

**Coastal Zone Consistency  
Consistency With Washington’s Local Shoreline Master Programs  
COLUMBIA RIVER CHANNEL IMPROVEMENT PROJECT**

**Introduction**

This Attachment to the CZMA consistency determination is based on information prepared for the purpose of reviewing consistency of the Project with local shoreline master programs (“SMPs”) to comply with the Washington State Environmental Policy Act (SEPA), chapter 43.21C RCW. The level of detail results from the extensive discussions that have occurred between the Washington Ports and State and local agencies. The information supplements the Coastal Zone Management Consistency analysis.

Washington’s State Coastal Zone Management Program includes Wahkiakum County and Pacific County. Therefore, the analysis, discusses Pacific County’s Shoreline Master Program, although no Project activities will occur in Pacific County’s shoreline.

**Method**

The Project permitting team met with appropriate regulatory personnel from each of the local jurisdictions to discuss permitting requirements, including the application of local SMPs to Project activities within their jurisdiction. The meetings, called Focus Groups, were held with individual jurisdictions to ensure that each local government had the opportunity to ask questions and express concerns about the Project.

**Process**

The SMA classifies certain shoreline areas as “shorelines of statewide significance.” As such, certain state statutory use priorities and policies apply these “shorelines of statewide significance.”

The SMA also requires cities and counties to classify the State’s shorelines within their jurisdictions as “types” of shoreline environments (such as urban, rural, conservancy, and so on), encompassing both aquatic environments all project elements occurring within shoreline jurisdiction. Local SMPs may designate appropriate “uses” for specific shoreline environments, incorporating both regulatory standards and broader policy objectives and guidelines.

The format of this Attachment corresponds with the standards for review of shoreline development proposals. It evaluates the consistency of those project elements with the specific “use” regulations and broader policy objectives and guidelines applicable to that shoreline environment. Because of the way SMPs are written, there are typically numerous policies, guidelines, regulations, and criteria that apply to any given project element, many of which are duplicative. The reader is requested to bear with the repetition inherent in each SMP. Summary statements and cross-references are used as much as possible without making the analysis difficult to follow.

## Summary of Applicable Standards

This consistency with Washington's local shoreline master programs begins by evaluating shoreline consistency of all Project elements with criteria for shorelines of statewide significance:

**Shorelines of Statewide Significance Criteria.** The Columbia River is a shoreline of statewide significance. Therefore, all Project elements occurring within 200 feet of the shoreline are reviewed for consistency with the criteria for shorelines of statewide significance listed in the Act. These are, in order of priority:

- Recognize and protect the state-wide interest over local interest;
- Preserve the natural character of the shoreline;
- Result in long term over short term benefits;
- Protect the resources and ecology of the shoreline;
- Increase public access to publicly owned areas of the shoreline;
- Increase recreational opportunities for the public in the shoreline;
- Provide for any other element deemed appropriate or necessary.

This consistency with Washington's local shoreline master programs then evaluates shoreline consistency of the Project elements occurring in each jurisdiction, with the provisions of the respective jurisdiction's SMP.

**Shoreline Substantial Development Criteria.** Each Project activity is also reviewed to determine whether it is permitted in the pertinent shoreline environment in the relevant jurisdiction. Project activities are reviewed under the criteria for a shoreline substantial development permit. The standards are:

- Compliance with Use Regulations and Standards. Each Project activity is reviewed for compliance with the specific regulations and standards governing that type of use or activity.
- Consistency with Policy Goals, Objectives and Guidelines. Each Project activity is also reviewed for consistency with the general policy goals, objectives and guidelines for that type of use or activity.

## Results –Findings of Shoreline Consistency

### Shorelines of Statewide Significance

**Project Activities within Shorelines of Statewide Significance.** The Project includes the following types of activities that will take place within shoreline of statewide significance.

- ***Columbia River – 43-ft. Channel Improvement Construction and Maintenance Dredging***  
The Columbia River will be dredged from River Mile (RM) 3 to RM 106.5 to deepen the authorized 40- foot depth channel, with advanced maintenance to 45-feet, to an authorized depth of 43-feet with advanced maintenance to 48- feet. Once the channel improvements are made, maintenance dredging will be conducted to maintain the authorized 43-foot channel. Dredged material will be disposed in a variety of upland, aquatic and shoreland sites.

Both construction and maintenance of the 43-foot channel will be conducted using a combination of dredging methods currently used for channel maintenance, primarily hopper and pipeline dredges. Overall construction of the 43-foot channel is anticipated to require removing approximately 15 mcy of dredged material, as well as 50,500 cubic yards of basalt rock and 440,000 cubic yards of cemented sand, gravel and boulders. Over the first 20 years following completion of the channel improvements, overall maintenance dredging is expected to total about 90 mcy, declining from around 8 mcy/yr to about 3 mcy/yr of sand as the new channel approaches equilibrium. Annual maintenance will then continue at an average of about 3 mcy/yr of sand per year for the remaining 30-year life of the Project.

▪ ***Columbia River - Dredged Material Flowlane Disposal***

Flowlane disposal, similar to that which currently occurs for channel maintenance, will be done throughout the reach from River Mile (RM) 3 to (RM) 106.5 in or adjacent to the navigation channel, where depths range from 50 to 65 feet, but are typically greater than 50 feet. Flowlane disposal will distribute dredged material in areas within or adjacent to the navigation channel that are at depths greater than the channel, to minimize the potential for material settling back into the channel and causing additional shoaling problems.

Two proposed flowlane locations (in the vicinity of CRM 5 and at various locations between CRM 29-40) are at elevations greater than -65 feet CRD. The sand will be spread out during disposal by keeping hopper dredges moving as they dump and by frequently moving the discharge pipe from a pipeline dredge. The disposal material will then be incorporated into the riverbed, forming sand waves and gradually moving downstream, mainly as bedload transport.

Flowlane disposal sites are not specifically designated because they vary according to the condition of the channel and the techniques used by the contractor selected to perform the work. Flowlane disposal is dispersed along the channel to minimize the potential for material settling back into the channel and causing additional shoaling.

▪ ***Upland Dredged Material Disposal***

A number of upland disposal sites will also be used for the disposal of dredged sediments, to reduce the need for in-water disposal. The Project will use existing disposal sites to the extent feasible, as well as new sites that are located 300 feet beyond the River and behind the main flood control dike. Existing upland disposal sites include: Rice Island and Brown Island in Wahkiakum County. One new upland disposal site, Puget Island is in Wahkiakum County.

• ***Shoreline Disposal***

The Project also includes a shoreline disposal and beneficial use disposal site at Skamokawa in Wahkiakum County. This site will only be used for maintenance dredge material.

This analysis only reviews the disposal sites in Wahkiakum County because these sites are the only ones in a County subject to the Coastal Zone Management Act.

Table 1. Washington Disposal Sites by County

<b>Pacific County</b>	<b>Wahkiukum County</b>
	Rice Island (upland)
	<i>Skamokawa (shoreline)</i>
	<b>Puget Island (new-upland)</b>
	Brown Island (upland)
	Flowlane

- **Restoration Activities**

The Project incorporates a number of ecosystem restoration activities. These activities in Pacific and Wahkiukum Counties include: tidegate retrofits with fish slides for salmonid passage at selected locations along the lower Columbia River Deep River in Washington, Purple Loosestrife Control Program, RM 18-52, Oregon and Washington.

**Shorelines of Statewide Significance Criteria.** The Project is consistent with the criteria for activities within shorelines of statewide significance, which are set forth in the SMA in the following order of preference:

1. *Recognize and protect the statewide interest over local interest.*

The Project furthers the interests of Oregon and Washington and recognizes the statewide, regional, and national interests in interstate commerce over local interests. The purpose of the project is to improve the deep-draft transport of goods on the Columbia and Lower Willamette Rivers navigation channel, and to provide ecosystem restoration for fish and wildlife habitats. The Project will enhance the efficiency of navigation on the Columbia River and improve navigational access for goods throughout Oregon, Washington and the region. Navigation is one of the principal public uses recognized and protected under the public trust doctrine and the Washington Shoreline Management Act. (Johnson, The Public Trust Doctrine and Coastal Zone Management in Washington State, Washington Law Review July, 1992). The Columbia River is an international gateway for waterborne cargo for the Pacific northwest region and the United States. More than 35 million tons of cargo are shipped annually on approximately 2,000 ocean-going vessels via the ports of Kalama, Longview and Vancouver in Washington, and Portland and St. Helens in Oregon. In 2000, cargo valued at \$14 billion was shipped via lower Columbia River ports.

The Columbia River corridor serves as a funnel for cargo moving from more than 40 states, which is then shipped from Columbia River ports. Since the last improvement to the Columbia River navigation channel, authorized in 1962, the volume of cargo carried by deep-draft vessels to and from Columbia River ports has tripled. During the same period, the average tonnage per vessel has also tripled, while the number of deep-draft vessels calling at Columbia River ports declined slightly. Over the past 20 years, an increasing share of the Columbia River cargo tonnage has been carried on vessels that are Panamax class (the largest size vessels that can transit the Panama Canal) or larger. These larger vessels have design drafts that, after allowing for underkeel clearance requirements, exceed the depth allowed by the 40-foot channel; consequently, these ships must often come into the Columbia River ports “light loaded” (i.e.,

only partially loaded). Currently, more than 70 percent of the vessels deployed in the transpacific container trade are constrained by the 40-foot channel depth. This amount would be reduced to 39 percent with a 43-foot channel. By deepening the navigation channel, the Project will continue to support these water-dependent uses that are vital to the economies of Oregon and Washington.

Ecosystem restoration also recognizes the statewide interest. Proposed restoration focuses on habitat types that have been determined to be important to species listed under the Endangered Species Act, including white-tailed deer and salmonids. This habitat will also benefit a variety of nonlisted species.

### *2. Preserve the natural character of the shoreline and minimize man-made intrusions on shorelines.*

The Project includes restoration features to help restore the natural function of shoreline ecosystems and minimize intrusions on shoreline areas. The Project's restoration components respond to a well-demonstrated need for ecosystem restoration and incorporate many restoration actions.

The Project uses dredging and disposal methods similar to those used for maintenance dredging that are designed to minimize man-made intrusions on shorelines. Dredging and flowlane disposal will occur at depths to minimize impacts. Dredging will use hopper and pipeline dredges to minimize turbidity. Flowlane disposal uses a "down pipe" with a diffuser plate at its end. The down pipe extends 20 feet below the water surface to avoid impacts to migrating juvenile salmonids. The diffuser and movement of the pipe help prevent mounds from forming on the river bottom. Upland disposal will use temporary floating and shore pipelines extending from dredges. These temporary pipelines will be removed after dredged material disposal occurs for each event. The Project primarily uses shoreline sites for upland disposal that have been previously used for this purpose. The four new sites in Washington State are located 300 feet from the Columbia River and behind the main flood control dikes to minimize intrusion on the shoreline.

### *3. Plan for long term over short term benefit.*

The Project plans for the long-term benefits of enhanced navigational access. Over the past 20 years, an increasing share of the Columbia River cargo tonnage has been carried by Panamax class vessels or larger. These larger vessels have design drafts that, after allowing for underkeel clearance requirements, exceed the depth allowed by the 40-foot channel; consequently, these ships must often come into the Columbia River ports "light loaded" (i.e., only partially loaded). Currently, more than 70 percent of the vessels deployed in the transpacific container trade are constrained by the 40-foot channel depth. This amount would be reduced to 39 percent with a 43-foot channel. By deepening to 43 feet, the Project will be able to improve navigation infrastructure and maximize the efficiency of the vessels and waterborne cargo shipments for years to come.

The Project's restoration features also are intended to provide a long-term benefit to the Columbia River. These features include shallow water and intertidal habitat important to

salmonid, Columbian white tailed deer listed under the Endangered Species Act and to further Lower Columbia River Estuary goals for restoring natural resources in the Columbia River.

4. *Protect the resource and ecology of the shoreline.*

Modeling of the Project has shown that it should have only minor, if any effects, on physical parameters such as salinity, stream flows, erosion and accretions. Habitats forming processes and food chain effects have also been determined to be minimal. The Project uses dredging and disposal methods designed to protect the resources and ecology of the shorelines. Dredging will be done at depths of more than 40 feet, while salmonids generally migrate at depths of less than 20 feet. The primary hopper and pipeline dredges generally do not produce large amounts of turbidity during dredging because of the suction action of the dredge pump and the fact that the drag arm or cutter head is buried in the sediment. Turbidity produced by clamshell dredges is minimal

Flowlane disposal generally will also be in depths ranging from 50 to 65 feet. The benthic invertebrates that provide a major food source for some fish are found at depths of less than 20 feet and some flowlane disposal in depths over 65-feet. Therefore, restricting the disposal of dredged materials to depths greater than 20 feet will minimize potential impacts from this activity. To avoid mounding during hopper-dredge disposal, material will be released while the dredge is in motion to disperse material over the flowlane disposal area. During disposal or placement of dredged material by pipeline dredge, the diffuser and movement of the pipe help prevent mounds from forming on the river bottom.

Upland disposal along the Columbia River channel has been reviewed by the NOAA Fisheries Service and U.S. Fish and Wildlife Service to avoid adverse impacts on listed fish species or proposed critical habitat. Upland disposal activities will employ measures to minimize potential impacts.

Sand will be placed at upland disposal sites with a temporary pipeline. The pipeline will be removed after the sand is in place, in order to minimize any interference with recreational boating and commercial fishing. Upland disposal sites are designed to contain the dredged material and hold the return water while allowing sand and suspended sediment to settle. Water is allowed to settle and clear through the retention pond drainage system before it runs back into the river. Weirs are used to regulate the return of water to the river. Water returned to the river through weirs is subject to applicable state water quality standards, after dilution, at an appropriate point of compliance. Rock will be placed at the outfall locations to minimize erosion of beach soils.

Upland sites that have been used for past dredged material disposal are being used again. New upland disposal sites have been located 300 feet beyond ordinary high water and behind main flood control dikes. All proposed sites have either been located to avoid wetlands, to the extent feasible. Impacted, wetlands will be mitigated as prescribed in the Mitigation Plan in the 1999 FIR/EIS, Appendix G.

5. *Increase public access to publicly owned areas of the shorelines.*

The shoreline disposal at Skamokawa Beach helps to maintain a popular public park. A number of the sites will be developed for restoration purposes or acquired for wildlife mitigation. Efforts will focus on the potential to enhance natural resources and help to recover fish and wildlife species, rather than significantly increase public access. Public access often can adversely affect natural resources in a manner that would be inconsistent with the basin wide priority for natural resource restoration.

6. *Increase recreational opportunities for the public on the shorelines.*

The Project will enhance recreational opportunity on the shorelines by restoring the erosive beach at Skamokawa beach. The ecosystem restoration features of the Project will enhance passive recreational opportunities for studying and viewing wildlife on the shorelines. These Project features are located in Washington and Oregon and include restored wetland and riparian habitat at Shillapoo Lake (RM 91) (Washington); fish gates for salmonid passage at selected locations along the lower Columbia River; connecting the river to embayments at the upstream end of Walker-Lord (Oregon) and Hump-Fisher Islands (Washington) for improved fish access to embayments and rearing habitat for juvenile salmonids; the Lois Island Embayment Habitat Restoration (Oregon); the Purple Loosestrife Control Program (Washington), Miller/Pillar Habitat Restoration (Oregon); the Tenasillahe Island Tidegate/Inlet Improvements and Dike Breach (long term); the Cottonwood/Howard Island Columbian White-Tailed Deer Introduction; and the Bachelor Slough Restoration.

**Conditional Use Criteria.** Each local SMP identifies some of the Project activities as conditional uses in certain areas in its shoreline. The Project activities meet the SMA's conditional use criteria as discussed below.

1. *The use will cause no unreasonable adverse effects on the environment or other uses within the area.*

The Project incorporates numerous BMPs and ecosystem restoration features and is not expected to have an unreasonable adverse effect in the areas where they will take place. Dredging will be done at depths of more than 40 feet, beyond the depths at which salmonids generally migrate. Flowlane disposal generally will be in depths ranging from 50 to over 65 feet, at depths at which benthic invertebrates abundance in low

2. *The use will not interfere with the public use of public shorelines.*

Navigation is a principle public use of the Columbia River, which will be enhanced by this Project. The federal government has dredged the channel for navigation purposes for over 100 years. Such dredging is an activity necessary to enhance and maintain the public's navigational access. Dredging and flowlane disposal will be limited to the navigation channel and adjacent areas; therefore, these activities will not interfere with the other normal public uses of the shorelines. Placement of dredged materials at upland disposal sites will utilize a temporary pipeline extending from the dredge vessel that will be removed after the dredged materials are placed to minimize interference with recreational boating.

Shoreline disposal at Skamokawa Beach in Wahkiakum County also enhances the public use of the day park at that beach. In addition to enhancing the efficiency of the navigation channel, another purpose of this Project is to restore ecosystem function. This Project incorporates a number of ecosystem restoration projects that will enhance passive recreational opportunities for studying and viewing wildlife on the shorelines.

3. *The design of the proposed use will be compatible with the environment in which it will be located.*

The Project is compatible with the existing permitted uses. Dredging and flowlane disposal has historically taken place and is currently ongoing in the navigation channel to maintain the 40-foot channel depth. Additional dredging for the 43-foot channel is, therefore, consistent with existing permitted uses of the navigation channel and the environment in which they will be located. Most of the upland disposal sites have already been used. New sites are being located 300 feet beyond the Columbia River and behind the main flood control dikes. The upland disposal are therefore compatible with existing uses in the environments for which they are proposed.

a. *Specific performance standards shall be imposed and/or developed for any given use, to make that use compatible to the natural or conservancy environments, in which that use will locate.* Each activity includes best management practices to make the use compatible with its location.

4. *The proposed use will not be contrary to the goals, policy statements or general intent of the shoreline environments of this master program.*

Most of the activities proposed have occurred in the same or similar locations for maintenance. The new upland disposal sites are sited 300 feet beyond the Columbia River and behind main flood control dikes.

## **Wahkiakum County**

**References.** Wahkiakum County's shoreline regulations and policies are found in its SMP. References below to the Wahkiakum County SMP (revised 1980) ("WCSMP") are given by page number.

**Proposed Shoreline Uses.** The Project includes dredging and disposal of dredged material, including flow-lane, upland, and shoreline disposal. These activities has occurred within Wahkiakum County before in the same general locations as proposed for this Project, except for the upland disposal site on Puget Island. The Puget Island upland disposal site is located 300 feet from the Columbia River behind main flood control dikes, and is not within the shoreline jurisdiction. These activities are discussed further below:

- ***Columbia River – 43-ft. Channel Improvement Construction and Maintenance Dredging,*** The 600 foot wide navigation channel in the Columbia River will be dredged in specific locations from River Mile (RM) 20 to RM 52, in Wahkiakum County. Dredging will deepen the existing 40-foot-deep channel to the newly authorized depth of 43 feet. This dredging will occur in the existing navigation channel in generally the same foot prints as past maintenance dredging. Past maintenance dredging has been found to be consistent with the Washington Coastal

Management Program. The Department of Ecology most recently determined maintenance dredging in these general areas to be consistent with the Washington Coastal Management Program on June 1, 2000.

- ***Columbia River – Dredged Material Flowlane Disposal***

Flowlane disposal could be done from River Mile (RM) 20 to (RM) 52, in Wahkiakum County. Flowlane disposal will occur where depths range from 50 to 65 feet in or adjacent to the navigation channel. Flowlane disposal will be in areas over 65-feet deep between RM's 29-40. Flowlane disposal similar to that proposed had routinely occurred for Channel maintenance and has been found to be consistent with the Washington Coastal Management Program. The Department of Ecology's June 1, 2000 consistency determination covered the Corps flowlane disposal activities.

- ***Rice Island - Dredged Material Land Disposal***

- Size: 228 acres (21 Washington, 207 Oregon)
- Elevation: Current surface elevation (average for WA 21 acres) estimated at +13 feet Columbia River Datum (CRD) based upon October 2001 survey; Surface elevation with total volume placed estimated at +53 feet CRD
- Owners: WDNR and Oregon Division of State Lands ("ODSL")

Rice Island is an existing upland disposal site located within 200 feet of the shoreline. The Rice Island site will only be used for maintenance dredge material. The site was subject to the June 1, 2000 consistency determination.

The property occupies the majority of a roughly northeast-southwest trending bar island. The island was created with material dredged from the Columbia River. The topography of the island interior is relatively level, as the dredged material has been evenly distributed across it. Improvements observed on-site include a retention pond and metal drainage structure for the dredged material dewatering. The downstream end of the island is used by terns and access to the island is limited.

The site can hold up to 5,500,000 cy of sand. The Corps plans to place up to 5,500,000 cy of sand during the maintenance phases of the Improvement Project. The site's elevation will be raised up to 53 feet CRD.

- ***Skamokawa – Dredged Material Shoreline Disposal/ Resale***

- Size: 11 acres
- Elevation: Current surface elevation for the shoreline site averages 0 feet CRD; post -fill elevation based upon site capacity equal +18 feet CRD although will vary with resale of material and beach erosion.
- Owner: Port of Wahkiakum 2

Skamokawa is an existing shoreline disposal/resale site. The Skamokawa shoreline disposal site will only be used for maintenance dredge material.

The site is zoned an urban shoreland environment above the ordinary high water (OHW) line, and a conservancy aquatic environment below OHW. The property borders a day-use park to the southeast and northeast. The site has been used for material disposal from the Columbia River. The Port of Wahkiakum 2 also uses the site as a holding area for sand that is later removed and sold in order to offset the park's operating costs.

The sand resale operation is focused in the southeast corner of the property. There are no other improvements on the site. The site can accept up to 250,000 cy of sand. The Corps plans to place 250,000 cy of sand on the beach during the maintenance phases of the Project. Sand has been placed as shoreline disposal at the Skamokawa site to ease severe beach erosion problems in the past, most recently in 2000.

- ***Puget Island (Vik Property)***
- Size: 100 acres
- Elevation: Current surface elevation estimated at +15 feet CRD; surface elevation with total volume placed estimated at +42 feet CRD.
- Owner: Vik family

Puget Island is a new upland disposal site located at least 300 feet beyond a rural shoreland environment. It is interior to the main flood control dike. The site is broken into three cells to be filled from upstream to downstream. This disposal site is outside the shoreline; therefore, it is not subject to the WCSMP.

The site is bordered on the north, west, and east by other agricultural lands and by private residences to the south, principally riverward of the flood control dike. The property is currently used as agricultural land. The site can accept up to 3,500,000 cy of sand. The Corps plans to place up to 3,300,000 cy of sand at the site, raising the elevation to 42 feet CRD. The topsoil will be borrowed to form the containment dike and then replaced over the disposal site so that the property owner can resume using the land for agricultural purposes after disposal has been completed.

- ***Brown Island - Dredged Material Upland***
- Size: 72 acres
- Elevation: Current surface elevation estimated at +15 feet CRD; surface elevation with total volume placed estimated at +66 feet CRD
- Owner: Washington Department of Natural Resources ("WDNR")

Brown Island is an existing upland disposal site located within 200 feet of the shoreline. The site was included in the maintenance proposal that was subject to the June 1, 2000 consistency determination.

Brown Island is located at the upper end of Puget Island. No improvements are located on the island. Ground surface consists of sand dredged from maintenance of the 40-ft navigation channel. There is no tree cover on the site. Brown Island is bordered by White Island. A low, seasonally inundated swale separates the two. The site can accept up to 3,700,000 cy of sand. The Corps plans to place up to that amount, raising the elevation up to 66 feet CRD. Dredged

material will be placed with a temporary pipeline extending from the dredge vessel. Water will be allowed to settle and clear before discharge through a weir and outfall system before returning to the River.

**Permitted Shoreline Uses.** The principal WCSMP regulatory use standards that apply to the Project elements that will occur in Wahkiakum County are those governing dredging and dredged material disposal. The WCSMP also includes standards for mining/mineral extraction and commercial (sand resale) activities. The Port of Wahkiakum 2 is expected to resale dredge materials disposed at Skamokawa beach. This resale activity is not part of the federally authorized project; therefore, use standards applicable to the resale activity do not apply to the federally authorized project.

- ***Dredging***

The WCSMP defines dredging as the removal of earth, sediment or other material from the bottom of a river or other aquatic area for the purpose of deepening a navigation channel or to obtain use of the bottom sediments. In this case, the removal of sand from the Columbia River to deepen the navigational channel to 43 feet constitutes dredging.

- Maintenance dredging is permitted as a substantial development in the urban, rural and conservancy aquatic environments.
- New construction dredging is permitted as a substantial development in urban and rural aquatic environments.
- New construction dredging is permitted as a conditional use in conservancy aquatic environments.

- ***Dredged Material Disposal***

Under the WCSMP, the disposal of dredged material encompasses the deposition of dredged material in aquatic areas as well as shorelines, including land disposal, in-water disposal, shoreline disposal and flowlane disposal. The Project will use three upland sites, one shoreline site, and flowlane types of disposal in Wahkiakum County. However, there will be no ocean disposal in Wahkiakum County.

- Land disposal is the deposition of dredged material on land. It will occur at the Brown Island and Rice Island sites. It will also occur beyond shoreline jurisdiction at the Puget Island (Vik property) site.
- Flowlane disposal is the in-water deposition of dredged material in or adjacent to the maintained navigation channel and within the natural channel or the slopes adjacent to the natural channel, in order to avoid permanent deposition and allow the material to continue downstream. This will occur in and adjacent to the navigation channel in the stretch of the Columbia River in Wahkiakum County.
- Shoreline disposal is the deposition of dredged material in shoreline areas where active erosion is occurring, as a way of preventing further erosion of the bankline. This will occur at the Skamokawa site.

**Format.** The WCSMP is organized into the following areas: general conditions for substantial development, specific regulatory standards for shoreline uses and activities, general policies and objectives for shoreline uses and activities, shoreline environment objectives, element goals and objectives, and conditional use permitting criteria. The analysis below, therefore, follows that same basic structure:

- **Substantial Development Conditions**
- **Master Program Regulatory Standards for Uses and Activities**
  - Dredging
  - Dredged Material Disposal
- **Master Program Shoreline Environments and Objectives**
  - Urban
  - Rural
  - Conservancy
- **Master Program Element Goals and Objectives**
  - Circulation
  - Conservation
  - Economic Development

**Consistency Analysis – Findings.** The Project is not only consistent and in general conformance with the WCSMP, it actually promotes several key goals and policies regarding navigation and economic development.

**Substantial Development Conditions.** The Project will adopt and comply with all applicable general permit conditions and best management practices (“BMPs”) identified on page “v” of the WCSMP.

**Dredging.** As noted above, the Project’s dredging will occur in the existing navigation channel where dredging has previously occurred. The Project, which involves incrementally deeper dredging, is consistent with the WCSMP’s regulatory use standards and general policy objectives for dredging.

**Regulatory Use Standards for Dredging.** The Project meets the specific standards for dredging (WCSMP, pp. 51-52):

1. *Dredging in aquatic areas shall be permitted only:*

a. *For navigation or navigational access.*

As discussed in Section 4.1.2, the primary purpose of the Project is to enhance navigation and navigational access. Dredging serves the purposes of navigation and navigational access.

b. *In conjunction with a permitted water-dependent use.*

Marine shipping and related navigational improvements are permitted water-dependent uses.

c. *As part of an approved restoration Project.*

d. *As a source of material, or for mining and/or mineral extraction.*

The Project uses disposal sites from which dredged materials can be used beneficially or sold, including the Skamokawa site in Wahkiakum County. However, as noted above, the purpose of the federal project does not include the resale activity and such activity is not part of the federal project.

*e. In conjunction with a permitted navigational structure for which there is a public need and no other feasible site or route.*

The dredging will occur in conjunction with construction of the deepened navigational channel. See Shoreline and Statewide Significance Criteria.

*2. Minimize dredging.*

Construction and maintenance dredging will only remove the material necessary for the authorized 43-foot navigation channel. The authorization includes overdepth and overwidth dredging for advanced maintenance.

*3. Locate dredging in sandy bottom sediments, where biological productivity is low and unwanted shoaling has occurred.*

The amount of dredging that will be necessary in a given location varies depending on the amount and location of shoaling. The dredged materials that are removed during construction of the 43-foot navigation channel will be primarily sand (small quantity of basalt and cobbles), with a low percent (<1%) organic content. These areas are low in benthic productivity when compared to other parts of the river.

*4. Conform to federal and state permits.*

The Project will comply with applicable state and federal permits or approvals.

*5. Avoid destabilization of fine-textured sediments, erosion, siltation, and other undesirable changes in circulation patterns or flushing times.*

The Project will avoid destabilization of fine-textured sediments, erosion and siltation. The dredged materials that are removed during construction of the 43-foot navigation channel will be primarily coarse to medium-grained sand (small quantity of basalt and cobbles) as opposed to fine-textured sediments (silts and clays). Hopper dragheads and pipeline cutter heads will only be lifted to within 3 feet of the river bottom. This minimizes siltation and is normally done by the dredge operators, as it has been required by NMFS for maintenance dredging of the 40-foot channel.

*6. Consider adverse effects of initial and maintenance dredging.*

Dredging will be done at depths of more than 40 feet. Because salmonids generally migrate at depths within 20 feet of the surface, entrainment is not expected to occur. No crab are located in the area to be dredged within Wahkiakum County. Upland effects of disposal of dredged materials is discussed below.

**Policy Objectives for Dredging.** The Project is also consistent with the WCSMP policy objectives for dredging (WCSMP, p. 20):

1. *Minimize damage to existing ecological systems and natural resources in both the dredging and deposition areas.*

Dredging will be done at depths of more than 40 feet, beyond the depths at which salmonids generally migrate. The primary hopper and pipeline dredges that will be used generally do not produce large amounts of turbidity because of the suction action of the dredge pump and the burial of the drag arm or cutter head in the sediment.

Flowlane disposal generally will also be in depths ranging from 50 to 65 feet. Most benthic invertebrates that serve as a food source for fish are found at depths of less than 20 feet. Therefore, restricting the disposal of dredged materials to depths greater than 20 feet will minimize potential impacts from this activity. Most of the volume of disposal material will be placed in areas in Wahkiakum County that have no crabs. While it has been established that white sturgeon are present in the flowlane disposal areas, the Corps is conducting studies to help avoid and minimize impacts to sturgeon.

The proposed dredging disposal activity along the Columbia River channel has been subject to consultation under the Endangered Species Act to address impacts to listed fish species or proposed critical habitat. Except for the Puget Island site, the upland disposal sites in Wahkiakum County have been used for dredge material disposal. Selection of previously used sites helps to avoid damage to “existing ecological systems” and resources. The new disposal site, Puget Island, in Wahkiakum County is located 300 feet beyond the Columbia River and behind the main flood control dike to minimize damage to existing ecological systems and resources of the shoreline. The site is outside of shoreline jurisdiction. The Washington Department of Fish and Wildlife Priority Habitat Survey map does not show waterfowl use of the Puget Island disposal site. Wintering Canada geese would be expected to forage in these pasturelands. The wildlife mitigation plan includes creation of 132 acres of Canada goose forage habitat at Woodland Bottoms. The disposal site ultimately will be returned to agricultural use and would then provide waterfowl forage compared to the present condition. (See Exhibit K, Technical Memorandum regarding Critical Area Consistency, SEIS). The USFWS Biological Opinion includes the Corps incremental (3 cell) disposal plan with topsoil replacement as a reasonable and prudent measure to minimize impacts on Columbian white-tailed deer.

2. *Restrict dredged material deposition in water areas to improve habitat or to correct material distribution adversely affecting resources.*

Shoreline sites selected for use as shoreline disposal areas are only those that are highly erosive, where replacement of dredged materials will correct the material distribution, such as at the Skamokawa site in Wahkiakum County. Flowlane disposal will be restricted to the navigation channel and the adjacent areas and will use a diffuser on the down pipe that will be moved continually to prevent mounding on the river bottom.

3. *Local review of dredging to create land or extend property.*

The dredging that will occur in this Project is not being conducted for the purpose of creating land or extending property.

4. *Dredged material disposal in shoreland areas should not impair scenic views of local residents.*

The Project uses existing disposal sites, including Brown Island and Rice Island in Wahkiakum County, in order to minimize visual impacts. The new disposal site is located beyond the shoreline.

5. *Restrict dredging activities in commercial fish drift areas during fishing season.*

Dredging and flowlane disposal will be restricted to the navigation channel and adjacent areas. As noted above, the Project generally uses disposal sites and practices that are being, or have been, used for many years in Wahkiakum County. Dredging and flowlane disposal activities are spatially restricted and preclude use of only a minor portion of the river during operations.

**Disposal of Dredged Material.** The Project is consistent with the WCSMP's regulatory use standards and the policy objectives for the disposal of dredged materials.

**Regulatory Use Standards for Disposal of Dredged Material.** The Project is consistent with the WCSMP's standards for the disposal of dredged material (WCSMP, p. 55-57):

1. *Select dredged material disposal sites in accordance with the "Dredged Material Disposal Plan Site Selection and Use Priorities."*

All dredged material disposal sites that are within the shoreline are covered by CREST's Dredged Material Disposal Plan Site Selection and Use Priorities ("DMDP"). In addition the CREST DMDP explicitly states that "the Plan is not intended to be an exhaustive list of all possible disposal sites and it in no way restricts the disposal of dredged materials to designated sites only."

2. *Use dikes to protect water quality, and graded slopes of 1½-1 and reseeding to minimize erosion at dredged material disposal sites.*

Upland disposal sites, like Brown Island, Rice Island and Puget Island are designed to contain the dredged material and hold the return water while allowing sand and suspended sediment to settle.

3. *Characterize bottom sediments in the dredging and disposal areas, except for clean Columbia River sands and gravel.*

Sediment quality has been evaluated for dredged materials from the navigation channel. Sediment samples were collected and subjected to physical and chemical analyses. These studies indicate that material to be dredged in the Columbia River navigation channel is suitable for unconfined open water disposal. The bed material of the Columbia River navigation channel is over 99 percent fine to coarse sand. Sediment evaluations of potential maintenance dredging material conducted since the 1970s have consistently found the material to be suitable for unconfined in-water disposal. A recent review of all available sediment and contaminants data from the navigation channel determined that all such data was below current DMEF and NMFS thresholds (NMFS Biological Opinion).

4. *Coordinate timing of dredging and disposal with federal, state and local agencies, and private interests to protect biological productivity and minimize interference with fishing activities.*

Year-round dredging is proposed for this Project because dredging will be restricted to the navigation channel, at depths of more than 40 feet where salmonids and benthic invertebrates are generally not present. Dredging and disposal in Wahkiakum County, however, will occur during a narrow time period each year. Restricting dredging and flowlane disposal to the navigation channel and adjacent areas will also minimize interference with commercial and recreational fishing, as will the use of temporary pipelines for placement of sand at upland disposal sites. The National Marine Fisheries Service and Fish and Wildlife have reviewed the Project and issued Biological Opinions that address the Project's effects on species listed under the Endangered Species Act. The use of existing disposal sites minimizes the impact to upland vegetation. Creation of the upland disposal site at Puget Island will impact farmlands that are located beyond the shoreline.

5. *Minimize adverse short-term effects of dredging and disposal such as turbidity, release of heavy metals, etc., disruption of food chains, loss of benthic productivity, and disturbance of fish runs.*

Dredging will occur at depths of more than 40 feet, beyond the depths at which salmonids generally migrate. Flowlane disposal generally will be in depths ranging from 50 to over 65 feet, at depths at which benthic invertebrates abundance is low. The Project incorporates dredging methods and BMPs that minimize turbidity. Sediment studies indicate that the quality of sediments that will be dredged from the Columbia River navigation channel is suitable for unconfined open water disposal.

6. *All relevant state and federal water quality standards shall be met by dredging and dredged material disposal activities.*

A Section 401 water quality certification will be obtained for the Project. The Project will comply with all applicable water quality standards and any conditions of the certification.

7. *In-water disposal requirements:*

Flowlane disposal is discussed in response to question 8 below. The only other in-water disposal is at Skamokawa Beach where such activity has occurred for many years.

a. *Consider the need for the proposed disposal, and alternate sites and methods of disposal that might be less damaging to the environment and benthic populations.*

The Corps has conducted detailed investigations of proposed and alternative disposal sites and methods. The shoreline disposal site at Skamokawa has been used because of the need to counter highly erosive forces at this area of the shoreline. In addition, the Department of Ecology is generally encouraging in-water disposal

b. *Consider matching the size and characteristics of dredged material to the disposal site.*

Most of the dredged materials that are removed during construction of the 43-foot navigation channel will be sand, with a low percent organic content, like the sands at the Skamokawa site. Sediment evaluations of potential maintenance dredging material conducted since the 1970s have

consistently found this material to be suitable for unconfined in-water disposal. Flowlane disposal will place sand on the sandy riverbed.

*c. Avoid erosion, sedimentation, increased flood hazard and other undesirable changes in circulation in dredging and the disposal of the dredged material. Tidal marshes, tidal flats and other wetlands should not be adversely affected.*

The Skamokawa site was selected specifically to counter erosion. Disposal at this location will neither result in undesirable changes nor adversely affect desirable habitat.

*d. No dredged material disposal in the vicinity of a public water supply intake.*

There is no public water supply intake near the Skamokawa shoreline disposal site.

#### *8. Flowlane disposal requirements:*

*a. No deposit of material upstream from the dredging site or where flows or tidal conditions transport sediments predominantly upriver.*

Flowlane or in-water disposal distributes dredged material downstream of the dredging area, at sites within or adjacent to the navigation channel where depths are greater than the channel. This is done to minimize the potential for material settling back into the channel and causing additional shoaling problems.

*b. No interference with fishing activities by causing major changes in the circulation patterns or bottom configuration of the disposal site.*

Flowlane disposal will be restricted to the navigation channel and the adjacent areas, where fishing activities generally do not take place. Flowlane disposal will be dispersed along the channel to avoid creating mounds that could change circulation patterns or bottom configurations. During hopper-dredge disposal, material will be released while the dredge is in motion to disperse material, during pipeline-dredge disposal, the diffuser on the down pipe will be operated to prevent mounding on the river bottom.

#### *9. Shoreline disposal requirements:*

*a. No erosion or deposition downstream from the disposal site, or erosion that could smother marsh or other shallow productive areas.*

NOAA Fisheries and U.S. Fish and Wildlife Service have approved shoreline disposal at Skamakowa after reviewing it to determine that it would not have adverse impacts to listed fish species or their habitat. The area downstream from Skamakowa is not a marsh or other shallow productive area. The site is on the outside of the river bend and therefore is unlikely that a stable benthic environment could form.

*b. The volume and frequency of dredged material disposal maintains a stable beach profile, as nearly as possible. Dredged material shall be graded at a uniform slope and contoured to reduce cove and peninsula formation and to minimize stranding of juvenile fish.*

Shoreline disposal will be done primarily with pipeline dredges. Material dredged from the main navigation channel is pumped to a shallow water and beach area. The dredge first pumps a landing on the beach to establish a point from which further material placement occurs. Dredged

material is pumped as a sand and water slurry (about 20 percent sand). As it exits the shore pipe, the sand quickly settles out on the beach while the water returns to the river. Once sand begins to accumulate, it is spread to match the elevation of the existing beach. A typical shoreline disposal operation occurs only once at any location during the dredging season. It takes from 5 to 15 days to fill a site, depending on the size of the site and the amount of material to be dredged. The width of the beach that is maintained is approximately 100 to 150 feet riverward. The process continues by adding length to the shore pipe and proceeding longitudinally along the beach. After disposal the beach is graded to a minimum steepness of 10 to 15 percent to prevent the possibility of creating areas where fish could be stranded by wave action.

10. *Ocean disposal requirements:*

No ocean disposal will occur within Wahkiakum County.

11. *Flowlane disposal and shoreline disposal inside the estuary should be substituted for ocean disposal only when sea or weather conditions are a hazard to navigation for the dredging vessel.* None of the disposal in Wahkiakum County has been substituted for ocean disposal. In addition, the Washington Department of Ecology has encouraged the Corps to consider alternatives to ocean disposal.

12. *Land disposal requirements:*

a. *Surface discharge must be properly diverted to maintain the integrity of the natural streams, wetlands and drainage ways. Disposal runoff water must exit the waterway through an outfall at a location that maximizes circulation and flushing. Underground springs and aquifers must be identified and protected.*

Upland disposal sites will use settling ponds and weirs to regulate the return of water to the river. Water from the upland disposal sites will be allowed to settle and clear through the settling pond drainage system before it runs back into the river. Water returned to the river through weirs is subject to applicable state water quality standards, after dilution, at an appropriate point of compliance. The only new upland disposal site is located Puget Island beyond shoreline jurisdiction.

b. *Dikes should be well constructed and large enough to encourage proper “ponding” and to prevent the return of settleable solids into the waterway or estuary. Ponds should be designed to maintain at least one foot of standing water at all times to further encourage proper settling. Weirs should have proper crest heights.*

Upland sites, like Brown Island, Rice Island and Puget Island, in Wahkiakum County, are designed to contain the dredged material within dikes and hold the return water while allowing sand and suspended sediment to settle. Sand will be placed in upland disposal sites with a temporary pipeline extending from the dredge vessel. The pipeline will be removed from the sites after sand placement. Sand moves through the pipeline in the form of a slurry mixed with Columbia River water. Water from the upland disposal sites will be allowed to settle and clear through the retention pond drainage system before it runs back into the river. Weirs of appropriate crest height will be used, where necessary, to regulate the return of water to the river. Water returned to the river through weirs is subject to applicable state water quality standards, after dilution, at an appropriate point of compliance.

13. *Disposal should be comparable with the intended land surface use after disposal and should minimize the quantity of land that is disturbed. Clearing of land should occur in stages on an as-needed basis. Reuse of existing disposal sites is preferable to the creation of new sites.*

Upland disposal sites, like Brown Island and Rice Island, that have been used for past dredged material disposal will continue to be used. Reuse of previous disposal sites minimizes resources impacts as well as the need to obtain new disposal sites. The useful life of these diked disposal sites will be extended by building a series of “lifts” placed on top of the deposited sand after a specified height is reached. This method minimizes the quantity of land that is disturbed.

14. *Where appropriate, revegetation should occur as soon as possible, using native species, consistent with the interagency seeding manual prepared by the Soil Conservation Service (SCS).*

The Puget Island site will have top soil replaced and the area will be returned to agricultural use. Sand is not a natural soil base for either upland or beach sites in the project area. Consequently, dredged material disposal sites (sand) are an atypical habitat for the project area. There are no native plant species present in the project area for sandy beach or upland habitats. For dredged material disposal sites, particularly downstream of CRM 46, experience has shown that the sandy material on disposal sites is too dry, sterile (i.e. lack of organic material and nutrients) and erosive (wind) to allow for vegetation establishment.

15. *Height and slope requirements: The final height and slope after each use of a land dredged material site should be such that:*

a. *The site does not enlarge itself by sluffing and erosion.*

Our observations of existing disposal sites indicate that erosion and side-slope sluffing are negligible.

b. *Material lost during storms and freshets is minimized.*

Upland sites, like Brown Island, Rice Island and Puget Island will be surrounded by earthen dikes to contain the dredged material and hold the return water while allowing sand and suspended sediment to settle. Return flows of water to the river will be regulated by weirs. Rain water percolates easily into the sand, this minimizing runoff and erosion.

c. *View impacts from residences, viewpoints and parks are avoided.*

The Project uses existing disposal sites to the extent feasible, like Brown Island and Rice Island, in order to minimize visual impacts. The sites are quite distant from residences, viewpoints and parks.

**Policy Objectives for Dredged Material Disposal.** The Project is consistent with the WCSMP’s standards for dredged material disposal, which are included within its policy objectives for dredging (WCSMP, p. 20).

**General Policies.** The Project is not only consistent with the WCSMP standards and policies discussed above, it also furthers some of the more general master program goals and policy objectives for applicable shoreline environments and elements, as discussed below.

**General Policy Objectives for Shoreline Environments.** The Project is consistent with the WCSMP's general policy objectives for the shoreline environments in which Project elements will be located.

1. *Urban: To identify those defined areas which are currently in urban use and potentially capable of urban use to satisfy the socio-economic needs of the present and future population of the County.*

None of the proposed Project uses are urban in nature.

2. *Rural: Establish open spaces which will satisfy positive human needs for recreation, discourage urban sprawl into areas beyond service capabilities and preserve the limited agricultural resource base.*

The only Project elements that will occur in a rural shoreland environment are the temporary pipeline from the dredge vessel to the Puget Island upland disposal site. These less intensive uses are consistent with the rural shoreline goals of establishing open spaces and discouraging urban sprawl.

3. *Conservancy: Maintain these areas for a sustained yield philosophy of resource management, and establish suitable areas for non-intensive agricultural uses, non-intensive recreational uses and limited intensive public access.*

Disposal of dredged material and the Skamokawa shoreline disposal activities will take place in conservancy shoreline areas. Shoreline disposal activities at Skamokawa will restore an eroded shoreline and return sands to the River system consistent with the conservancy shoreline goal of maintaining the Columbia River with a sustained yield philosophy of resource management.

**General Policy Objectives for Shoreline Elements.**

The Project is consistent with the WCSMP's general policy objectives for applicable shoreline elements.

1. *Circulation Element:*

*Goal: Development of facilities for any of the various modes of travel on County shorelines must not endanger the life, property, or rights, nor debilitate the quality of life of citizens or existing commercial entities.*

The dredging and disposal activities related to the navigation channel that are used in Wahkiakum County are similar to those used for decades. These past activities have not endangered life, property or the rights of others. The Skamokawa shoreline disposal enhances Wahkiakum County's quality of life by helping maintain the day use park.

*Applicable Policy Objectives:*

a. *To ensure that the site selected is suitable for the use proposed.*

Dredging and flowlane disposal will be restricted to the navigation channel and the adjacent area. Upland dredged material disposal sites have been chosen so as to avoid and minimize impacts. Sites that have been used for past dredged material disposal, like Brown Island and Rice Island, will continue to be used. Sites from which dredged materials could be used beneficially or sold, like the Skamokawa resale site, were also selected in preference to other locations. The new upland disposal site at Puget Island (Vik), is located outside the 200-foot shoreline jurisdiction.

The Skamokawa shoreline disposal site was selected to counter erosive effects to a popular recreation area.

b. *To be introduced to the area with a minimal adverse effect upon the natural features, scenic quality and ecosystems.*

No new circulation activity is being introduced to the shoreline area. Dredging and disposal has occurred in Wahkiakum County for many years. The new Puget Island site is behind the flood control dike and beyond the shoreline jurisdiction.

c. *To fulfill a need which can only be satisfied by such use on the shorelines as opposed to an upland use.*

The Project will use the existing upland disposal sites at Brown Island and Rice Island, and the existing resale site at Skamokawa.

d. *To protect the life, property and rights of others and sustain or improve the quality of life in the area.*

See Goal 1 above.

## 2. *Conservation Element:*

*Goal: Encourage best management practices for the continued sustained yield of replenishable resources of the shorelines and preserve, protect and restore those unique and nonrenewable resources.*

The Project incorporates the following BMPs, among others, to protect shoreline resources during dredging:

- During hopper and pipeline dredging, maintain dragheads in the substrate or no more than 3 feet above the bottom with the dredge pumps running.
- The contractor shall not release any trash, garbage, oil, grease, chemicals, or other contaminants into the waterway.
- The Project also incorporates the following BMPs, among others, to protect shoreline resources during dredged material disposal:
- For flowlane disposal, dispose of material in a manner that prevents mounding of the disposal material.
- Maintain discharge pipe of pipeline dredge at or below 20 feet of water depth during flowlane disposal.
- Berm upland disposal sites to maximize the settling of fines in the runoff water.
- Locate new upland disposal sites 300 feet from the Columbia River.
- Grade shoreline disposal sites to a slope of 10 to 15 percent, with no swales, to reduce the possibility of stranding of juvenile salmonids.

### *Applicable Policy Objectives:*

a. *Preserve the scenic and aesthetic qualities of shorelines and vistas.*

Existing upland disposal sites, like Brown Island and Rice Island, are being used. The new upland disposal site is located outside of the shoreline.

b. *Contribute to a maximum utilization of resources without harming other natural systems or quality of life.*

By deepening the navigation channel to 3 feet in selected locations, the Project will maximize the utility of the navigation channel. At the same time, by incorporating ecosystem restoration components, the Project will further enhance the natural systems and quality of life.

c. *Restore damaged features or ecosystems to a higher quality than may currently exist.*

The Project incorporates a number of ecosystem restoration actions. A wildlife mitigation plan will also be enacted to offset wildlife habitat losses.

d. *Preserve unique and non-renewable resources.*

Restricting dredging and flowlane disposal to depths of more than 20 feet will minimize potential impacts from these activities on threatened and endangered species and their critical habitat. Utilization of previously used upland disposal sites to the extent practicable also addresses this objective.

e. *Consider the total upstream and downstream effect of proposed developments to ensure that no degradation will occur to the shorelines.*

This Technical Memorandum includes shoreline consistency analyses for each jurisdiction in which Project activities will take place to consider the total upstream and downstream effects of the proposal.

### 3. *Economic Development Element:*

*Goal: Encourage industry and commercial activities on the shorelines that require the land-water interface for productive efforts.*

The Columbia River navigation channel serves the national and regional economy. The lower Columbia River is the second largest grain-shipping waterway in the world, surpassed only by the Mississippi River. Regional growers, producers, and manufacturers use Columbia River ports to transport their goods to world markets. Shippers that use the Columbia River realize lower shipping costs by using Columbia River ports as opposed to more distant alternative ports. Marine shipping is an important industry in the lower Columbia River region. Approximately 40,000 jobs depend on Columbia River port activity, at \$46,000 per year per employee on average. Columbia River port activity also generates \$2 billion in business revenues and more than \$200 million in state and local taxes each year. By lessening or removing the channel depth constraints for Columbia River port activity, the Project will continue to support this vital section of the regional economy for Wahkiakum County citizens and commercial entities.

#### *Applicable Policy Objectives:*

a. *Those economic developments proposed must not reduce the quality of life residents.*

The Project involves activities and methods that are well established in Wahkiakum County and will not reduce quality of life.

b. *Effectively operate without debilitating the quality of life or resources of the surrounding and adjacent area selected.*

By deepening the channel depth in selected locations, the Project will enhance the utility of the navigation channel. At the same time, by incorporating ecosystem restoration components, the

Project will further enhance quality of life and preserve resources in the surrounding and adjacent areas.

## **Pacific County**

**References.** Pacific County’s shoreline regulations and policies are found in its SMP. References below to the Pacific County SMP (revised 2000) (“PCSMP”) are given by page number.

### **Shoreline Designations.**

A potential ocean disposal site, referred to as the “Deep Water” site, was selected after a thorough analysis of alternative disposal sites. Under the preferred option presented in the Supplemental IFR/EIS, construction of the Millar Pillar and Lois Mott ecosystem restoration features would use dredged materials from construction and maintenance that otherwise would have been taken to the Deep Water site. With the use and implementation of the two estuarine restoration sites, the Deep Water site would not be necessary. In the event dredge material from the channel did go to the ocean, it would go to a site designated for ocean disposal under Section 102 103 of the Ocean Dumping Act (“ODA”). Such disposal would be in accordance with the management and monitoring plan developed for dumping at that site. At this point in time, we fully anticipate that the site designated under the ODA will be the Deep Water Site. This site is located outside the limits of the Territorial Sea and, as explained below, is not within the jurisdiction of Pacific County and is not subject to any policies of the Pacific County SMP.

The Pacific County Shoreline Master Program includes a number of provisions that implement the Washington Ocean Resources Management Act (ORMA). As explained in the CZMA Consistency Determination, the Ocean Resources Management Act does not apply to the Project because the Deep Water site is off the coast of Oregon and is south of Cape Disappointment, the southern limit of the area regulated by the Act. The Pacific County SMP also expressly limits its application to north of Cape Disappointment and contains no policies that are applicable to the Deep Water Disposal Site.

*Section 2. Definitions.* The Pacific County SMP defines “coastal waters” as “waters of the Pacific Ocean seaward from Cape Flattery south to Cape Disappointment, from mean high tide seaward two hundred miles. For Pacific County, coastal waters include from mean high tide seaward three miles.” This definition is similar to the definition in the ORMA in limiting its applicability to areas north of Cape Disappointment. In addition, the definition limits Pacific County’s definition of coastal waters to within three miles. The Pacific County SMP defines “ocean uses” as “activities or development involving renewable and/or nonrenewable resources that occur on Washington’s coastal waters.” By these terms ocean uses do not include uses occurring south of Cape Disappointment or beyond three miles.

Subsection 25.B.9 designates an “Ocean Environment” to which specific regulations apply. This subsection defines the Ocean Environment as “waters of the Pacific Ocean from Cape

Disappointment north to the border between Pacific County and Grays Harbor County; and from mean high tied, seaward three miles.”

As noted above, the proposed ocean disposal site is located south of Cape Disappointment and beyond three miles and is, therefore, not within the “coastal waters” covered by Pacific County’s SMP or in the “Ocean Environment” designated by Pacific County.