0%</p> <p>Least degraded: 93%</p> <p>Less degraded: 7%</p> <p>Moderately degraded: 0%</p> <p>More degraded: 0%</p> <p>Small lot (~1/4 acre or less) residential shoreline development is the primary use, along with water dependent public access uses along the Freeland shoreline. Significant areas of low bank development with existing hard armoring. Land cover substantially altered (limited forest cover) both within 'buffer' / shoreline setback areas and throughout shoreline jurisdiction.</p>	<p>Vacant: 1 ac (4%)</p> <p>Subdividable lands: 8 ac (23%)</p> <p>Potential residential units: 69</p>	<p><b>Water Quality:</b> Development reduces soil infiltration and increases potential for nitrogen, phosphorus, and hydrocarbons.</p> <p><b>Water and Sediment Movement:</b> Rapid erosion rates for bluff backed beaches and barrier beaches could be accelerated with faster stormwater flows.</p> <p><b>Habitat:</b> Potential for limited number of new docks would create new overwater structures, degrading aquatic habitat. Aquatic habitats additionally threatened by water quality degradation – associated with untreated stormwater, failing and/or high density of septic systems, illegal dumping, and normal use of chemicals in residential landscaping. Restrictions on shoreline armoring should limit future degradation associated with these structures.</p> <p><b>Shoreline vegetation:</b> Moderate risk for impact to riparian habitat – some opportunity for additional impact through redevelopment and encroachment from existing uses; however little intact shoreline vegetation remains.</p> <p><b>Hydrology (Water Quantity):</b> Moderate risk. Limited potential for new development within shoreline jurisdiction due to existing pattern (relatively few undeveloped lots).</p>	<p><b>Protection</b> <b>Allowed uses and modifications:</b></p> <p><u>Residential Uses:</u> Single-family and multi-family uses, accessory dwelling units, accessory structures, accessory beach access structures on private lots, and subdivisions</p> <p><u>Commercial Uses:</u> Water-oriented commercial, non-water-oriented commercial if part of a mixed-use development with a water-dependent use</p> <p><u>Boating and Related Facilities:</u> Boat launches, private and public piers, floats and docks, float plane bases and docks, and marinas (CUP)</p> <p><u>Scientific, educational, historic, or archaeological uses:</u> Water-oriented and non-water-related uses (CUP)</p> <p><u>Resource Management and Extraction:</u> Low intensity agriculture and forest practices</p> <p><u>Transportation:</u> Parking lots, new and existing vehicular routes and facilities, bridges, and culverts (CUP)</p> <p><u>Utilities:</u> All types some subject to a CUP</p> <p><u>Recreational Uses:</u> Marine campgrounds, marine trails, undeveloped natural reserves/parks, unpaved non-vehicular trails and paths, passive recreation, and public parks</p> <p><u>Tourist Accommodations:</u> Hotels &amp; motels (CUP), and inns</p> <p><u>Shoreline stabilization:</u> Structural (CUP) and non-structural and shoreline restoration/beach enhancement</p> <p><u>Dikes (CUP)</u></p> <p><u>Grading and Dredging</u></p> <p><u>Groins and jetties</u> for restoration or enhancement of natural resources, as part of an approved marina, or for navigational purposes (CUP)</p> <p><b>Prohibited uses and modifications:</b></p> <p><u>Residential Uses:</u> Mobile home parks</p> <p><u>Commercial Uses:</u> Non-water-oriented commercial (except tourist accommodations)</p> <p><u>Industrial Uses:</u> All types</p> <p><u>Resource Management and Extraction:</u> Aquaculture on land activities/structures/processing and mining</p> <p><u>Transportation:</u> Ferry terminals and railroads</p> <p><u>Recreational Uses:</u> Campgrounds, scenic overlooks, &amp; RV parks (i.e. private uses)</p> <p><u>Groins and jetties</u> (except as permitted above)</p> <p><u>Dolphins</u></p> <p><b>Shoreline buffers, setbacks, maximum impervious surface and critical areas protection:</b></p> <p><u>Shoreline Marine Buffer:</u> 50 feet</p> <p><u>Steep Slope Buffer:</u> 30 feet for slopes greater than 40%, 50 feet for exceptional feeder bluffs</p> <p><u>Shoreline Setback:</u> 25 feet</p> <p><u>Maximum Impervious Surface:</u> 10 percent</p> <p><u>Critical Area Buffers:</u> Landslide Hazard Area or Steep Slope (50-100 foot setback); Streams (50-150 foot buffer); Wetlands (20-300 foot buffer); Nesting sites and territory (200-1000 foot buffers); Washington Natural Heritage Program Areas (50 foot buffers)</p> <p><b>Additional standards</b></p> <p>ICC 11.03 (Stormwater and Surface Water) <i>Hydrology, Water Quality</i></p> <p>ICC 17.05A.090A: General Shoreline Development standards limiting alteration of natural drainage features and prohibiting release of solid and liquid waste. <i>Hydrology, Water Quality</i></p> <p>ICC 17.05.A.090D: Native vegetation within shoreline buffers must be maintained or, where lacking, must be enhanced. As a general guideline, the percentage of buffer to be enhanced should equal the percentage increase in impervious lot coverage on the site. <i>Shoreline Vegetation</i></p> <p>ICC 17.05A.090E and 17.05A.090G: Development in the setback or buffer for constrained lots is allowed provided buffer enhancement is installed. <i>Vegetation</i></p> <p>ICC 17.05A.090H: Where buffer enhancement is required, buffer areas must be enhanced with native species, noxious weeds and impervious surfaces must be removed from the enhanced buffer, and 90% vegetative cover achieved within 5 years. <i>Vegetation</i></p> <p>ICC 17.05A.090.E: Septic drainfields are required to be located landward of SFR whenever possible. <i>Habitat</i></p>	<p><b>No Cumulative Impacts</b></p> <p>Limited potential for infill of the Historic Beach Communities because they are primarily built-out. Potential for continuing redevelopment with larger building footprints and heights. Impervious coverage restriction imposed to address stormwater impacts.</p> <p>No cumulative impacts due to required marine shoreline and critical areas buffers, restrictions on allowed uses and detailed standards to ensure only appropriate development and use will occur. Structural shoreline stabilization only allowed for necessary and imminent protection of existing structures. Protections extending outside of shoreline jurisdiction, including stormwater and surface water standards, provide additional protection.</p>

Existing Conditions by Reach <i>Shoreline Inventory and Characterization Report</i>	Level of Degradation <i>PSNERP, 2010 and Shoreline Alterations Impacting Processes and Functions</i>	Foreseeable Development <i>See Chapter 3 of report for methodology</i>	Ecological Functions at Risk	SMP Provisions Addressing Functions at Risk: Protection (Proposed SMP regulations) Restoration Plan	Anticipated Future Performance
				<p>ICC 17.05A.100.J: Subdivisions and individual residential structures must be designed to ensure that surface runoff does not pollute adjacent waters or cause soil or beach erosion either during or after the construction phase. <i>Habitat</i></p> <p>ICC 17.05A.090.N: Herbicides, fungicides, pesticides, and fertilizers must not be applied within 25 feet of a shoreline of the state except by a qualified professional. <i>Habitat</i></p> <p>ICC 17.05A.090N: Low impact development techniques must be considered, materials that come into contact with water must be composed of non-toxic materials. <i>Habitat</i></p> <p>17.05A.100D: Private boat launches allowed only when public launches are unavailable within 1 mi. Rail and track systems preferred. Mooring buoys must avoid critical saltwater habitats. <i>Habitat</i></p> <p>17.05A.110B: Single-family residential docks, floats and piers approved only if existing shared, public or community facilities are shown to be inadequate and possibility of multi-owner/user has been investigated and is not feasible. Cumulative impacts on water circulation and quality and fish and wildlife must be assessed. New docks, piers and floats must not extend further waterward than 90 feet for single-use and 110 feet for shared use. New docks, piers and floats must have a maximum width of four feet. Existing docks, piers and floats may be replaced or reconstructed to the existing dimensions provided they include measures that increase light transmission, maximize the height of piers above water surface, reduce the overall number or size of piles, and enhance shoreline vegetation. Design standards must be met to limit impacts. <i>Habitat</i></p> <p>ICC 17.05A.090N: Low impact development techniques must be considered, materials that come into contact with water must be composed of non-toxic materials. <i>Water Quality, Habitat</i></p> <p>ICC 17.05A.110. A. 1d: New development that would require shoreline stabilization which causes significant impacts to adjacent or down-current properties and shoreline areas is prohibited. <i>Water and Sediment Movement</i></p> <p>ICC 17.05A.110.A. 1h: Structural shoreline stabilization is prohibited for the purposes of leveling or extending property or creating or preserving residential lawns, yards, or landscaping. <i>Habitat, Water Quality, Water and Sediment Movement</i></p> <p><b>Restoration</b> Opportunity: EW15 Remove failing wooden bulkhead</p>	