

ATTACHMENT A: FINDINGS AND CONCLUSIONS COMPREHENSIVE UPDATE TO THE PIERCE COUNTY SHORELINE MASTER PROGRAM

SMP Submittal accepted December 18, 2015 - Ordinance No. 2013-45s4
Prepared by Kim Van Zwalenburg on May 7, 2018

INTRODUCTION

Ecology's Findings and Conclusions (Attachment A), including reference to Attachment B (Required Changes) and Attachment C (Recommended Changes), provide the factual basis for the Department of Ecology's (Ecology) decision on the Pierce County (County) comprehensively updated Shoreline Master Program (SMP). The document is divided into three sections providing an Introduction; Findings of Fact regarding the submittal, amendment history, and local and state review; and Conclusions.

Description of Proposed Amendment

Pierce County has submitted a comprehensive update to their Shoreline Master Program (SMP) for review and approval by Ecology. The updated master program will regulate approximately 225 miles of marine shoreline and 880 miles of freshwater shoreline throughout the unincorporated areas of the County. It contains locally tailored shoreline management policies, regulations, environment designations, a designation map folio and administrative provisions, as well as Title 18E Pierce County Code (PCC) Development Regulations - Critical Areas adopted by reference as part of the SMP. Additional reports and supporting information and analyses were included in the County's submittal and, as noted below, have been considered by Ecology during its review.

In addition, because of the lengthy process at both the local and state levels to conclude the comprehensive update, the statutory periodic review deadline is nearing. Pierce County is required on or before June 30, 2019, and every eight years thereafter, to review and, if necessary, revise their master program. Proposed changes have been incorporated into this decision to address this requirement.

Need for the amendment

The proposed amendment is needed to comply with the statutory requirement for a comprehensive update to the County's SMP, consistent with the SMP Guidelines in WAC 173-26. The update also ensures the SMP is consistent with land use management policies provided by the County's Comprehensive Plan and environmental protections provided by the County's Critical Areas Code.

The County currently manages shorelines under an SMP originally adopted and approved in 1975. A number of relatively minor amendments were adopted over the years but the County's SMP has never been comprehensively revised. The record submitted by the County to Ecology as part of the SMP update, including Ordinance No. 2013-45s4, reports, analyses and local approval materials, provides information supporting the need for the proposed amendment.

SMP provisions to be changed by the amendment as proposed

The proposed SMP would entirely replace the County's existing master program, including policies and regulations and the shoreline environment designation maps. The updated SMP establishes

shoreline buffers on all shorelines, except Lake Tapps which has a residential setback, regulates critical areas within shoreline jurisdiction by adopting the County’s Critical Areas Ordinance by reference, and includes requirements for mitigation for unavoidable impacts.

FINDINGS OF FACT

Amendment History, Local Review Process

The County initiated the local planning process in 2006 by entering into a grant agreement with Ecology (#G0700001). The timeline below outlines the progress and challenges during the local process.

2007: Draft Inventory & Characterization Report including a map folio is developed by a consultant with input from a Shoreline Technical Committee and issued in October. Two community open houses are held on December 3rd and 4th, in Gig Harbor and Puyallup.

2008: Shoreline Citizens Advisory Committee is established by County Council Resolution No. R2008-12s. The committee meets through February 2010 providing input on draft policies and regulations and early environment designation maps.¹

2009: The national economic downturn significantly impacts the County’s budget and staffing. Grant funding ends June 30th without development of a complete draft SMP.

2010: A second grant (#G1000552) funds a revised Restoration Plan and an independent analysis of the draft marine shoreline environment designation maps. Due to staffing constraints, the County is unable to complete a draft SMP or Cumulative Impacts Analysis (CIA).

2012: The County budget allows for staff and resources to restart the SMP update. A complete draft SMP with environment designation maps is developed. Public meetings are held: June 21, July 11 and July 16, followed by Planning Commission hearings July 18 and 25, August 1, 15, 22, and 29. The draft SMP is forwarded to County Council in October. The County’s record indicates the Washington State Department of Commerce was notified October 18, 2012 of proposed SMP adoption.

2013: Ecology sends a comment letter to the County Council on February 2, 2013. The SMP is revised by staff March – June in meetings with Ecology. Additional meetings are held with a County Council Subcommittee and County and Ecology staff. Planning Commission hearings are held August – October to address substantive changes to the SMP. A draft Cumulative Impacts Analysis is produced in September and the revised SMP is sent back to Council in October.

2014: County Council Community Development Committee (CDC) hearings are held March - April in Lake Tapps, Parkland and Purdy. Between April and July, Council members host topical meetings, between Ecology and constituents, on aquaculture and on shoreline buffers for lakes Tapps and Spanaway. County Council CDC adopts 18 amendments, many specific to aquaculture, July – September.

2015: Ecology submits a letter January 30, 2015 expressing concerns about the increased restrictions on aquaculture and noting the need for the County to provide a factual foundation in the record.

¹ The committee reconvened for two meetings in 2012 to review a staff draft SMP.

January – February, CDC hearings are held at Lake Tapps, Parkland and Purdy. On March 2nd, the CDC adopts eight amendments, including prohibitions on dredge disposal and commercial aquaculture in the Nisqually Reach Aquatic Reserve, and forwards the SMP to full Council. On March 10, 2015, the County Council passes Ordinance 2013-45s4 with five additional amendments and authorizes staff to forward the proposed SMP to Ecology.

Inventory and Characterization (WAC 173-26-201)

Documentation of current shoreline conditions is a key part of the SMP development process and meeting the requirement to address the no net loss standard of the SMP Guidelines (WAC 173-26-186). The County hired a consultant who produced the Shoreline Inventory and Characterization Report, June 2009 (ICR). The report documents existing shoreline conditions and helped inform development of the County’s SMP, including environment designations, policies and use regulations.

Table 9-1. Shorelines identified in Pierce County, Washington

Type of Shoreline	Number of Shoreline Waterbodies / Management Units (MU)	Number of Reaches Inventoried	Total Shoreline Miles in the County	% of Total Shoreline Miles in Pierce County
Marine/nearshore	7 MU	46	180	26 %
Freshwater – Rivers and Streams	70 rivers	137	375	53%
Freshwater – Lakes and Reservoirs	40 lakes	47	145	21%
Freshwater, subtotal	110 rivers and lakes	184	520	74%
Grand Total		230	700	100%

The above table from the ICR shows the approximate breakdown between water types throughout the county. Shoreline miles shown in the table underrepresent the County’s current mileage estimates resulting from improved mapping. The overall totals are now approximately 881 miles of freshwater shorelines and 224 miles of marine shoreline.

Table 9-2. Waterbodies newly identified as shorelines in Pierce County, Washington

Water Resources Inventory Area (WRIA)	Number of Newly Identified Waterbodies	Shoreline Miles for New Waterbodies
10	31 (Total) 27 – Rivers / streams 4 – Lakes	64.1 (miles) 52.6 – Rivers / streams 11.5 – Lakes
11	11 (Total) 4 – Rivers / streams 7 – Lakes	10.9 (miles) 4.3 – Rivers / streams 6.6 – Lakes
12	None	None
15	2 (Total) 0 – Rivers / streams 2 – Lakes	2.8 (Total) 0 – Rivers / streams 2.8 – Lakes
Total	44	78 miles

Table 9-2 shows the number of new waterbodies, not listed in the 1975 SMP, that were analyzed in the ICR. The number of “new” rivers and streams in WRIA 10 is due to the identification of numerous shoreline waterbodies in the upper Puyallup River watershed located within the national forest. Shoreline mapping for first generation SMPs stopped at federal ownership boundaries.

The County’s ICR and companion map portfolio provides an ecosystem-wide (watershed) and reach-level analysis (reach sheets) of existing shoreline environmental and land use conditions organized by Water Resource Inventory Area (WRIA). Summary descriptions, of existing shoreline conditions within Pierce County are provided below, organized by WRIA consistent with the report.

WRIA 10, Puyallup/White River Watershed: This WRIA contains approximately 49% of the linear shoreline in the County and more shoreline waterbodies than any of the other watersheds. The majority are freshwater systems including 47 rivers and streams and 7 lakes stretching from Mount Rainier National Park to Puget Sound. There is a small segment of marine shoreline in the Brown’s Point/Dash Point area. The reservations of the Muckleshoot Tribe, located along the White River, and the Puyallup Tribe along the lower end of the Puyallup River are both in this watershed. Shorelines of statewide significance include the Puyallup and White rivers and Lake Tapps, as well as marine waters seaward of extreme low tide.

Major alterations within the watershed include Mud Mountain Dam and water diversion facilities for Lake Tapps on the White River and levees along much of the Puyallup River and the Carbon. Despite these alterations, the watershed contains significant habitat for anadromous fish.

Along the rivers and streams, the degree of shoreline modification generally increases as you move downstream with Mount Rainier National Park and the surrounding forest resource lands transitioning to areas dominated by agricultural activities and small towns. The agricultural areas transition into the urbanizing and urbanized areas of the lower Puyallup river valley. Much of the Puyallup River and significant portions of the White and Carbon rivers have been disconnected from their historic floodplain, and riparian areas are limited along the lower reaches due to levees and development activities. Channel aggradation from increasing bed loads has reduced channel capacity over time. Floodplain management issues are significant in the lower Puyallup River valley, and flood hazards,

including channel migration, exist throughout the watershed. Water quality impairments are known in both the Puyallup and White rivers.

There are seven shoreline lakes in the watershed, with Lake Tapps being the largest and most developed. Created for power generation in the early 1900's, the lake is now largely surrounded by shoreline development, most of it single-family residential lots. Operation of the reservoir for power generation ended in 2004 and Puget Sound Energy ultimately sold the lake and facilities to Cascade Water Alliance. The lake is now managed for municipal water supply and recreation. Shoreline modifications including bulkheads and docks are prevalent around the lake. Rhodes Lake has no direct shoreline development but is surrounded by large suburban residential tracts. The other lakes in the watershed are lightly developed if at all, usually with a rural character including large residential lots and agricultural activities.

The marine shoreline, all located within Tacoma's designated Urban Growth Area, is largely developed with moderate density single family residential structures, including many located on/over the beach. There are few residential docks but much of the shoreline has been bulkheaded.

WRIA 11, Nisqually River Watershed: This WRIA contains approximately 21% of the County's shoreline mileage including 17 lakes and 16 rivers and streams. Shorelines of statewide significance include the Nisqually River delta, the Nisqually River and Alder Lake. The watershed stretches from Mount Rainier National Park at the headwaters to the Billy Frank Jr. Nisqually Wildlife Refuge at the estuary. The Nisqually Indian Reservation (Thurston County) and portions of Joint Base Lewis-McChord are also located in the basin. Along with the national park, neither the Reservation nor the military base are within shoreline jurisdiction of the SMP.

Large scale modifications in the watershed occur on the Nisqually River including two hydroelectric dams (La Grande and Alder), a water diversion and flume in Thurston County for the Centralia Power Canal, and levees and revetments, particularly along the lower reaches of the river. Flood hazards including channel migration are common along the mainstem of the Nisqually. Numerous anadromous fish runs are present throughout the basin as well as other priority habitats and species. There are identified water quality impairments, but the water quality is generally considered good. Land uses are largely forest resources, agriculture and rural residential development. A great deal of restoration and conservation work has and is occurring throughout the watershed, including the large estuary restoration at the wildlife refuge, and work along Ohop Creek and the Mashel River.

There are numerous lakes in this watershed including the two reservoirs located behind the dams. Most of the lakes are located on glacial terraces and lightly developed with forestry, agriculture and rural residential uses. Lake Tanwax is the most heavily developed with single-family residential homes and docks and recreational facilities.

WRIA 12, Chambers/Clover Creek Watershed: This is the smallest and most urbanized of the watersheds, with the majority located within the incorporated cities of Dupont, Steilacoom, Lakewood, Tacoma and University Place or designated Urban Growth Areas. There are two lakes and three streams, totaling approximately 16 miles, located in County shoreline jurisdiction. Water quality degradation, often resulting from stormwater impacts, is an issue throughout the basin as are low summer flows. Water quality is also impacted by on-site sewage disposal systems in the eastern portion of the basin.

All three creeks, Spanaway, Clover and Chambers, are heavily impacted by the urbanized nature of the watershed with impaired water quality, low summer flows and stormwater-driven flashy winter flows. All have been significantly modified with channelized segments, bank hardening, culverts and limited riparian habitat. Because of these impairments, anadromous fish runs have been impacted.

Only a small portion of American Lake, containing Washington National Guard's Camp Murray, is located within County jurisdiction with the remainder of the lake either in the City of Lakewood or Joint Base Lewis-McChord. This is a Shoreline of Statewide Significance, and water quality and shoreline modifications are the biggest impairments to the lake. Spanaway Lake is entirely within the County and, except for the large park, almost fully developed with residential uses including numerous docks and bulkheads.

WRIA 15, Kitsap Peninsula Watershed: This watershed includes the Gig Harbor and Key peninsulas and numerous islands. Approximately 27% of Pierce County shorelines (over 200 miles) are located in this watershed, the majority of it along marine waters. Freshwater shorelines include short segments along two streams (Minter and Rocky creeks) and nine lakes. Major alterations in the watershed are largely associated with residential land uses along marine shorelines, including hardened shorelines interrupting sediment movement, removal of riparian vegetation and water quality impacts.

Nearly all the County's marine shorelines are located in this watershed including the eastern portion of Case and Carr inlets, the western portions of Colvos Passage and the Tacoma Narrows, Key Peninsula, Gig Harbor Peninsula and a number of islands including Fox Island, McNeil Island and Anderson and Ketron islands. These shorelines are primarily developed with residential uses at varying levels of intensity/density. Water quality impairments, associated with urban areas, agricultural activities, and overwater structures, have been identified in a number of bays. There are numerous marine mammal haulouts, waterfowl concentrations particularly in those areas with mud or sand flats, and documented forage fish spawning, eelgrass, and shellfish beds. The documentation in the characterization report is not expansive, but notes the area also supports commercial shellfish aquaculture.

Non-residential development is limited in scale and includes scattered commercial areas supporting local communities, such as Purdy, small marinas, and Pierce County ferry dock facilities. More sheltered areas such as the northern shorelines of Fox Island and Gig Harbor Bay, Wollochet Bay and Horsehead Bay have densely developed residential shorelines including long stretches of hardened/bulkheaded shoreline, a lack of riparian vegetation and numerous residential piers, docks and other overwater structures.

There are nine shoreline lakes, two of which (Florence and Josephine lakes) are located on Anderson Island and characterized by low to moderate residential development and associated docks. Butterworth Reservoir, on McNeil Island, is largely undeveloped and is the primary drinking water source for the corrections center and associated residential units. Bay, Carney and Jackson lakes all have low levels of residential development and have public access for fishing via Department of Fish and Wildlife boat ramps. Modifications are limited and significant portions of each lake remain undeveloped. Crescent, Minterwood and Stansberry lakes are largely developed with residential uses including a moderate number of associated docks on Crescent Lake. Crescent Lake supports recreational fisheries though publicly owned parcels are currently undeveloped except for a boat launch. Access to Minterwood (which is a private reservoir) and Stansberry lakes is limited to the surrounding subdivisions.

WRIA 26, Cowlitz: Only a small portion of the upper watershed, located entirely within Mount Rainier National Park, is in Pierce County. Therefore, there are no shoreline streams within Pierce County in this WRIA.

***Finding:** Ecology finds that the Inventory & Characterization Report adequately inventoried and analyzed the current conditions of the shorelines located in Pierce County. The report synthesized existing information and was used to inform the master program update as well as provide a basis for future protection and restoration opportunities in county shoreline jurisdiction (WAC 173-26-201(3)(c)).*

Shoreline Jurisdiction and Shoreline Environment Designations (WAC 173-26-211)

The extent of shoreline jurisdiction is defined in RCW 90.58.030(2). Pierce County (18S.10.030 and Chapter 18S.70 – Appendix E) uses the minimum jurisdiction allowed by statute, including the bedlands and water areas of all shoreline waterbodies, shorelands located within 200 feet of the Ordinary High Water Mark (OHWM), the designated floodway and contiguous floodplain landward 200 feet from such floodways, and all associated wetlands and river deltas.

Shoreline jurisdiction is not being extended to include buffers necessary to protect critical areas. The SMP does not include lands within Rainier National Park (RCW 37.08.200) or Joint Base Lewis-McChord (RCW 37.16.180) which have been ceded to the federal government of the United States nor any tribal lands on the reservations or lands held in trust by the federal government on behalf of the tribes.

Local governments are required to classify shoreline areas into shoreline environment designations (SED) based on the existing use pattern, biological and physical character of the shoreline, and the goals and aspirations of the community as expressed in the comprehensive plan. The Inventory and Characterization Report is used to determine the relative degree of impairment and biophysical capabilities and limitations for individual shoreline reaches. Based on this assessment, along with consideration of anticipated future development, zoning and other regulatory overlays, jurisdictions may apply the designation criteria provided in WAC 173-26-211 or develop their own tailored designation criteria.

Pierce County's original SMP had four designations: Urban, Rural, Conservancy and Natural. The updated SMP proposes to use High Intensity, Residential, Conservancy, Natural and two Aquatic designations: Aquatic Freshwater and Aquatic Marine. Table 4-1 of the Cumulative Impacts Analysis, shown below, compares the percentage of shoreline by SED under the existing and proposed SMPs. The analysis looked at the proposed 2012 SED maps which were revised slightly by the Planning Commission in October 2013.

Table 4-1. Existing and Proposed Designations for Pierce County Shorelines¹²

Existing Designation 1992 SMP in Effect	Percent of Shoreline	Proposed Designation 2012 Draft SMP Title 18S	Percent of Shoreline
Marine Shorelines			
Natural	16	Natural	21
Conservancy	34	Conservancy	37
Rural	19	Residential	42
Rural Residential	28		
Urban	3	High Intensity	0.9
Freshwater Shorelines (Rivers, Streams, Lakes)			
Natural	5	Natural	53
Conservancy	56	Conservancy	35
Rural	18	Residential	12
Rural Residential	13		
Urban	8	High Intensity	0.9

¹ The waterbody is not included in the acreage values. These reflect only shorelands (upland areas and associated wetlands). All water areas below the ordinary high water mark are proposed to be designated Aquatic. Associated wetland areas were approximated using existing data and GIS layers indicating potential wetland areas.

² Calculated by taking the acres in one designation, dividing it by the total acres in shoreline jurisdiction and multiplying by 100 to get the percentage value.

Finding: Ecology finds that the County SMP defines shoreline jurisdiction consistent with the Act and the record sufficiently documents the basis for assigning shoreline environment designations. For each environment designation, the SMP includes a purpose statement, designation criteria, and management policies as required by WAC 173-26-211(4)(a). Ecology finds that, subject to required changes in Attachment B, the County’s shorelines are adequately identified in 18S.70 Appendix E and mapped in 18S.70 Appendix H the Shoreline Master Program Environment Designations map.

General Master Program Provisions (WAC 173-26-221)

The SMP Guidelines in WAC 173-26-221 list general provisions that are intended to apply broadly to all of types of shoreline development regulated by master programs. Pierce County’s general provisions are located primarily in the General Policies and Regulations (Chapter 18S.30). This section includes subsections that address Archaeological, Cultural and Historic Resources, Shoreline Access (public access); Excavation, Dredging, Filling and Grading; Ecological Protection (which includes reference to critical areas) and Water Quality, Stormwater and Nonpoint Pollution. The county also includes two unique sections on Scenic Protection and Compatibility and Water Oriented Development.

Primary changes from the existing SMP include ecological protection provisions that require all development go through mitigation sequencing and provisions to ensure shoreline vegetation is conserved or restored where feasible. Vegetation conservation provisions apply county-wide and a vegetation planting plan is required when vegetation removal exceeds defined removal allowances.

Shoreline buffers are applied by environment designation along all shorelines: Residential²- 75 feet, Conservancy – 100 feet and Natural – 150 feet shoreline environments. The High Intensity designation has a buffer of 50 feet. Impervious surfaces are limited to 1/3 of the parcel within shoreline jurisdiction except that new lots in a Natural or Conservancy environment are limited to

² Lake Tapps has a setback of 50 feet in the Residential SED.

10%. The SMP includes regulations that allow for modified buffers in specific circumstances, consistent with mitigation sequencing.

Critical area regulations contained in Title 18E Pierce County Code (PCC) for all designated critical areas are adopted by reference with exceptions (see 18S.10.010 and 18S.30.030 D.1). Where critical area and shoreline buffers overlap, the most restrictive buffer requirement applies. The regulations include allowances, up to 25% of the buffer width, for buffer modifications without a shoreline variance.

Finding: Ecology finds that, subject to required changes in Attachment B, the general policies and regulations are consistent with WAC 173-26-221.

Shoreline Modifications (WAC 173-26-231)

The SMP Guidelines in WAC 173-26-231 define “shoreline modifications” as: “...generally related to construction of physical elements such as a pier, floating structure, shoreline stabilization, dredged basin, or fill...” WAC 173-26-231(2)(b) states (as a general principle) that master programs should: “Reduce the adverse effects of shoreline modifications, and as much as possible, limit shoreline modifications in number and extent.” These shoreline modification principles and standards contained in WAC 173-26-231 are reinforced through associated requirements for mitigation sequencing (WAC 173-26-201(2)(e) and the no net loss of shoreline ecological function standard (WAC 173-26-186).

Pierce County’s SMP regulates shoreline modifications in Chapter 18S.30 including 18S.30.040 Excavation, Dredging, Filling and Grading; 18S.30.070 Shoreline Stabilization; and 18S.30.080 Shoreline Modifications. Additional modifications (as defined by the SMP Guidelines) are addressed in Chapter 18S.40 in the following sections: 18S.40.110 Restoration and Enhancement and 18S.40.140 Water Access Facilities which combines the SMP Guidelines boating facilities and piers and docks sections into one section “intended to manage development of facilities that support water dependent uses.” See discussions on dredge disposal and water access facilities below.

Finding: Ecology finds that, subject to required changes in Attachment B, the shoreline modification policies and regulations are consistent with WAC 173-26-221.

Shoreline Use Provisions (WAC 173-26-241)

The SMP Guidelines in WAC 173-26-241 are intended to both recognize existing uses and ensure that future development will be appropriately managed consistent with the underlying policies of the SMA. Avoidance of use conflicts through coordinated planning and prioritization of “preferred” shoreline uses is a primary tenant of the SMA (RCW 90.58.020). Updates to local SMPs are intended to support these goals through development of appropriate master program provisions, based on the type and scale of future shoreline development anticipated within a particular jurisdiction.

Pierce County regulates shoreline uses in Chapter 18S.40. Consistent with WAC 173-26-186(5), the County SMP reflects the principle that the regulation of private property needs to be consistent with all relevant constitutional and other legal limitations. The updated SMP varies the allowed uses within each SED depending on the current level of impairment of shoreline functions with greater restrictions on future uses in the Natural designation and increased allowances in the more altered SEDs such as High Intensity (see Table 18S.60.030-1 Shoreline Permit Table). See discussion on aquaculture below.

Finding: Ecology finds that, subject to required changes in Attachment B, the County has established a system of use regulations consistent with WAC 173-26-241 along with related environment designation provisions that accommodate preferred and priority uses, protect property rights while implementing the policies of the SMA, reduce use conflicts, and assure no net loss of shoreline ecological functions.

Shorelines of Statewide Significance (WAC 173-26-251)

RCW 90.58.020 specifically calls out Shorelines of Statewide Significance (SSWS) for special consideration, declaring that “the interest of all of the people shall be paramount in the management” of these shorelines. In Pierce County, the following are designated as SSWS (18S.20.020):

Marine:

- Nisqually Delta, from the Thurston/Pierce County border to Tatsolo Point;
- All marine waters lying seaward from the line of extreme low tide.

Lakes:

- Alder Lake;
- American Lake;
- Lake Tapps

Rivers:

- Nisqually River from the confluence with Mineral Creek downstream to the mouth;
- Puyallup River from the confluence with the Carbon River downstream to the mouth;
- White River from the confluence with the Greenwater River downstream to the confluence with the Nisqually River

The Shoreline Guidelines in WAC 173-26-251 requires that local master programs recognize the specific use preferences identified in the SMA and provide for “*optimum implementation*” of the statutory policy. This is done by providing SMP provisions that implement: (a) statewide interest, (b) preserve resources for future generations and (c) give preference to uses identified in RCW 90.58.020.

The SMP has no specific stand-alone policies for SSWS. Absent this, Ecology must look at the SMP as a whole and provisions that apply to SSWS to ascertain whether the SMP, when implemented, is consistent with the policies of RCW 90.58.020.

Finding: Ecology finds that subject to required changes in Attachment B, the SMP has accurately identified SSWS within the County’s jurisdiction, is consistent with RCW 90.58.020 and WAC 173-26-251, and provides for optimum implementation of the statutory policy.

Cumulative Impact Analysis (WAC 173-26-201(2)(c))

Addressing no net loss of ecological functions is a critical element in any SMP update. Ecology rules require that “Master programs shall contain policies and regulations that assure at minimum, no net loss of ecological functions necessary to sustain shoreline natural resources.”³ A cumulative impacts analysis documents how an SMP update addresses no net loss of ecological functions. The Pierce County Cumulative Impact Analysis includes review and analysis of existing shoreline characteristics, reasonably foreseeable future shoreline uses and development including shoreline modifications, new

³ WAC 173-26-201(2)(c)

shoreline environment designations and development standards such as buffers. While the cumulative impact analysis did not include an assessment to support certain restrictions on aquaculture, the county has worked with Ecology to develop required changes as part of the conditional approval that ensure the county will be allowing for preferred uses while building the capacity to monitor impacts and modify practices to address potential impacts to ecological functions through adaptive management.

Finding: Ecology finds that the county’s Cumulative Impact Analysis (CIA) provides an adequate examination of anticipated development and potential effects to shoreline ecological functions per WAC 173-26-201(3)(d)(iii).

Shoreline Use Analysis (WAC 173-26-201(3)(d)(ii))

Chapter 8 of the Shoreline Inventory and Characterization analyzed current and future potential land uses and trends to address the SMP Guidelines requirement to project future shoreline development, identify potential use conflicts and ensure preference is given to water oriented uses, particularly uses that are unique to or dependent upon a shoreline location. County permitting data, over 8 years, show the majority of shoreline activity was related to residential development along marine shorelines.

Nearly all commercial and industrial water-dependent activities are located in incorporated areas, and while marina space may be in demand, many of the County’s marine shorelines are too shallow to accommodate these sorts of facilities. The County runs two ferry routes from Steilacoom to Ketrion and Anderson Islands. The report also notes the increasing demand for geoduck aquaculture.

The following are identified as potential use conflicts: development of piers and docks; aquaculture (which can be impacted by development on adjacent uplands and conversely can impact recreational uses of the shoreline); and flood management and habitat restoration, e.g. requirements to remove vegetation on levees.

Finding: Ecology finds, subject to required changes in Attachment B, that the county has adequately considered SMA preferred uses and the potential for use conflicts consistent with WAC 173-26-201 (2)(d) and WAC 173-26-201 (3)(d)(ii).

Restoration Plan (WAC 173-26-201(c) and (f))

Local governments are directed to identify restoration opportunities as part of the SMP update process and to include policies that promote restoration of impaired shoreline ecological functions [WAC 173-26-201 (2)(c) and (f)]. It is intended that local government, through the master program, along with other regulatory and non-regulatory programs, contribute to restoration by planning for and fostering such actions. These are anticipated to occur through a combination of public and private programs and actions.

Pierce County developed a restoration plan, the Shoreline Restoration Report (June 2009; Revised June 2011), based on information gathered in the Inventory & Characterization which identified programmatic and site specific restoration opportunities. These are organized by WRIA, then by basin and waterbody, prioritized and given general timeframes for implementation. As the report states on page 2-1 “This plan seeks to establish a basic framework for improving the quality and sustainability of Pierce County’s shoreline resources over time in a collaborative and cohesive manner.” The plan goes on to discuss the county’s intentions to facilitate restoration work consistent with the Puget Sound Partnership Action Agenda as well as be compatible with the efforts of other restoration planning entities including the Nisqually and Muckleshoot tribes, Salmon Recovery Planning Lead Entities and

others. The vision expresses the County’s intent to “restore, protect and enhance the shoreline resources and ecological processes” with the effort “targeted to create a net improvement in the shoreline ecosystem over time so as to benefit native fish and wildlife, and maintain public amenities for the people of Pierce County, Washington.”

The County’s SMP includes policies and regulations in Section 18S.40.110 that promote restoration efforts and links restoration actions to the Restoration Plan. Table 18S.60.030-1 permits restoration and enhancement actions in all shoreline designations, subject to a shoreline substantial development permit or shoreline exemption, except in the Aquatic Marine designation which requires an Administrative Conditional Use permit.

Finding: Ecology finds that the Restoration Plan is based on appropriate technical information available during the SMP update and meets the requirements of WAC 173-26-201(2)(c) and (f).

Consistency Review

Consistency with the Shoreline Management Act (RCW 90.58): The proposed amendments have been reviewed for consistency with the policy and procedural requirements of RCW 90.58.020 and the approval criteria of RCW 90.58.090.

Consistency with applicable guidelines (WAC 173-26): The proposed amendments have been reviewed for compliance with the requirements of the applicable Shoreline Master Program guidelines (WAC 173-26-171 through 251 and -020 definitions). This included review of a SMP Submittal Checklist, which was completed by the County.

Consistency with SEPA Requirements: The County submitted evidence of compliance with RCW 43.21C, the State Environmental Policy Act (SEPA) in the form of a SEPA checklist and issued a Determination of Non-Significance (DNS) for the proposed SMP amendment on September 17, 2012. On March 5, 2015, the County Environmental Official issued a letter to County Council indicating review of the additional amendments to the proposed SMP would not result in ‘actions that would cause “probable significant adverse environmental impacts”’ and thus the original determination remained valid. Ecology did not comment on the DNS.

Other Studies or Analyses supporting the SMP update

Ecology reviewed the following reports, studies, map portfolios and data prepared for or by the County in support of the SMP amendment:

- *Final Shoreline Inventory and Characterization Report, ESA Adolfson,⁴ July 2009*
- *Shoreline Environment Designation Justification Memorandum, ESA Adolfson dated September 17, 2007*
- *Marine Shoreline Designations and Developed Conditions Evaluation, Schroedel Planning Services & Core GIS, December 2010*
- *Cumulative Impact Analysis, ESA, December 2013; Revised October 2014*
- *Shoreline Restoration Report, ESA, June 2009; revised June 2011*
- *Final SMP Submittal Checklist prepared by Pierce County and dated January 2015.*

⁴ ESA Adolfson changed their name to ESA during the time they were contracted to work on the Pierce County SMP update.

- *Exhibits A through H to Ordinance No. 2013-45s4*
- *Exhibit I to Ordinance No. 2013-45s4 Findings of Fact*

Ecology also reviewed and considered all comments received along with the references noted at the end of this document.

Department of Ecology review process

The timeline below outlines the progress and challenges during the state review process.

2015: The proposed SMP amendments were received by Ecology for state review on July 2, 2015 and verified as complete on December 18, 2015. Ecology's review for completeness was delayed due to contract obligations with numerous communities working on their SMP updates under grants which extended through June 30, 2016. Because of unexpected delays at the local level, Pierce County's SMP was received outside the normal flow of SMP development, which typically occurs over a three year grant cycle, with locally approved SMPs received three to five years from the start of the update process.

2016: Notice of the state comment period and hearing was distributed via U.S. mail or email to state task force members and approximately 600 county-identified interested parties on March 3, 2016 and published in The News Tribune on March 9, 2016 in compliance with the requirements of WAC 173-26-120. The Muckleshoot, Nisqually and Puyallup tribes were individually and specifically notified, and invited to comment.

Notice was posted on Ecology's website for shoreline master programs:

<http://www.ecy.wa.gov/programs/sea/shorelines/smp/mycomments/pierce.html> and on the agency's Public Involvement Calendar. A news release was issued on March 15th and an entry posted on Ecology's ECOconnect blog. The state comment period began on March 15 and continued through April 29, 2016 for a total of 45 days. A public hearing was held in Parkland on March 30, 2016.

Ecology received comments from 131 entities. Consistent with SMP review requirements in WAC 173-26-120, Ecology provided copies of all comments to the County on May 11, 2016.⁵ A summary of comments was provided to the County on May 31, 2016. On July 11th and August 22nd, the County requested additional time to respond to comments. On September 7, 2016, the County submitted its responses to the issues raised during the state comment period.

Between June and October, Ecology completed initial review of the locally adopted SMP and preliminary drafts of required and recommended changes. Ecology believes in its partnership with local government and as part of this, is committed to avoiding surprises when proposing changes to locally adopted SMPs. In this spirit, initial changes were compiled into discussion drafts of required and recommended changes and sent to the County for their review. County and Ecology staff met to discuss these changes on December 8 and 13, 2016.

⁵ Scanned copies were posted to Ecology's ftp site for download and receipt was confirmed by the County the same day. Comment #12 was re-posted to the ftp site on May 13, 2016, this time containing Appendices A-LL (over 1000 pages) which were not included in the scanned copy but were all received prior to the close of the comment period. Due to size, two attachments associated with comments #12 and #96 were sent on a flashdrive via U.S. Mail on June 6, 2016.

Discussions at these meetings identified specific issues that county and Ecology staff understood would take some time to resolve. These issues, including the dredge disposal prohibition in the Nisqually Reach Aquatic Reserve and a number of geographic prohibitions on aquaculture, were identified as key areas where the county and Ecology were not in agreement. In addition, county staff requested a meeting with Department of Natural Resources (DNR) to discuss issues around the Nisqually Reach Aquatic Reserve, particularly dredge disposal.

2017: On January 30 Ecology, Department of Natural Resources and Pierce County staff, along with County Council Chair Doug Richardson and Council staff, met to discuss Nisqually Reach Aquatic Reserve issues. Most of the discussion focused on the prohibition on use of the Anderson/Ketron dredge disposal site.

From February through December Ecology and county staff periodically check in via phone and email to discuss provisions with a goal to achieve some agreement on proposed changes that are legally defensible. Delays occur on the part of both Ecology and the county due to respective workloads. Resolution on most CAO integration questions is largely completed by August.

On September 19, County Council passes Emergency Ordinance No. 2017-58 prohibiting use of, and the filing of permit applications for the use of, the Anderson/Ketron Island dredge disposal site. On October 17 a public hearing is held. Ecology testified at the hearing.

2018: The County sent Ecology suggested revisions on aquaculture prohibitions on January 3. Ecology and county staff discuss proposals on January 12.

DNR convened the Nisqually Reach Aquatic Reserve Implementation Committee on February 1, asking for input on the consistency of the dredge disposal site with the Reserve Management Plan. On February 22, the Anderson Island Citizens' Advisory Board (a county-designated entity) hosts a public meeting on the island to discuss the Dredged Material Management Program and future use of the Anderson/Ketron Island disposal site. Ecology and county staff attend both meetings.

On March 14, Pierce County holds a hearing for Ordinance No. 2018-12 to extend the moratorium on dredge disposal at the Anderson/Ketron Island disposal site.

On March 21 County and Ecology staff meet to review final draft decision documents prior to Ecology's formal decision.

Summary of Issues Raised during the Ecology Public Comment Period

The Responsiveness Summary (Attachment D) includes a summary of the comments received and Pierce County's responses to SMP topics raised in the comments pursuant to WAC 173-26-120(6). The following is a summary of the most common issues raised and the County's responses. Ecology includes its response to comments concerning the state's review process in this section. All other Ecology responses are included in the rationale in attachments B and C and in the section below titled "Summary of Issues Relevant to Ecology's Decision."

Aquaculture

Summary of comments: The majority of comments received during the comment period focus on aquaculture with 71 of the 131 commenters explicitly mentioning this topic. Comments in support of

the proposed provisions in the SMP often specifically cite, and request retention of, the prohibitions on aquaculture in various locations.

Other commenters who oppose many of the proposed aquaculture provisions, including aquaculture industry representatives, also point to the prohibitions and request these be removed. Comments included a detailed technical assessment of the potential impact and extent of the prohibitions. Commenters suggest that by including these prohibitions, the county has failed to adequately plan for and accommodate aquaculture, a water-dependent use, consistent with the SMA, the SMP Guidelines and the federal and state shellfish initiatives.

Numerous specific comments were made on many of the proposed policies and regulations contained in Section 18S.40.040 Aquaculture and Appendix C – Aquaculture Application Requirements. Additionally, small scale growers raised concerns that the regulations are so onerous they can't afford to even apply for a shoreline permit, let alone meet all the regulatory requirements.

Summary of County response: The County's response notes the two-year stakeholder process that included representatives of the aquaculture industry, shoreline property owners, tribal interests, natural resource agencies and environmental groups. The County acknowledged aquaculture is a water-dependent preferred use with a long history in the community contributing economically, socially and culturally, including efforts to further improve water quality.

The County also notes the existence of other uses and the potential for conflict between uses. The County states the proposed language is in response to concerns expressed by shoreline property owners and others related to aesthetics, accuracy over property lines, and the potential for impacts to shoreline access, recreation and residential uses. To help address these use conflicts, and the conflicting comments and concerns of the public and the industry, the County SMP restricts or prohibits commercial aquaculture in specific areas while allowing it elsewhere. The County suggests the detailed regulatory requirements are intended to ensure proposals are consistent with the required mitigation sequencing, are consistent with State law and guidance, and represent a compromise between shellfish growers, property owners, and the public. The county proposed no changes in its formal response to comments (Attachment D).

Dredge Disposal

Summary of comments: Comments address future dredge disposal at the existing open water disposal site located south of Anderson Island commonly called the Anderson/Ketron Island disposal site. A number of citizens request Ecology retain the County's proposed prohibition on future use of the site suggesting dredge disposal has negative impacts on the Nisqually Reach Aquatic Reserve and Anderson Island. Comments received from federal and state agencies directly involved in managing dredge disposal in Washington, along with potential users of the site, request the prohibition be removed from the SMP. Agencies explain that all material placed at the site undergoes testing to ensure it meets the standards for in-water disposal, and there is ongoing monitoring of the site. The agencies assert the County failed to involve agencies with expertise on this matter during the local decision process. Commenters note the site was established as part of a regional program to manage dredge disposal in Puget Sound and that these sites are determined by the state Legislature to be "essential to the commerce and well-being of the citizens of the state of Washington."⁶

⁶ RCW 79.105.500

Summary of County response: Pierce County indicates the proposed restriction supports the protection of important regional resources including environmental resources as well as Federal and State listed species located within the Nisqually Reserve. The county proposed no changes in its formal response to comments (Attachment D).

Shoreline Environment Designations

Summary of comments: Comments were received on proposed Natural environment designations for specific properties located in Oro Bay, Anderson Island and North Bay, Case Inlet. Comments were also received from property owners opposed to the proposed Residential designation (a change from the current Conservancy designation) along the south shore of Fox Island. In addition, Futurewise provided numerous site-specific comments identifying shoreline areas throughout the County which they recommended be designated Natural rather than the proposed Conservancy designation.

Summary of County response: The County indicates it believes the proposed shoreline designations accurately reflect existing use patterns, shoreline characteristics and community interests consistent with the SMP Guidelines. With regard to parcel-specific comments, the County believes the proposed designations are appropriate and will not interfere with existing or proposed uses. The county proposed no changes in its formal response to comments (Attachment D).

Tribal Treaty Rights

Summary of comments: Comments received from the Squaxin Island Tribe and the Nisqually Tribe express strong objection to aquaculture-related restrictions in the SMP, which could or would infringe on Tribal Treaty rights.

Summary of County response: In its response, Pierce County acknowledges limits to its authority related to Tribal Treaty rights and points to language included in the SMP in the Applicability section, 18S.10. The county proposed no changes.

Water Access Facilities

Summary of comments: Most comments relate to questions of interpretation of the proposed policies and regulations. Proposed language changes are suggested to improve the clarity of specific policies and regulations related to state-owned aquatic lands, mitigation, joint use facilities and vacant lots. In addition, a number of comments were received expressing concern that the proposed SMP will increase the potential for residential docks along the south shore of Fox Island.

Summary of County response: The County acknowledged the comments noting all shoreline development is subject to mitigation sequencing and the County distinguishes between vacant and developed residential lots. The county proposed no changes.

Ecology review process

Summary of comments: A number of commenters (Comments B1 – B8) question the state's role in the process, raise concerns over the scheduling and notice of the hearing, request Ecology respect the County's process, and question the length of time needed for the state to issue a decision. Comments include suggested review criteria to use while reviewing the County's SMP.

Ecology response: Ecology appreciates the level of interest by all stakeholders in this SMP update and recognizes challenges often arise notifying interested parties and accommodating a range of schedules. We attempted to address these challenges by using a variety of means to get the word out about the public comment period and hearing including: sending notice by mail or email to interested parties

identified by the County, hosting a web page, advertising the hearing in the News Tribune, issuing a news release and posting information on the agency’s Public Involvement calendar and the agency’s ECOconnect blog. Because of the high level of interest in this SMP, a 45-day comment period (rather than the usual 30 days) was provided. Written and oral comments are given the same weight.

Ecology recognizes and appreciates the time and resources put toward development of the County SMP including the significant input received from local citizens. The department respects the County process and recognizes that development of an SMP, and implementation of the SMA is a cooperative program with our local government partners. During the course of the Pierce County effort, Ecology acted in a supportive and review capacity by providing grant funds, attending numerous meetings during development of technical documents and draft policies and regulations, and providing technical assistance throughout, including comments on numerous drafts of the SMP.

Ecology acknowledges the delay in beginning review of the Pierce County SMP along with the concerns raised about the length of time needed to review the County’s SMP. Comprehensively updated County SMPs are generally very complex and address multiple uses and activities. For a variety of reasons, Pierce County’s local SMP adoption was delayed past the original due date. The county’s final adoption coincided with the receipt of documents related to numerous efforts by other local governments operating under grant deadlines. This left Ecology without adequate staff to complete the final steps in the approval process in a timely manner. Ecology’s decision was further delayed in order to explore options with the county on how to respond to public comments and in an effort to reach resolution on proposed changes. Ecology collaborated with the county to reach mutual understanding about legally defensible alternatives to locally adopted provisions that Ecology could incorporate into final required and recommended changes.

Summary of Issues Identified by Ecology as Relevant to Its Decision

Ecology is required to review all SMPs to ensure consistency with the Shoreline Management Act (SMA) and implementing rules including WAC 173-26, State Master Program Approval/Amendment Procedures and Master Program Guidelines.⁷ WAC 173-26-186(11) specifies that Ecology “shall insure that the state’s interest in shorelines is protected, including compliance with the policy and provisions of RCW 90.58.020.”

Based on review of the locally adopted SMP for consistency with applicable SMP Guidelines requirements and the Shoreline Management Act, consideration of supporting materials in the record submitted by the County, and issues raised during Ecology’s public comment period (Attachment D), the following issues remain relevant to Ecology’s final decision on the comprehensive update to the Pierce County SMP, with Findings specific to each issue identifying amendments needed for compliance with the SMA and applicable guidelines:

Integration of Critical Area Regulations

As required by RCW 36.70A.480(3)(d), upon Ecology approval of a shoreline master program, “critical areas within shorelines of the state are protected under chapter [90.58](#) RCW and are not subject to the procedural and substantive requirements of this chapter...”.⁸ This requirement means critical area reviews for activities in shoreline jurisdiction occur within the context of the SMP permitting procedures.

⁷ RCW 90.58.050

⁸ See also RCW 90.58.610

Ecology, with County staff assistance, has identified changes to the SMP to ensure the SMP and associated critical area provisions are implemented consistent with the requirements of the Act. These changes remove conflicting language and/or add clarifying provisions. (Attachment B, Rows 1, 4 and 5).

Finding: Ecology finds that the county has chosen to adopt its critical area code by reference as allowed by WAC 173-26-191(2)(b). Ecology also finds that revisions are needed to ensure the SMP is consistent with this provision along with ensuring implementation of critical area regulations remain consistent with the permitting requirements of the Shoreline Management Act. An additional change ensures consistency with the requirement to ensure the use of “the most current, accurate, and complete scientific or technical information available” (WAC 173-26-201(2)(a)).

Administration corrections

Ecology has identified a number of modifications needed for internal consistency and/or consistency with Ecology permit rules (Attachment B, Rows 2, 3, 17 and 19).

Finding: Ecology finds changes are necessary to ensure consistency with permitting provisions set forth in Ecology’s implementing rule on permitting procedures Chapter 173-27 WAC.

Shoreline Jurisdiction and Shoreline Environment Designations

Ecology has identified required corrections in Appendix E, Shoreline Jurisdiction Descriptions and Appendix H, Shoreline Environment Township Atlas Maps. Corrections to these inadvertent errors are shown in Attachment B and are necessary for internal consistency and for consistency with WAC 173-26-211(2) and WAC 173-22-044 (Attachment B, Rows 20 and 21). In all other regards, Ecology concurs with the county.

Finding: Ecology finds that corrections are necessary to ensure internal consistency.

Dredge Disposal

Ecology has identified clarifications to dredge disposal regulations for internal consistency and consistency with Ecology guidelines (Attachment B, Rows 6 and 7). The issues identified by Ecology to support the changes are described below and in Attachment B.

Policies and regulations pertaining to dredging and dredge disposal in 18S.30.040 are internally inconsistent. 18S.30.040 C.2.d authorizes disposal of dredged material consistent with the Dredged Material Management Program (DMMP) and Table 18S.60.030-1 allows dredging with a conditional use permit in both the Aquatic Freshwater and Aquatic Marine environments.

Late in the SMP adoption process the county adopted 18S.30.040 C.1.d which explicitly prohibits all dredge disposal within the Nisqually Reach Aquatic Reserve. The prohibition on all dredge disposal within the Nisqually Reserve would prevent the continued use of the southernmost of eight regional open-water disposal sites established under the state’s DMMP.

Through statute, the Legislature in 1987 declared dredge disposal sites on aquatic lands to be of statewide interest. Per legislative findings set forth in RCW 79.105.500, aquatic land dredge material disposal sites are “essential to the commerce and well-being of the citizens of the state of Washington” and “management and environmental monitoring are essential to protect the environmental quality and to assure appropriate use of state-owned aquatic lands.”

In Puget Sound, dredging and dredge disposal activities were historically managed on a case by case basis. In the 1970's, public multiuser disposal sites were established. However, evaluation of the material to be discharged at these sites continued to occur on a project by project basis. By the 1980's it was recognized that open water dredge disposal activities should be addressed regionally with a goal of providing "publicly acceptable guidelines governing environmentally safe unconfined, open-water disposal of dredged material..."⁹ The proposed regional approach led to the development of the Puget Sound Dredged Disposal Analysis (PSDDA) program. Site selection of regional disposal sites occurred in two phases after an extensive public process and issuance of two Final Environmental Impact Statements (FEIS) in 1988 and 1989.¹⁰

Eight open water dredge disposal sites were identified and established to help support the maintenance of navigable waterways, port terminal shipping berths and small-boat harbors which provide commercial and recreational water dependent activities. As part of the Dredged Material Management Program,¹¹ these eight sites are managed, through a cooperative process involving state and federal agencies.¹² In addition to managing and monitoring the dredge disposal sites, the DMMP agencies oversee testing to evaluate the suitability of material for disposal.

The Anderson/Ketron Island site, established in 1989, is one of five non-dispersive disposal sites.¹³ Located between Anderson and Ketron islands, on Shorelines of Statewide Significance (SSWS), it is approximately 360 to 460 feet deep and covers 318 acres.¹⁴ This is the only site south of the Tacoma Narrows Bridge. Past users include Day Island Marina, LOTT, Olympia Yacht Club, Port of Olympia and Zittel's Marina along with U.S. Army Corps of Engineers federal navigation project maintenance dredging. The nearest alternative site available to southern Puget Sound ports, marinas, and other entities for open water disposal is located in Commencement Bay.

The proposed prohibition on dredge disposal was introduced as Committee Amendment No. 5 to the draft SMP at the last Community Development Committee (CDC) meeting on March 2, 2015, one week before adoption of the SMP by the Council as a whole on March 10, 2015. In adopting the SMP, the Council adopted the following Findings in support of this prohibition:

County Finding #40: The SMP authorizes applications for discharging dredged materials in Pierce County marine waters when consistent with the Master Program, except, within the Nisqually Reach Aquatic Reserve where such use is prohibited due to the management goals of preservation, restoration and enhancement of subtidal ecosystems.

⁹ Page S-6, FEIS, Unconfined Open-Water Disposal for Dredged Material, Phase II (North and South Puget Sound).

¹⁰ Phase 1 focused on Central Puget Sound. The Phase II FEIS addressed North and South Puget Sound.

¹¹ The DMMP is an adaptive management program which ensures up-to-date methods and guidelines are implemented for environmental monitoring. It grew out of the PSDDA effort and was renamed when the state broadened the geographic scope of the program in the 1990's. <http://www.nws.usace.army.mil/Missions/Civil-Works/Dredging/>

¹² The cooperating agencies include the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, Region 10, Department of Ecology and Department of Natural Resources.

¹³ There are five non-dispersive disposal sites in Puget Sound. Non-dispersive sites are in locations with low current velocities, which means the disposed material stays on-site, and is monitored long term for physical, chemical and biological parameters. The parameters used to select sites can be found in the FEIS. See also US Army Corps of Engineers, Anderson-Ketron PSDDA Disposal Site and Transport Modeling, September 2014. This report, along with recent review on monitoring data taken at the site confirm that the location is non-dispersive.

¹⁴ US Army Corps of Engineers, Biological Evaluation, June 2015. <http://www.nws.usace.army.mil/Missions/Civil-Works/Dredging/Reports/>

County Finding #41: The Council supports the Nisqually Reach Aquatic Reserve Management Plan’s goal of recovery and protection of Federal and State threatened, endangered and sensitive species, species of special concern and their habitats. As such, certain uses, including discharging dredged materials is prohibited.

The County record submitted to Ecology includes no scientific or technical foundation supporting this prohibition, nor is there a record of consultation with agencies with expertise, affected Tribes and statewide interest groups. The DNR commented that a prohibition is inconsistent with the Nisqually Reach Aquatic Reserve Plan. The Reserve’s implementation plan acknowledges the presence of the Anderson/Ketron disposal site and provides for its continued existence contingent on ongoing monitoring and management by the cooperating agencies under the DMMP.

Dredge Disposal Moratorium: On September 19, 2017, Pierce County Council declared an emergency and adopted Ordinance No. 2017-58 prohibiting disposal of dredged material in the Nisqually Reach Aquatic Reserve¹⁵. The moratorium is in place “until the date Ecology completes its review and approval of Pierce County’s Shoreline Master Program...and outstanding issues relating to development within the Aquatic Reserve are resolved, or six months...whichever date comes first¹⁶.”

Consistent with RCW 90.58.590, the county notified Ecology and held a public hearing October 17. Ecology provided comments at the public hearing acknowledging our mutual interest in completing the decision on the SMP. However, because the record lacked input from the range of stakeholders on this issue, Ecology was interested in hearing the breadth of the issues and waited until the county concluded public meetings on the moratorium in February 2018 to complete the final SMP approval steps.

On February 1, 2018, DNR held a meeting of the Nisqually Reach Aquatic Reserve Implementation Committee to obtain their input on whether the dredge disposal site is consistent with the Reserve Management Plan. DMMP agencies gave a range of presentations including how the program and the dredge disposal site was established, how dredge materials are authorized for open water disposal, required monitoring at the site, and results of recent studies done on the site. Both the County and Ecology attended this meeting.

On February 22, a public meeting of the Anderson Island Citizen’s Advisory Board allowed Anderson Island residents to hear presentations by DMMP agencies and provide input to the county regarding use of the disposal site.

Finding: Ecology finds that the open water dredge disposal sites established under the Dredged Material Management Program are a water dependent use. The Legislature has declared these sites to be “essential” to the state of Washington. The Anderson/Ketron Island site is one of a regional network of sites established after extensive review, including an Environmental Impact Statement. These regional dredge disposal sites help support public and private recreational, commercial and industrial water dependent uses including the maintenance of Federal navigation channels necessary for regional, national and international trade.

Ecology also finds that the SMP is required to recognize and implement the use preferences set forth in RCW 90.58.020 on Shorelines of Statewide Significance and that Ecology must ensure optimum

¹⁵ On March 13, 2018, Pierce County held a hearing and adopted Ordinance No. 2018-12 extending the moratorium.

¹⁶ Section 1 of Ordinance Nos. 2017-58 and 2018-12.

implementation of these policies to ensure the statewide interest is met.¹⁷ The prohibition of dredge disposal at the Anderson/Ketron Island disposal site conflicts with the statewide interest established by the Legislature. Additionally, the prohibition was adopted without consulting agencies with expertise, including Washington Department of Natural Resources, the U.S. Army Corps of Engineers and the Environmental Protection Agency.¹⁸

Aquaculture

Background

Before summarizing issues relevant to Ecology’s decision on aquaculture provisions, a brief background is warranted. Citizen concerns about aquaculture operations in Pierce County have been raised since the early 2000’s. In response, the County adopted interim regulations amending the existing SMP. Initially adopted in 2007 (Ordinance No. 2007-34s2), the final form of these regulations, as approved by Ecology, were contained in Ordinance No. 2009-26. This amendment was subsequently vacated in 2010 by the Growth Management Hearings Board¹⁹ on remand from Thurston County Superior Court.²⁰

Meanwhile, the concerns being raised by those for and against geoduck aquaculture in Puget Sound also resulted in legislative action. In 2007, the Washington State Legislature passed a bill and appropriated funds establishing the Shellfish Aquaculture Regulatory Committee (SARC) to “serve as an advisory body to the department of Ecology on regulatory processes and approvals for all current and new shellfish aquaculture activities...”²¹ The SARC was a diverse group including representatives of county government (Pierce County was included), commercial shellfish growers, shoreline property owners, environmental organizations and state agencies. Tribal representatives, invited by the Governor, also participated.

The committee’s work was reported to the Legislature in 2007 (Interim) and 2008 (Final). The report documented public comment received during the committee process. The issues raised were similar to the comments received during the County’s update process including siting of farms, buffers on critical habitat (such as eelgrass) and setbacks from property boundaries, effects on shoreline property owners, ecological effects, pollution including the use of plastics, sediment disturbance and litter and debris. The work of SARC resulted in amendments to Ecology’s SMP Guidelines in 2011 which provide direction to local governments on how to address geoduck aquaculture in Shoreline Master Programs.²²

In addition to establishing SARC, the legislation directed the Washington Sea Grant program to commission scientific research studies that “examines the possible effects, including the cumulative effects, of the current prevalent geoduck aquaculture techniques and practices on the natural environment in and around Puget Sound, including the Strait of Juan de Fuca.”²³ This work included a

¹⁷ See also WAC 173-26-251

¹⁸ WAC 173-26-251(3)(a) and (3)(d)(ii)

¹⁹ GMHB Case No. 09-03-0010, Seattle Shellfish and Pacific Coast Shellfish Growers Association v. Pierce County and Washington Department of Ecology.

²⁰ Thurston County Superior Court No. 10-2-00345-0, Seattle Shellfish et. al. v. Pierce County and Washington State Department of Ecology. Order Reversing Final Decision and Order of Central Puget Sound Growth Management Hearings Board. November 2010.

²¹ Second Substitute House Bill 2220, passed Legislature, 2007 Regular Session.

²² WAC 173-26-241 (3)(b)

²³ Second Substitute House Bill 2220, passed Legislature, 2007 Regular Session.

review of the scientific literature and coordination with Ecology and SARC to prioritize research needs. Results of the scientific research was provided to the Legislature in a report in 2013.²⁴

Pierce County's SMP

Pierce County's SMP addresses all forms of aquaculture with the same set of regulations, many of which are based on the geoduck-specific provisions set forth in WAC 173-26-241(3)(b)(ii-iv). The SMP includes a requirement for a Conditional Use permit (CUP) for all aquaculture projects.²⁵ Detailed application requirements are located in 18S.70 Appendix C.

Ecology has identified a number of clarifications to aquaculture regulations for internal consistency and consistency with Ecology guidelines (Attachment B, Rows 8, 9, 10, 11, 15 and 18). The issues identified by Ecology to support these clarifying changes are explained in Attachment B.

Ecology has also identified a number of changes removing and/or clarifying four proposed prohibitions on aquaculture (Attachment B, Rows 12, 13, 14 and 16). Each of the four provisions and the issues identified by Ecology to support the changes are explained in Attachment B and further described below.

- ***Commercial shellfish aquaculture activities within the Nisqually Reach Aquatic Reserve (18S.40.040 C.17) [Attachment B, Row 12]***

Attachment B includes an alternative to Regulation C.17, developed with input from County staff, to address comments received and improve internal consistency. The regulation clarifies that Olympia Oysters and other enhancement activities are allowed within the Reserve.

The restriction on commercial shellfish aquaculture in the Nisqually Reserve was introduced as Committee Amendment No. 5²⁶ to the draft SMP at the last Council CDC meeting on March 2, 2015, one week before adoption of the SMP by the Council as a whole on March 10, 2015. Other than Council findings, the submitted record includes no scientific or technical foundation supporting the restriction.²⁷

The limitation applies only to state-owned aquatic lands located within the boundaries of the Nisqually Reserve or approximately 30% of the total tidelands. Private tidelands are not included in the Aquatic Reserve. DNR's comment letter (Attachment D, L35) highlights the agency's concern with this language including the lack of consultation regarding this proposal, the potential impact on the adopted Reserve Plan, the potential for undermining the open public process utilized during development of the Reserve Plan, and the possible impact on establishment of future reserves. Comments from the Nisqually tribe expressed concern that the restriction may interfere with tribal treaty rights.

²⁴ [Geoduck Aquaculture Research Program: Report to the Washington State Legislature, WA Sea Grant](#), November 2014.

²⁵ The SMP Guidelines require the use of CUPs only for geoduck aquaculture. The permitting scheme for other forms of aquaculture, and the conversion from one form to geoduck aquaculture, is left to the discretion of local government.

²⁶ This amendment also includes the prohibition on dredge disposal in the Nisqually Reserve discussed separately.

²⁷ Ordinance No. 2013-45s4 Exhibit I, Findings #29, 30, and 31

- ***Prohibition on all aquaculture in estuaries within 300 feet of the mouth of freshwater streams (18S.40.040 C.18) [Attachment B, Row 13]***

Adopted by the Council’s CDC as part of Amendment No. 8 on July 21, 2014, this provision would preclude aquaculture in estuaries within 300 feet of the mouth of freshwater streams (as measured at extreme low tide). It is not clear whether this applies to the estuaries of all streams, no matter how small, or just streams that meet the definition of shorelines of the state. It is not clear how the term estuary would be interpreted, or how to determine the location of the stream mouth from which to measure the 300 feet. Neither the SMP nor the submitted record include documentation as to the location of these estuaries or how the criteria would apply. The Inventory & Characterization map folio and other materials used during the local SMP update do not include an estuaries layer.²⁸

The County’s response to comments asking where the prohibition would apply suggests the location could be identified by the point where the stream channel intersects with extreme low tide (Attachment D, L38). In Ecology’s discussions with county staff, it was suggested this could be further refined to apply to estuaries adjacent to streams documented with listed species. A review of the map provided, while more limited in scope, was not convincing as the proposed estuaries encompassed areas of existing shellfish farms and Bush Act lands along with numerous other uses and activities along the shoreline that may also have impacts on listed species.

Even if the criteria for identifying these areas were adequately defined, and the scope reduced, the prohibition would still need to be supported by scientific evidence for the imposition of a buffer of 300 feet or a rationale for the ecological functions that are affected by aquaculture in these areas. There is no description of how the prescribed distance would effectively mitigate those undescribed effects.

- ***Prohibition on all aquaculture adjacent to residential neighborhoods in Horsehead Bay, Wollochet Bay, and Lay Inlet and adjacent to Raft Island (18S.40.040 C.19) [Attachment B, Row 14]***

This prohibition was adopted by the CDC as Amendment No. 9 on July 21, 2014. Other than Council Findings regarding use conflicts,²⁹ the record lacks supporting rationale for imposing this restriction.

The regulation is not sufficient in scope and detail to implement consistently, as required by state rules.³⁰ For example, the term “residential neighborhood” is not defined. If interpreted to mean aquaculture is prohibited in those areas adjacent to the Residential SED, then these prohibitions would be extensive along the identified shorelines. In addition, the regulation provides no outer boundaries for the named bays or inlets, nor is it clear how boundaries for residential neighborhoods adjacent to Raft Island would be determined.

²⁸ WAC 173-26-191(2)(a)(ii)(A) requires that master program regulations be “...sufficient in scope and detail...” to insure appropriate implementation of the SMA and supporting policies.

²⁹ Ordinance No. 2013-45s4 Exhibit I, Finding # 26

³⁰ WAC 173-26-191(2)(a)(ii)(A)

The record submitted does not provide compelling reasons to prohibit aquaculture in these areas. While these areas are largely “unclassified” by Washington Department of Health, this means the beaches have not been evaluated through a sanitary survey to determine whether they meet health standards and are safe to harvest for human consumption.³¹ This lack of information does not preclude a beach from being classified as approved for harvest sometime in the future. Additionally, the record includes no analysis of how this prohibition would affect existing ongoing aquaculture, nor is there recognition that nearly all the tidelands of Lay Inlet are Bush Act lands, which were sold by the state to encourage oyster farming.³²

- ***Prohibition on aquaculture in the Aquatic SED adjacent to the Natural SED (Table 18S.60.030-1, Note 2) [Attachment B, Row 16]***

Adopted by the Council’s CDC as part of Amendment No. 8 on July 21, 2014, the prohibition on aquaculture in the Aquatic SED adjacent to the Natural SED replaced the original draft SMP language prohibiting aquaculture in the Aquatic SED adjacent to spits. The Council Findings state that shorelines designated Natural “as well as the adjacent intertidal ecosystems are intended to remain ecologically intact, free of structural shoreline modifications, structures, and intensive human uses.” The County concludes “these areas are limited and that aquaculture practices are inconsistent with “these remaining natural shoreline and tideland areas.”³³

The existing SMP has long protected spits, which are small, but important shoreforms. The Cumulative Impacts Analysis (CIA) acknowledges the intent behind the original prohibition.³⁴ The July 2014 amendment expanding the prohibition to all areas adjacent to the Natural SED is not addressed in the CIA, and other than Council Findings, the county’s record does not include scientific and technical information that supports a prohibition that applies to roughly 21% (County comment response to D4) of the 224 miles of marine shoreline in Pierce County.

Comments received during Ecology’s public comment period indicate a number of existing farms are adjacent to shorelines proposed to be designated Natural.³⁵ The proposed prohibition on aquaculture in the Aquatic SED abutting the Natural SED would render existing farms nonconforming, and farm operators would be unable to expand/enlarge (18S.10.055 E.1) nor change species cultivated.³⁶

Working with county staff, Ecology proposes an alternative that would amend the prohibition, limiting it to marine waters, and referencing a new policy and regulation to address local and state concerns. While allowing the prohibition to be included in the SMP, the proposed new policy and regulation would clarify that Bush Lands are not included and that existing aquaculture operations adjacent to the Natural SED are not rendered nonconforming.

³¹ See Washington Department of Health <https://www.doh.wa.gov/CommunityandEnvironment/Shellfish/GrowingAreas>

³² The Bush Act of 1895 allows for the sale of state-owned aquatic lands to encourage the growth of the oyster industry (see RCW 79.135.010). <https://www.dnr.wa.gov/programs-and-services/aquatics/aquatic-leasing-and-licensing/bush-and-callow-act-aquatic-lands-maps>

³³ Ordinance No. 2013-45s4 Exhibit I, Finding #27

³⁴ Cumulative Impact Analysis page 38

³⁵ A. Carr and J. DeNike, Plauche’ & Carr (4/29/2016); Appendix Z. Confluence Environmental Company, Shellfish Aquaculture in Pierce County: Technical and Scientific Information (April 2016)

³⁶ 18S.40.040 C.14: “Introduction of a new shellfish species, changing the shellfish species cultivated, expansion of the physical area cultivated or relocation of the aquaculture operation is considered a new use/development, and shall require a new permit and compliance with this SMP.” As a prohibited use, the county would be unable to issue any shoreline permit.

Additionally, the policy clarifies that this prohibition will be revisited at the county’s next periodic review, allowing the county and Ecology time to implement the updated SMP and develop a more robust base of scientific and technical information to determine if, and where, prohibitions are appropriate.

The County has chosen to take a precautionary approach in these prohibitions based on broadly stated concerns. In adopting aquaculture prohibitions, the County Council Findings noted additional requirements were added, e.g.: “to address impacts specific to marine shoreline areas that Council does not feel are adequately addressed by Washington Sea Grant research or Ecology Master Program guidelines. Council concerns include the potential establishment of new aquaculture in proximity to waters that have a history of water quality problems as evidenced by closures or restrictions on harvest, visual impacts adjacent to residential neighborhoods and estuarine areas where salmon undergo physiological transitions including confined bays.”³⁷

Outright use prohibitions are among the most challenging for Ecology to review for consistency with state laws and rules. Ecology rules recognize that SMA policy goals harbor potential for conflict. “The act recognizes that the shorelines and the waters they encompass are “among the most valuable and fragile” of the state’s natural resources... Thus the policy goals of the act relate to both **utilization** and **protection** of the extremely valuable and vulnerable shoreline resources of the state.”³⁸ The rules do not always provide a simple bright line for determining how local governments must balance these goals.

The rules clarify that aquaculture is of statewide interest, and can, when properly managed, result in long-term over short-term benefit and can protect the resources and ecology of the shoreline. It is dependent on the use of the water area, and is a preferred use when consistent with control of pollution and prevention of damage to the environment. The rules acknowledge potential locations for aquaculture are relatively restricted and the technology associated with some forms of aquaculture are experimental, therefore SMPs “should recognize the necessity to provide some latitude in the development of this use as well as its potential impact on existing uses and natural systems.”

The rules also clearly grant authority to set limits on potential impacts, e.g., “aquaculture should not be permitted in areas where it would result in a net loss of ecological functions, adversely impact eelgrass or macroalgae, or significantly conflict with navigation and other water-dependent uses.” However, to address both the use and protection goals of the SMA, outright prohibitions on water-dependent preferred uses should be well founded. Prohibitions should be supported by substantive analysis of the most current, accurate, and complete scientific and technical information available.³⁹

In determining whether locally adopted SMP provisions meet the state policy to plan for both use and protection, Ecology is required to consider public comments. In both local and state comment periods on the Pierce County SMP, public comments were extremely polarized. Ecology has attempted to find a balance that addresses both interests. Ecology acknowledges the concerns expressed about the potential impacts of aquaculture by approving the county’s prescriptive application requirements, review criteria, and obligations for ongoing monitoring and adaptive management. Ecology likewise acknowledges the concern of shellfish farmers and citizens interested in making productive economic

³⁷ Ordinance No. 2013-45s4 Exhibit I, Finding #26

³⁸ WAC 173-26-176(2)

³⁹ WAC 173-26-201(2)(a)

use of private tidelands by not authorizing prohibitions that are not based on substantive analysis of scientific information.

Finding: Ecology finds these prohibitions on aquaculture are not adequately supported in the submitted record by scientific and technical information nor by any analysis of the impacts of these proposed regulations on existing aquaculture activities. The record contains no analysis demonstrating that the total of all restrictions on aquaculture remains consistent with the policy of the SMA and the SMP Guidelines and the preferences for water-dependent uses. Ecology also finds that the County’s SMP is required to recognize and implement the use preferences set forth in RCW 90.58.020 on Shorelines of Statewide Significance and that Ecology must ensure optimum implementation of these policies to ensure the statewide interest is met.

Periodic Review

Pierce County is required on or before June 30, 2019, and every eight years thereafter, “to review and, if necessary, revise their master program”.⁴⁰ The purpose of the review is to ensure the SMP complies with laws and guidelines that have been added or changed since the most recent update, and for consistency with the county’s comprehensive plan and development regulations. The periodic review is also an opportunity to address changed circumstances, new information, or improved data.⁴¹

Pierce County is one of a small group of communities that are approaching this periodic review deadline just as they are completing a comprehensive SMP update. Because Ecology’s formal action on Pierce County’s comprehensive shoreline master program update has been delayed for over a year, Ecology and Pierce County staff have identified several recent changes to laws and Ecology guidelines that can be incorporated into Ecology’s formal approval.

Changes resulting from a review of the Periodic Review checklist are found in Attachment B, Row 5 and Attachment C, Rows 46, 48, 49, 52 and 55. By incorporating these changes into the SMP, to address new laws and rules adopted by the state since local adoption of the SMP, Ecology’s approval of the Pierce County comprehensive update will also address this statutory obligation to keep the SMP up to date. These changes are documented in Attachment E, a checklist prepared to meet the requirements of WAC 173-26-090(3)(b)(i).

To address the public notification requirements of WAC 173-26-090(3)(a), Pierce County will need to provide notice to the public that the final adoption of the Pierce County SMP will conclude the formal periodic review requirement, and hold a hearing on incorporating these changes.

Finding: Ecology finds that, consistent with WAC 173-26-090, Pierce County is required to periodically review their SMP on or before June 30, 2019 and every eight years thereafter. These reviews are required to ensure local governments address changes in requirements of the SMA and guidelines requirements since the comprehensive update, changes for consistency with revised comprehensive plans and regulations, along with any changes deemed necessary to reflect changed circumstances, new information or improved data. Ecology also finds that the comprehensive update of the Pierce County SMP has been delayed at both the local and state levels. Ecology has identified changes, which if adopted by the county, will help meet the requirements of the periodic review.

⁴⁰ RCW 90.58.080(4)(b)(i)

⁴¹ WAC 173-26-090

CONCLUSIONS OF LAW

After review by Ecology of the complete record submitted and all comments received, Ecology concludes that the county's comprehensive SMP update proposal, subject to and including Ecology's required changes (itemized in **Attachment B**), is consistent with the policy and standards of RCW 90.58.020, RCW 90.58.090, RCW 36.70A.480 and the applicable SMP guidelines (WAC 173-26-171 through 251) as well as the definitions in WAC 173-26-020 and WAC 173-27. This includes a conclusion that the proposed SMP, subject to required changes, contains sufficient policies and regulations to assure that no net loss of shoreline ecological functions will result from implementation of the new updated master program - WAC 173-26-201(2)(c).

Ecology concludes that a separate set of recommended changes to the submittal (identified during the review process and itemized in **Attachment C**) would be consistent with SMA policy and the Guidelines and would be beneficial to SMP implementation. These changes are not required, but if accepted by the county, can be included in Ecology's approved SMP amendment.

As stipulated in RCW 90.58.610, RCW 36.70A.480 governs the relationship between shoreline master programs and development regulations to protect critical areas that are adopted under chapter 36.70A RCW. Consistent with RCW 36.70A.480(4), Ecology concludes that the SMP provides a level of protection to critical areas located within shorelines of the state that assures no net loss of shoreline ecological functions necessary to sustain shoreline natural resources.

Ecology concludes that the county has chosen *not* to exercise its option pursuant to RCW 90.58.030(2)(d)(ii) to increase shoreline jurisdiction to include buffers for critical areas located within shorelines of the state. Therefore, as required by RCW 36.70A.480(6), for those designated critical areas with buffers that extend beyond SMA jurisdiction the buffer shall continue to be regulated by the county's Critical Area regulations.

Ecology concludes that subject to and including Ecology's required changes, those SMP segments relating to shorelines of statewide significance provide for the optimum implementation of Shoreline Management Act policy - RCW 90.58.090(5).

Ecology concludes that the county has complied with the requirements of RCW 90.58.100 regarding the SMP amendment process and contents.

Ecology concludes that the county has complied with the requirements of RCW 90.58.130 and WAC 173-26-090 regarding public and agency involvement in the SMP update process. The county conducted additional consultation during the dredge disposal moratoria to address comments received during Ecology's state-level public comment period.

Ecology concludes that the county has complied with the purpose and intent of the local update process requirements contained in WAC 173-26-100, including conducting open houses and public hearings, notice, consultation with parties of interest and solicitation of comments from tribes, government agencies and Ecology. The County conducted additional consultation to address comments received during Ecology's state-level public comment period.

Ecology concludes that the county has complied with requirements of Chapter 43.21C RCW, the State Environmental Policy Act.

Ecology concludes that the county's comprehensive SMP update submittal to Ecology was complete pursuant to the requirements of WAC 173-26-110 and WAC 173-26-201(3)(a) and (h) requiring an SMP Submittal Checklist.

Ecology concludes that it has complied with the procedural requirements for state review and approval of shoreline master program amendments as set forth in RCW 90.58.090 and WAC 173-26-120.

Ecology concludes that the county has reviewed applicable state laws and rules adopted since local adoption of the SMP, and identified clarifications incorporated into Ecology's recommended changes. Ecology concludes the county's final legislative action in completing the comprehensive SMP update required by RCW 90.58.080(2) will therefore also serve to meet the county's obligation to conduct a periodic review of the SMP at RCW 90.58.090(4).

DECISION AND EFFECTIVE DATE

Based on the preceding, Ecology has determined the proposed amendments comprehensively updating the SMP are consistent with the policy of the Shoreline Management Act, the applicable Guidelines and implementing rules, once required changes set forth in **Attachment B** are accepted by the county. The county may choose to adopt the recommended changes in **Attachment C**. Pursuant to RCW 90.58.090(2)(e), the county must notify Ecology of the approval or denial of the recommended changes. Ecology approval of the proposed amendments with required changes is effective 14 days from Ecology's final action approving the amendment.

As provided in RCW 90.58.090(2)(e)(ii) the county may choose to submit an alternative to all or part of the changes required by Ecology. If Ecology determines that the alternative proposal is consistent with the purpose and intent of Ecology's original changes and with RCW 90.58, then the department shall approve the alternative proposal and that action shall be the final action.

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Acronyms and Abbreviations:

CAO – critical areas ordinance
CDC – County Council Community Development Committee
CIA – Cumulative Impacts Analysis
County – Pierce County
DMMP – Dredged Material Management Program
DNR – Washington Department of Natural Resources
DNS – Determination of Non-significance
Ecology – Washington Department of Ecology
FEIS – Final Environmental Impact Statement
ICR – Shoreline Inventory and Characterization Report
OHWM – Ordinary High Water Mark
PCC – Pierce County Code
PSDDA – Puget Sound Dredged Disposal Analysis
RCW – Revised Code of Washington
SARC – Shellfish Aquaculture Regulatory Committee
SED – Shoreline Environment Designation
SEPA – State Environmental Policy Act
SMA – Shoreline Management Act
SMP – Shoreline Master Program
SSWS – Shorelines of Statewide Significance
WAC – Washington Administrative Code
WRIA – Water Resource Inventory Area