CENWS-EN-ER April 2013

DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT: FISCAL YEARS 2009-14 QUILLAYUTE RIVER NAVIGATION CHANNEL MAINTENANCE DREDGING

Clallam County, Washington

US Army Corps of Engineers®
Seattle District

Quillayute Navigation Channel Maintenance Dredging
Draft Supplemental Environmental Assessment
Fiscal Years 2009-14

Responsible Agency: The responsible agency for this navigation project is the U.S. Army Corps of Engineers, Seattle District.

Abstract:
This Supplemental Environmental Assessment (EA) evaluates the difference in environmental effects between the work proposed for 2013 and the project as described in the initial Environmental Assessment for maintenance of the Federal navigation channel at the mouth of the Quillayute River and U.S. Coast Guard station at La Push, Washington. La Push is located on the northwest coast of the Olympic Peninsula, in Clallam County, Washington. Shoaling of the channel requires maintenance dredging approximately every two years to ensure safe navigation. Maintenance dredging last occurred in 2011. For all dredging work conducted within the project period during and subsequent to Dredging Year 2013, which extends from 1 September through 28 February, the channel would be hydraulically dredged to the authorized depth of -10 feet mean lower low water (MLLW) plus two feet of overdredge to -12 feet, MLLW, resulting in a total dredged volume of approximately 100,000 cubic yards. The dredging would occur within the approved Washington Department of Fish and Wildlife in-water construction window from 15 September to 1 March; however, based on coordination with the Washington State Department of Fish and Wildlife, Quileute Tribe, the National Park Service, and Environmental Protection Agency, an allowance has been made so that dredging of the outer channel may begin on 1 September, due to safety concerns for the dredge vessel and personnel during the winter season on the Washington Coast. Based on the results of the 2009 surf smelt monitoring, the dredge timing would continue to begin on 1 September for the outer channel, and 1 October for the inner channel and boat basin. This timing has been coordinated in advance of obtaining a water quality certification from the Environmental Protection Agency. Dredging would occur over the full duration of the fish work window that closes 1 March. The two differences between the proposal reflected in this Supplemental EA and the previously analyzed work are that material disposed at Site A would be moved and deposited at First Beach, and the dredging area would be expanded to include the entire boat basin rather than just a portion of it.

This document is available online at:
http://www.nws.usace.army.mil/Missions/Environmental/EnvironmentalDocuments/2013EnvironmentalDocuments.aspx

The document is titled "Supplemental Environmental Assessment FY2009-14: Quillayute River Navigation Channel Maintenance Dredging".

The public comment period for this document is 10 April through 10 May 2013.
Please send comments, questions, and requests for additional information to:

Ms. Chemine Jackels
U.S. Army Corps of Engineers, Seattle District
Environmental and Cultural Resources Branch
P.O. Box 3755
Seattle, Washington 98124-3755
chemine.r.jackels@usace.army.mil
206-764-3646

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1 INTRODUCTION

The U.S. Army Corps of Engineers (Corps) is responsible for maintaining the Quillayute River Navigation Channel near a U.S. Coast Guard (USCG) station located in La Push, Washington. La Push is located near the northwest corner of the Olympic Peninsula, in Clallam County, Washington (Figure 1). This harbor is a dredged basin originally constructed in 1932. The basin provides a harbor of refuge, a USCG station, transient and permanent moorage in a marina, and a boat launch ramp. Shoaling of the channel requires dredging approximately every two years to ensure safe navigation. Maintenance dredging in the channel last occurred in 2011. Pending funding availability, the Corps expects to next perform dredging commencing in fall 2013.

An Environmental Assessment (EA) was prepared in 2009 to cover the FY2009-14 dredging cycles; however, project elements described in the aforementioned EA would change for this upcoming Dredging Year (DY) 2013, based on unexpected erosion and deposition in this dynamic coastal system. This Supplemental Environmental Assessment (SEA) evaluates the potential incremental effects of these changes in the maintenance-dredging events expected to occur at La Push commencing in 2013 and continuing for all dredging episodes throughout the remainder of the project period of FY 2014. Elements of the dredging and placement of materials that have not changed from the description in the FY2009-14 EA are incorporated by reference, and may be found at the following location:

http://www.nws.usace.army.mil/Missions/Environmental/EnvironmentalDocuments/OlderEnvironmentalDocuments.aspx

The document is titled "Quillayute River Maintenance Dredging 2009-2014 Final Environmental Assessment - July 2009".

1.1 Location

The Quillayute River Navigation Channel project is located on the northwest coast of the Olympic Peninsula in Clallam County, Washington (T28N, R15W, Section 28). The navigation channel provides access to the Quileute Tribe's marina, and for the USCG vessels to reach the Pacific Ocean for rescue missions (Figures 1 and 2).

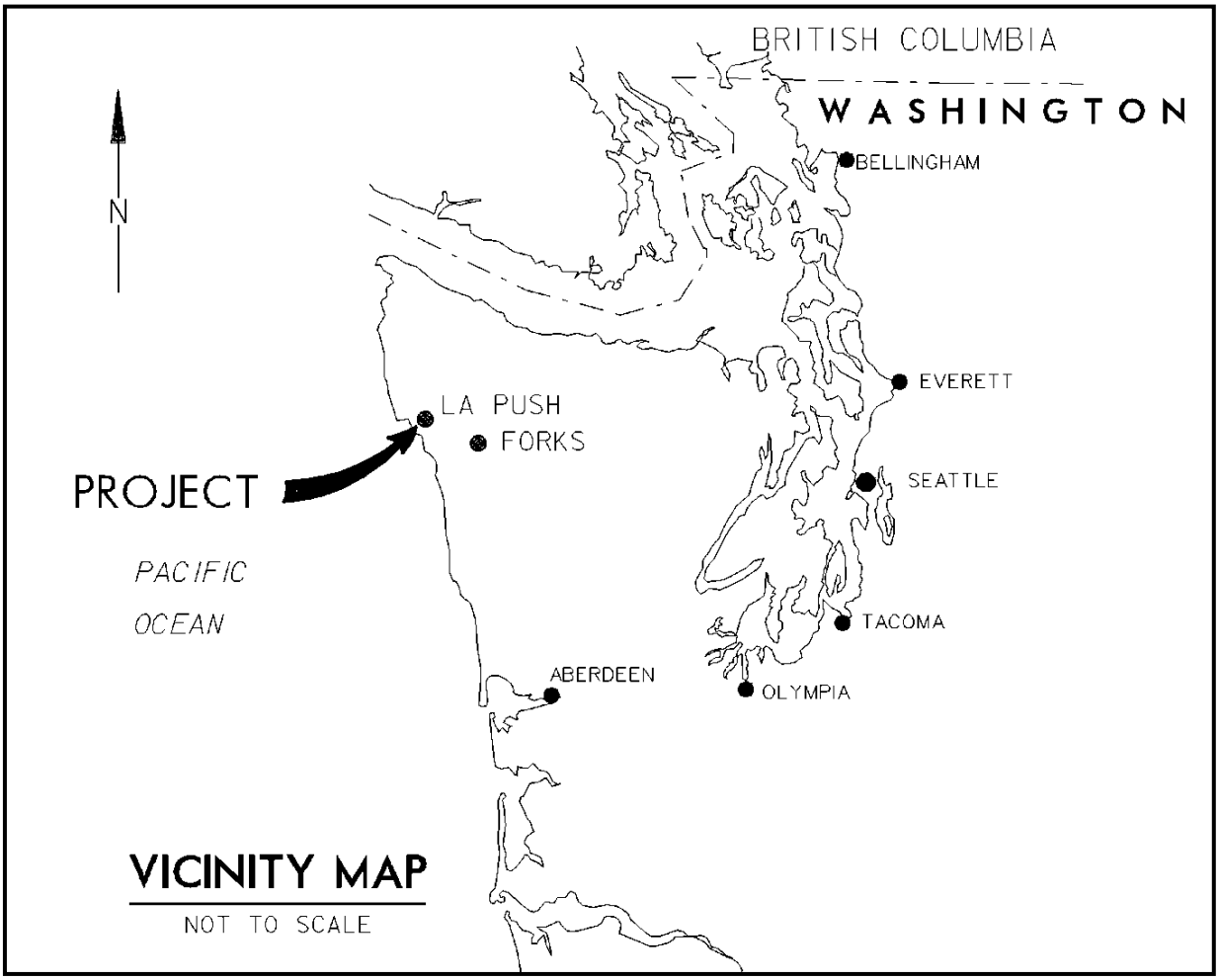

Figure 1. Location of La Push and the Quillayute River in Washington State.

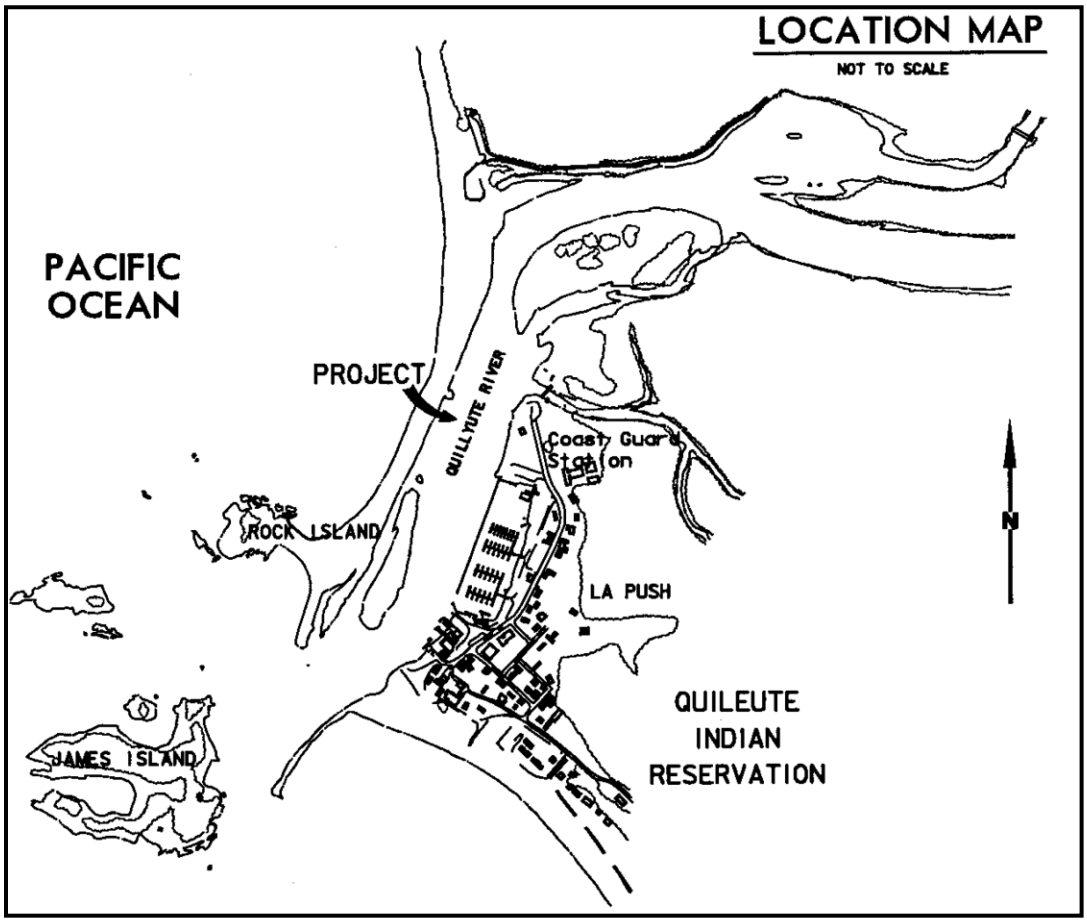

Figure 2. Quillayute River Federal navigation channel with U.S. Coast Guard Station.

1.2 Background

The project was constructed in 1932; Federal maintenance began in 1949 and has continued to the present. The purpose of this continuing maintenance dredging is to protect the navigation channel and the community of La Push. Additional project features were developed in 1962. Authorized features of the Federal navigation project include the following (Figures 2 and 3):

- A small boat basin 1,070 feet long, 313 feet wide, and 10 feet deep, with a 1,500 foot timber training wall constructed to elevation +16 feet MLLW along the west side to reduce shoaling inside the boat basin, and a timber seawall at the downstream end to protect against ocean waves
- A rubble mound jetty 1,400 feet long along the east side of the river mouth at +15 MLLW
- A rubble mound dike 1,050 feet long, +8 MLLW, along the west side of the river between Quillayute Spit and James Island;
- A navigation channel varying from 100 to 275 feet wide and -10 feet MLLW with an entrance channel southeast of James Island and extending 3,500 feet upstream ending with a stilling basin alongside the marina's training wall
- Maintenance of Quillayute Spit, 2,080 feet long and +20 MLLW, a naturally occurring spit that is artificially maintained with armoring to provide protection to the marina and town from ocean waves.

Review of aerial photographs from 1976 and historical documentation contained in the 1986 Final Environmental Impact Statement indicates the upper spit area (Figure 3) consisted of sand, small gravel,

and sporadic vegetation. The upper spit breached in 1954 and 1955 and was repaired with sand. During the 1960s, large drift logs were cabled together and beach material was relocated to low spots in the upper spit to prevent breaches. During annual maintenance dredging in the 1960s, dredged material from the boat basin (coarse sand and gravel) in the average amount of 50,000 cubic yards (CY) was placed on the upper spit; however, yearly emergency action was generally required to prevent breaching of the spit (Schuldt 1974).

Figure 3. Navigation and flood protection features at the mouth of Quillayute River (2007).

In 1971, 300,000 CY of sand, heavy gravel, and cobbles were dredged from the river and deposited on the ocean side of the upper spit (Figure 3), a naturally occurring sand spit along the west edge of the river mouth. The Corps monitored the rate of erosion. By September 1974, the spit had lost nearly all of the 300,000 CY of material at an erosion rate of 100,000 CY per year. To reduce the increasing expense of repairing the spit, 50,000 tons of 10- to 1,000-pound rocks were placed along the middle 1,600 feet of the spit. Then in 1979, an additional 90,000 tons of the rocks were placed on the spit. This was considered an interim repair that would give an additional four to five years of protection. In 1982, the Corps added 56,000 tons of spalls and large armor rock on the spit to extend the protection longer than the estimated five years. Between 1982 and 1996, the Corps placed dredged material on the spit to maintain the portion of the spit that had not been armored with riprap.

On 16 January 1996, a winter storm caused an 800-foot-wide breach along the natural sand spit just north of the area that had been armored in 1982. In August of 1996, the Corps placed 205,000 tons of riprap along a 1,900-foot section of the spit to close the breach and bring the armored portion of the spit to a

height of +20 feet above MLLW. This work included a permanent riprap toe along the river side of the spit to prevent undermining of the armored spit by river currents.

In response to a request for urgent assistance from the Quileute Tribe in January 2012, the Corps addressed erosion along the landward terminus of the South Jetty at the mouth of the Quillayute River. Protracted erosion had threatened a breach at the jetty root, which in turn would place at risk the navigation channel protected by the South Jetty from infilling with sediment. Previously dredged material (5000 cubic yards), stockpiled at the adjacent upland Site A location, was relocated to the First Beach side of the jetty root. Subsequently, 8 tons of 4 to 5.5-foot diameter armor stone was placed along a 175-linear foot length of the river side of the jetty root, in order to prevent overtopping waves from washing sand and soils into the navigation channel. This work was intended to alleviate the erosion threat for the 2012 winter and spring seasons, until a more permanent rehabilitation effort could be designed and implemented. This action is reflected in a draft EA, which is currently posted for public comment at the following location:

http://www.nws.usace.army.mil/Missions/Environmental/EnvironmentalDocuments/2013EnvironmentalDocuments.aspx

The document is titled "La Push Coastal Emergency: Direct Assistance to Quileute Nation"

1.3 Authority

The Quillayute River Navigation Channel project and maintenance dredging by the Department of the Army was authorized by the Rivers and Harbors Act of 3 July 1930 (House Document 290, 71st Congress, 2nd session) and modified by the Rivers and Harbors Act of 2 March 1945 and 3 September 1954. The authority provides for an entrance channel at a depth of -10 feet (MLLW), varying from 100 to 275 feet wide extending upstream from deep water, and a 75-foot wide channel also at a depth of -10 feet (MLLW) extending 900 feet upstream to Smith Slough; a boat basin 10 feet in depth with a timber-planked training wall with a +16-foot top elevation including a rock toe; a jetty approximately 1,400 feet long at a +15-foot elevation on the left bank; and a low dike 1,050 feet long on the right bank protecting the entrance channel. Maintenance of the upstream 900 feet of channel is not performed, as navigation access is no longer required to Smith's Slough.

1.4 Project Purpose and Need

The overall purpose of this work is to provide for safe navigation and moorage by returning a section of the navigation channel and boat basin to its authorized depth of -10 feet below MLLW plus two feet of overdredge, and to remove accumulated material from the USCG moorage slips. This work is needed so that vessels may safely transit the channel for entry and exit from the marina, and so that the USCG can keep their response vessels stationed effectively in the current location. The La Push station is the only vessel rescue response point between Neah Bay and Grays Harbor and is therefore an important location for timely response to endangered mariners in nearby Pacific Ocean. The marina at La Push offers a livelihood for approximately 325 Tribal members and 50 non-Tribal citizens including USCG personnel. The primary commercial activity is fishing and fish processing, which generates approximately $4,000,000 in annual income.

River borne sand and gravel forms shoals within the navigation channel that require removal to allow continued safe use of the federal navigation project; this occurs roughly every two years. Dredging of the boat basin is also necessary to allow for proper moorage of commercial, recreational, and USCG vessels. Sediment loss at First Beach threatens the jetty "root," which extends north affixing the jetty to the land. Loss of sediment on First Beach threatens to expose the landward terminus of the jetty, which could allow

the ocean and river erosive forces to create a breach, form a new channel, and obstruct the Federal channel with sediment. Stabilizing the jetty would reduce the risk of flooding and damage to waterfront properties and the marina in the town of La Push.

1.5 Proposed Action

Dredging of the navigation channel and placement of material is described in the FY2009-14 EA and consists of routine maintenance dredging of roughly 100,000 CY of material from the navigation channel and USCG basin once every two years. The navigation channel is 3,500 feet long, varying in width from 100 to 275 feet. Elements of the project description in the aforementioned EA would change for the remainder of the FY2009-2014 dredging cycle through the end of the project period, based on deposition and erosion that has compromised 1) the stability of the South Jetty, and 2) moorage in the boat basin. The proposed changes commencing with the FY2013 dredging episode are as follows (see figures 4 and 5 for updated project footprint):

1) In FY2013the entire 335,000 square foot boat basin, including the boat slips, would be dredged to the authorized depth of -10 feet MLLW (only a portion of the boat basin was proposed to be dredged in the FY2009-14 EA).

2) For the remainder of the FY2009-2014 dredging cycle 85,000 CY of material would be placed on both Site 1 and Site 2A with equal preference (the FY2009-14 EA stated a preference for placement at Site 2A, with placement at Site 1 only if weather conditions required it). Dredging of the entire boat basin in FY13 would require the placement of additional boat basin materials on these sites, but still would not exceed 85,000 CY.

3) If deemed necessary, based on erosion patterns on the ocean side of the South jetty, for the remainder of the FY2009-2014 dredging cycle the 15,000 CY of material that is typically placed upland Site A would be pushed onto the sloped bank at First Beach biannualwith a bull dozer no earlier than 1 November, and as late as the end of December (the FY2009-14 EA states that the material is hauled offsite after decanting and desiccation to be used by the Quileute Tribe). This is an interim measure intended to preserve the status quo and protect against undue risk of erosion that may cause a breach to form at the South Jetty root, until a more long-term solution is developed.

   Before the material is pushed onto the beach it would decant at Site A for a period of one to two months. A berm would be constructed around the dredged materials using a bulldozer and/or excavator with dry on-site materials from previous dredging events. The basin inside the berm would be of sufficient size to allow turbid water to settle, before channeling the water to the outfall structure. The outfall structure would be placed such that water ponding in the disposal area is allowed to flow through a structure that controls rate and direction of flow. Water exiting the disposal site would flow back to the river. Once fully decanted, the dredged material would be pushed over the top of the bank at First Beach (elevation +20) down to where it intersects the beach, not to extend below MLLWW. Using a dozer, the material will be graded to a slope varying between 5:1 and 20:1, depending on height of the bank, and quantity of available material. Once in place, the material shall be left to transform naturally by wave action to assume their final contours and sediment gradations, which is expected to extend below MLLW. See figure 5 for a project footprint and elevations the material is expected to distribute to. The material placed will consist mostly of sand with a small fraction of gravel and cobble from the outer channel. The purpose of the material until early November is twofold: 1) it will avoid surf smelt spawning and emergence, and 2) allowing the material to dry for approximately one to two

months, therefore placing dry material on the beach, will prevent elevated levels of turbidity in the waters surrounding First beach.

4) No material would be placed at the James Island location.

As in previous years, the proposed start date for dredging is 1 September for the outer channel with disposal at Site A, and 1 October with disposal at Site 2A and at Site 1. For 2013, material from upland site A would not be pushed onto First Beach until 1 November. Nearshore currents travel generally in a northward direction in the vicinity of the Quillayute River mouth, therefore, deposited material is expected to erode and travel northward from all three sites.

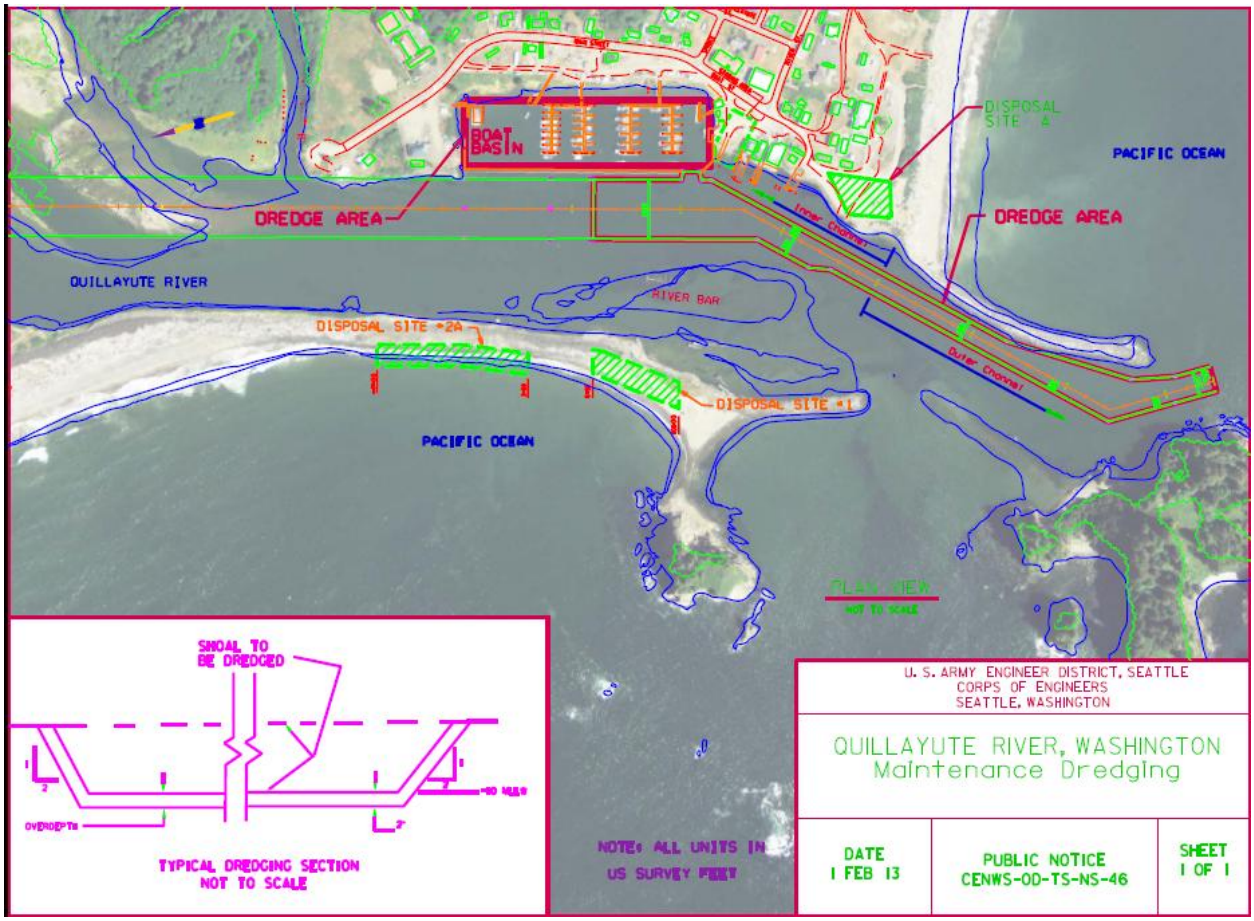

Figure 4. Areas proposed for dredging with three disposal sites.

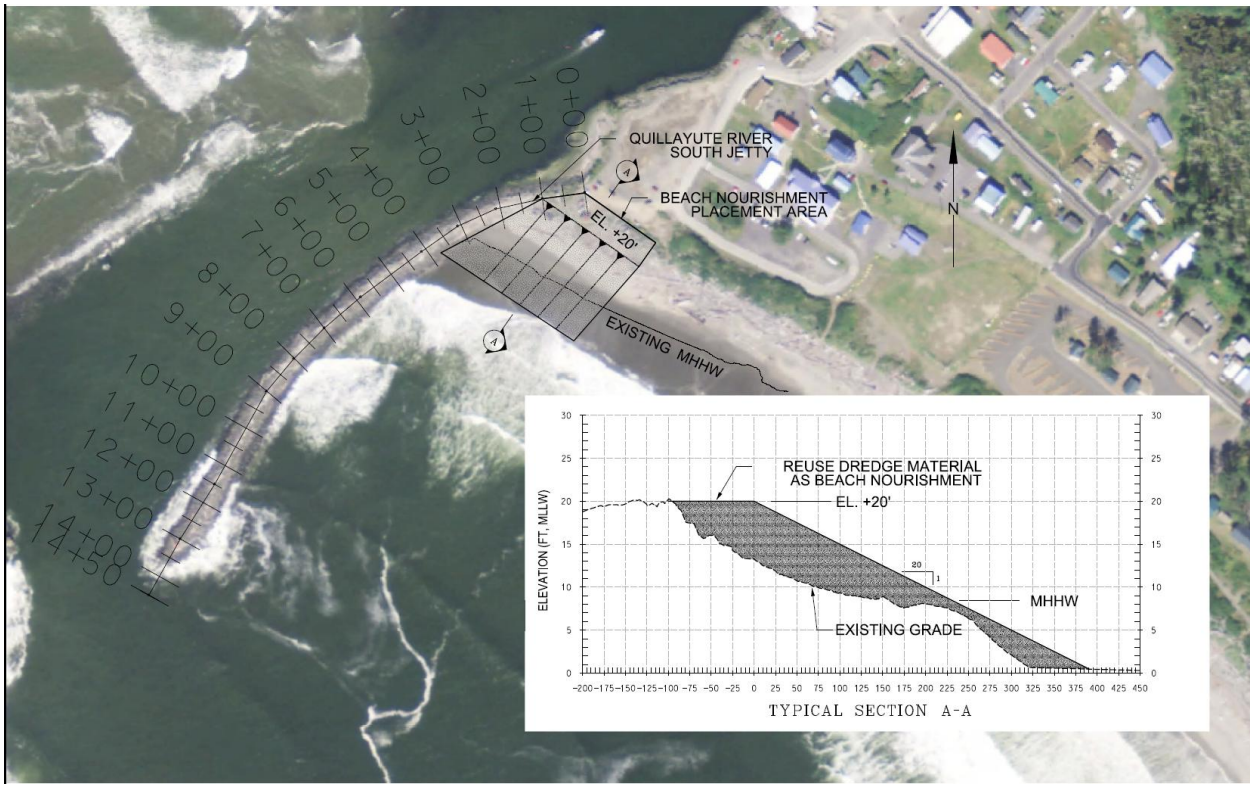

Figure 5. Footprint and grading for material placed on First Beach.

2 EXISTING ENVIRONMENT

The Quillayute River extends 5.6 river miles west from the confluence of the Bogachiel and Sol Duc Rivers, which drain a portion of the northwest slope of the Olympic Mountains in Clallam County, Washington. The Quillayute is joined by the Dickey River at Mora, then flows another mile where an armored spit turns the river south. It forms the north boundary of the Quileute Indian Reservation and enters the Pacific Ocean at La Push. The mouth of the river enters the ocean among rocky islands and sea stacks. Information and analysis from the FY2009-14 EA are hereby incorporated by reference.

2.1 Sediments

General sediment characteristics of the Quillayute River are described in the FY2009-14 EA. The last sediment characterization was performed by the Corps in 2011 and included sediments from the navigation channel and the boat basin. There is no heavy industrialization within the community nor upstream of the project site. All sediment tested was determined suitable in accordance with the Dredged Material Management Program (DMMP) for open water, upland, and near shore disposal. The grain size distribution in the boat basin by dry weight is as follows: less than 1% gravel, 22% sand, 71% silt, and 7% clay. The inner channel grain size is as follows: 5.1% gravel, 84% sand, 8.1% silt, and 2.4% clay The outer channel grain size is: less than 1% gravel, 98% sand, less than 1% silt, and 1% clay intermixed with cobbles as large as six inches in diameter.

2.2 Water Quality

No part of the 5.6-mile Quillayute River is on the 303(d) list for any water quality parameters. The Washington Department of Ecology (Ecology) classified the fresh/estuarine waters of the Quillayute River and the coastal marine waters as Class AA (extraordinary). Aside from logging and a road network in the sub-basins of the upper watershed tributaries to the Quillayute, there is little other disturbance that might affect water quality. In the estuary, the marina with its associated boat use and maintenance may contribute some pollutants. The Corps's most recent Dredged Material Suitability Determination (USACE 2011) states that the material is acceptable for marine disposal.

2.3 Biological Resources

2.3.1 Vegetation

Vegetation characteristics of the project area are described in the FY2009-14 EA. No changes in vegetation in the surrounding areas have occurred since that document was prepared. Rockweeds and other periphyton, grows on the large rock of the South jetty during spring, summer, and fall months.

2.3.2 Fish

Fish communities in and around the project area are described in the FY2009-14 EA, including within the estuary and on Rialto Beach.

Results from the 2009 Corps surf smelt monitoring study support the proposed disposal dates for Sites 1 and 2A (Rialto beach). There are anecdotal accounts of surf smelt spawning on First Beach; however the proximity to the South jetty has not been documented. A forage fish study encompassing the entire Washington Coast is underway, but it is not expected to be complete until June 2013. Benthic fish species on First Beach are expected to be the similar to those found on Rialto Beach, including saddleback gunnels (*Pholis ornata*), pacific herring (*Clupea pallasii*), starry flounder (*Platichthys stellatus*), sculpins (Scorpaniformes), rockfish (*Sebastes* spp.), perch (Percidae), sticklebacks (*Gasterosteus aculeatus*), sand lance (*Ammodytes hexapterus*), anchovy (*Engraulis mordax*), and shad (*Alosa sapidissima*) (Chitwood 1981). The larger rock along the South Jetty likely harbors reef dwelling fish like rockfish and lingcod (*Ophiodon elongates*).

2.3.3 Wildlife

Wildlife in and around the project area are described in the FY2009-14 EA. No changes in wildlife communities have occurred since that document was prepared.

2.3.4 Benthic Invertebrates

Benthic invertebrates were described in the FY2009-14 EA, including those within the estuary and on Rialto Beach. Invertebrate communities on First Beach are low density and similar to those found on Rialto Beach; they are dominated by amphipods and nemertean worms (SAIC 2003). Benthic invertebrates on the South jetty are likely communities characteristic of high energy rocky shorelines, including mussels and barnacles.

2.4 Threatened and Endangered Species

There are no new ESA listed species in the project area since the FY2009-14 EA was prepared, nor are there any additional species found on First Beach. The Corps prepared a biological evaluation (BE) in May 2009 to determine the effects of the project. The species may be found in the general vicinity of the project are:

- Coastal/Puget Sound bull trout (*threatened*); critical habitat designated
- Northern spotted owl (*threatened*); critical habitat designated
- Marbled murrelet (*threatened*); critical habitat designated
- Short-tailed albatross (*endangered*)
- Steller sea lion (*threatened*)
- Southern Resident killer whale (*endangered*)
- Humpback whale (*threatened*)
- Blue whale (*threatened*)
- Fin whale (*threatened*)
- Sei whale (*threatened*)
- Sperm whale (*threatened*)
- Leatherback sea turtle (*endangered*)
- Loggerhead sea turtle (*threatened*)
- East Pacific green sea turtle (*endangered*)
- Southern green sturgeon (*threatened*)
- Pacific smelt (*threatened*)

2.5 Cultural Resources

Cultural resources in the project area are described in the FY 2009-14 EA. No changes have occurred since that document was prepared, and no known cultural resources exist within the project area.

2.6 Air Quality and Noise

Air quality in the project area is described in the FY2009-14 EA. No changes have occurred since that document was prepared and air quality it is still considered excellent.

2.7 Land Use and Socioeconomics

Land Use and Socioeconomics for La Push are described in the FY2009-14 EA using information from the 2000 U.S. Census. The more recent 2010 U.S. Census does not include information specific to the town of La Push, so it is assumed that socioeconomics and land use are similar to that described in the aforementioned EA.

2.8 Recreation and Aesthetics

Recreation and aesthetics are described in the FY2009-14 EA. Due the low population density, rugged wilderness, and natural resources in the area no changes to recreation and aesthetics have occurred since this document was prepared.

2.9 Navigation

The USCG maintains the Quillayute River Station within the boat basin of the Quileute Tribe's marina, which provides the only harbor of refuge between Neah Bay and Grays Harbor. The USCG monitors safety conditions for mariners in this locale and limits vessel traffic across the bar that forms in the entrance reach of the Federal navigation channel. In rough weather conditions that coincide with lower tides, the USCG must move their vessels out of the safe harbor and take up position outside the bar to be able to respond if needed for rescues. In addition, the berths for USCG rescue vessels can experience shoaling as the navigation channels fills in. This aspect of the project has not changed since preparation of the FY2009-14 EA.

3 EFFECTS OF THE PROJECT CHANGES FOR FY 2013

Effects of dredging the navigation channel and the placement of material at Sites 1 and 2A (Rialto Beach) are described in the FY2009-14 EA. The analysis below focuses on the incremental effects of the proposed changes in project description for DY2013, including moving disposed materials from Site A to First Beach, dredging the entire boat basin, and the subsequent placement of boat basin material on Sites 1 and 2A.

3.1 Sediments

The sediments from dredging the navigation channel and boat basin have been analyzed and deemed appropriate for marine disposal by the DMMP agencies (USACE 2011). Execution of planned dredging would entail disposal of material from the outer channel at Site A starting 1 September, with eventual placement on First Beach no earlier than 1 November. Disposal at Site A typically removes approximately 10,000 to 15,000 CY from the estuarine environment; however, with eventual placement on First Beach this sediment would remain in the vicinity of the river mouth. The composition of First Beach in the winter, when the material would be placed, is mostly gravel and cobble. In the summer sand washes up onto higher elevation and buries this coarser material. The material placed on First Beach from the outer channel is a sand/gravel/cobble mixture and is expected to integrate with the natural composition of the beach material and profile quickly. In the winter, the sand would be dispersed to lower elevations by wave activity and in the summer it would wash back up on the higher beach. Emergency repair of a breach would likely be done with large boulders that are less appropriate than the native sand, gravel, and cobble. The rest of the roughly 85,000 to 90,000 CY would be disposed on the ocean side of Quillayute Spit, with equal preference for placement on Sites 1 and 2A. The majority of material that accumulates in the navigation channel and boat basin is deemed appropriate grain size distribution to help maintain the surf smelt spawning habitat. Therefore, disposal of dredged material on First Beach and Sites 1 and 2A is considered to be a beneficial use of the dredged material. Corps coastal engineers have stated that the coarse-grained material has been documented to play a critical role in protecting the spit and sea dike structures from wave damage and erosion (Schuldt 1974).

3.2 Water Quality

Dredging of the entire boat basin material, which is composed of clean gravel and sands, is expected to cause only minor localized increases in turbidity. This turbidity is expected to be of short duration due to the coarse grain size of the material that settles out rapidly, and because the strong flow of the river flushes fine material downstream quickly. Material pushed onto First Beach would be allowed to first desiccate for approximately one to two months and runoff from the temporary holding location at Site A would be controlled by setting up a containment berm with ecology blocks and hay bales. Once pushed onto First Beach, this clean dry material will integrate with the natural profile and composition by the summer time. The Corps is seeking a water quality certification from the EPA, and would comply with all conditions contained in the certification. Previous years' certifications allowed for a mixing zone of 150 feet radial or 300 feet down current from the immediate dredging operation and/or disposal in which the Class AA standard for turbidity is waived. No release of contaminants is expected due to the clean nature of the material.

3.3 Biological Resources

3.3.1 Vegetation

Shore grasses growing between Site A and First Beach would be affected as material is pushed onto the beach biannually. However, they are expected to rebound during the following growing season. Marine algae growing on the South jetty is not likely to be affected by material placed on First Beach since it would disperse naturally by the summer months , when most marine algae are growing.

3.3.2 Fish

No additional noise is expected from the proposed project changes. The same amount of material would be dredged and placed in adjacent areas, so no incremental noise impacts on fish are anticipated.

Surf smelt spawning typically occurs from March to September at Rialto Beach, immediately north of the armored section of Quillayute Spit, and is expected to occur during the same period on First Beach. Material would not be pushed from Site A onto First Beach until 1 November or later, well after spawning and egg incubation. Results from the 2009 surf smelt monitoring effort found no surf smelt or their eggs along Rialto Beach after 1 October (Corps 2009). The same is expected to be true for First Beach. Further studies, combined with the Washington coast-wide forage fish study, may be necessary to corroborate the results of the 2009 study, but without further information available at this time, no additional incremental impacts to surf smelt is anticipated due to the proposed DY2013 work.

3.3.3 Wildlife

There are no incremental impacts to wildlife anticipated from the proposed project changes, including the placement of material at First Beach and the dredging of the boat basin. Dredging would occur during the same window and duration as previously analyzed; therefore impacts would be the same as those described in the FY2009-14 EA.

3.3.4 Benthic Invertebrates

Dredging the entire boat basin would result in a greater removal of benthic epifauna and infauna and their habitat. Biannual placement of material at First Beach would temporarily smother communities. However, in a relatively short period, benthic communities would reestablish in the disposal area due to recruitment from adjacent non-disturbed areas. Benthic invertebrate populations are expected to return to pre-dredging conditions within a couple of months after dredging is complete, and the community in the boat basin is likely adapted to the dredging cycle and populated with tolerant species (McCauley et al. 1977). This incremental increase in impacts to benthic invertebrates is still minor and insignificant.

3.4 Threatened and Endangered Species

The Corps prepared a Biological Evaluation (BE) pursuant to ESA Section 7(a)(2) for the dredging cycles to occur 2009 through 2014. The BE was submitted to NMFS 1 June 2009 for their review. Concurrence was received from NMFS on 23 July 2009. For species under jurisdiction of USFWS, the Corps determined “no effect.” No changes in the effect analysis and determinations are anticipated as a result of the proposed project changes for DY2013. Dredging would still occur during windows that avoid ESA-listed species and their prey, and there are no new ESA-listed species found in the expanded project footprint areas of First Beach or within the boat basin. Brown pelican has been delisted since the last consultation. NMFS and USFWS were notified on 15 January 2013 of the proposed project changes for the FY2013 dredge cycle. Both agencies replied that there was no need to reinitiate consultation. See memorandum for record in Appendix D.

According to the FY2009-14 BE, it was determined the project *may affect, but is not likely to adversely affect* the following species:
Steller sea lion (*threatened*)
Southern Resident killer whale (*endangered*)
Pacific smelt (*proposed*)

Also according to the BE, the Corps determined the project would have *no effect* on the following species or designated critical habitat:
Coastal/Puget Sound bull trout (*threatened*); critical habitat designated

Northern spotted owl (*threatened*); critical habitat designated
Brown pelican (*endangered*)
Marbled murrelet (*threatened*); critical habitat designated
Short-tailed albatross (*endangered*)
Humpback whale (*threatened*)
Blue whale (*threatened*)
Fin whale (*threatened*)
Sei whale (*threatened*)
Sperm whale (*threatened*)
Leatherback sea turtle (*endangered*)
Loggerhead sea turtle (*threatened*)
East Pacific green sea turtle (*endangered*)
Southern green sturgeon (*threatened*)

Brown pelican has been de-listed since preparation of the BE in 2009.

3.5 Cultural Resources

The Corps conducted a literature review and records search to identify significant cultural resources located within the area of potential effect (APE) for the Quillayute Navigation Channel Maintenance dredging project. The review included a search of the online database of archaeological and historic site records at the Washington State Department of Archaeology and Historic Preservation (DAHP). The literature review and records search revealed that there are a number of archaeological properties in the vicinity that are of historic and cultural significance to the Quileute Tribe, but these properties are located outside the APE and their significant values would not be affected. Two archaeological sites and two burial sites can be found within a half mile radius of the project APE. These sites would not be affected by the proposed project. There are no properties listed in the National Register of Historic Places (NRHP) or the Washington State Historic Site Register in the project vicinity, and no cultural resources have been recorded within the APE.

The Corps has previously reviewed the project, with the exception of the fill placement at First Beach, for purposes of Section 106 of the National Historic Preservation Act. The Corps consulted with the Washington State Historic Preservation Office (SHPO) by letter dated 12 June 2009 and found that no historic properties would be affected by the project. SHPO concurred with the Corps' findings on 16 June 2009 (DAHP Log: 061609-07-COE-S). The Corps has reinitiated Section 106 consultation with the Washington SHPO to include the currently proposed fill placement action at First Beach. The Corps has also notified the Quileute Indian Tribe of the proposed action to identify cultural resources or tribal concerns. General Land Office (GLO) maps as late as 1907 show the historic shoreline to be upland of the current project APE. The beach is subject to a high level of tidal activity, and the current work will not include any upland ground disturbing activities. Given the low potential for cultural resources to exist within the proposed placement area, the Corps has determined that no historic properties would be affected by the project and is transmitting our findings to SHPO to comply with Section 106 of the NHPA.

3.6 Air Quality and Noise

Incremental impacts to air quality and noise anticipated from the proposed project changes would arise from using a bulldozer to push material onto First Beach. However, these impacts would be minor and temporary. Dredging would occur during the same window and duration, and the same amount of material would be dredged and placed.

3.7 Land Use and Socioeconomics

Providing added protection to the root of the South jetty (via placement of material of First Beach) and spit (via placement of material on Site 1), along with dredging the entire boat basin would incrementally preserve the socioeconomics of the town of La Push and the Quiluete Nation by preventing the navigation channel from filling and providing the authorized depth of moorage in the marina. Tribal fishermen would be able to continue participating in local fisheries, and the Quileute Tribe would benefit from the ability to host transient mariners. No incremental impacts to land use are expected from the proposed project changes. The Quileute Tribe supports the placement of dredged materials on First Beach to protect the South jetty.

3.8 Recreation and Aesthetics

Providing added protection to the root of the south jetty and spit and dredging the entire boat basin would incrementally preserve the navigation channel and boat basin by allowing recreational vessel traffic to continue in the marina and estuary. Incremental increases in impacts to aesthetics anticipated from the proposed project changes would result from the placement of material from Site A to First Beach. However, this impact would be minor and temporary.

3.9 Navigation

Providing added protection to the root of the South jetty (via placement of material at First Beach) and spit (via placement of material on Sites 2A and 1), along with dredging the entire boat basin would incrementally benefit navigation. These actions would assist in protecting the navigation channel from filling and would provide the authorized depth of moorage in the boat basin. The USCG would have full access for ingress and egress of the channel for search and rescue missions.

4 UNAVOIDABLE ADVERSE EFFECTS

Anticipated incremental increases in unavoidable adverse effects that could occur as a result of the proposed project changes include temporary depression of benthic fish and invertebrate populations in the boat basin and on First Beach, and impacts to shore grasses resulting from the pushing of material onto First Beach. Given the temporary, localized, and discountable nature of these effects, they are not considered significant.

5 MITIGATION

The proposed work includes several measures that would be employed to avoid and minimize any adverse effects, including the following:

- All work would occur during the in-water work windows coordinated with NMFS, USFWS, and WDFW to protect salmon, bull trout, and forage fish. This work window would allow dredging and disposal under controlled conditions beginning 1 September (outer channel) and 1 October (remainder of project area), and placement of material on First Beach beginning 1 November to avoid effects on surf smelt spawning and egg incubation.
- No work would occur during the spring months when macroalgae are most susceptible to harm from increases in turbidity
- All work would occur in areas previously disturbed by the navigation project; no new areas of dredging would occur that have not been dredged previously
- If the EPA requests in the water quality certification that turbidity be monitored during construction, then work would stop if an exceedance of state water quality standards occurs

6 COORDINATION

The following agencies and entities have been consulted during the preparation of this supplemental environmental assessment:

National Marine Fisheries Service
U.S. Fish and Wildlife Service
National Park Service
Environmental Protection Agency
Washington Department of Ecology
Washington Department of Fish and Wildlife
Olympic Coast National Marine Sanctuary
Washington State Office of Archaeology and Historic Preservation
Quileute Tribe

7 CUMULATIVE EFFECTS

NEPA defines cumulative effects as the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions (40 CFR §1508.7).

Cumulative effects in of the bi-annual dredging on the lower Quillayute River are described in the FY2009-14 EA. The proposed project changes, including dredging of the entire boat basin and placement of material at First Beach, are expected to have only minor incremental cumulative impacts. This is largely due to dredged material placed on First Beach dispersing by the summer , and the highly modified nature of the boat basin, navigation channel, and river mouth. The Corps therefore concludes that there would be no significant contribution to cumulative effects associated with the proposed changes to maintenance dredging and disposal actions.

8 ENVIRONMENTAL COMPLIANCE

LAWS AND REGULATIONS RELATING TO THE PROPOSED ALTERNATIVE	SUMMARY OF REQUIREMENT	CONSISTENCY OF PREFERRED ALTERNATIVE
National Environmental Policy Act (NEPA) 42 USC 4321 *et seq*.	Requires all Federal agencies to consider the environmental effects of their actions and to minimize negative impacts	Consistent –Draft Supplemental Environmental Assessment completed and made available for public comment
Endangered Species Act 16 USC 1531 *et seq*.	Requires Federal agencies to protect listed species and to consult with USFWS and NMFS regarding a proposed action that may affect listed species or designated critical habitat	Consistent – The Corps prepared a Biological Evaluation and NMFS concurred with the “not likely to adversely affect” determinations; a “no effect” determination was made for USFWS species. Both agencies indicated project changes do not require re-initiation of consultation
Clean Water Act Section 401	Requires Federal agencies to comply with state water quality standards	Consistent – the Corps is seeking a 401 Water Quality Certification from

		the Environmental Protection Agency.
Clean Water Act Section 404	Requires Federal agencies to protect waters of the United States. Disallows the placement of dredged or fill material into waters (and excavation) unless it can be demonstrated there are no less environmentally damaging practicable alternatives	Consistent per 404(b)(1) evaluation – see Appendix A in this document
Coastal Zone Management Act	Requires Federal agencies to comply to the maximum extent practicable with the enforceable policies of approved state coastal zone management programs	The Corps prepared a Coastal Zone Consistency Determination and will submit it to the Department of Ecology. The Corps' determination states that the project is consistent to the maximum extent practicable with the Clallam County Shoreline Master Program. The Corps is seeking a letter of concurrence with this determination from Washington Department of Ecology (See Appendix B)
Clean Air Act	Section 176 of the Clean Air Act, 42 USC 7506(c), prohibits Federal agencies from approving any action that does not conform to an approved state or Federal implementation plan	Consistent – see the Air Quality effects evaluation in this document and the FY2009-14 EA
National Historic Preservation Act	Requires Federal agencies to identify and protect historic properties	Consistent – refer to the Cultural Resources section of this document
Executive Order 12898 Environmental Justice	Requires Federal agencies to identify and address disproportionately high and adverse human health or environmental effects on minority and low-income populations	Consistent – the surrounding area is a marina and working waterfront, which would benefit from the action without causing disproportionate adverse human health or environmental effects on any population segment
Executive Order 11988 Floodplain Management	Requires Federal agencies to consider how their activities may encourage future development in floodplains	Consistent – no new or additional dredging would be conducted that would encourage additional development

9 CONCLUSION

Based on staff assessment and on coordination with Federal and state resource agencies, it is determined that the proposed project changes, when considered in conjunction with the overall project effects addressed in the FY2009-14 EA, would not result in incremental increases in environmental impacts on the Quillayute River aquatic ecosystem that would lead to significant adverse environmental impacts on the quality of the human environment, and the preparation of an Environmental Impact Statement is thus not required. A draft amended finding of no significant impact (FONSI) has been prepared.

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Appendix A: Clean Water Act Section 404 (b)(1) Analysis

Amended Fiscal Years 2009-14 Maintenance Dredge and Disposal
Quillayute River Navigation Channel
Clallam County, Washington

Substantive Compliance for
Clean Water Act Section 404 and Rivers and Harbors Act

1. Introduction. The purpose of this document is to record the Corps' evaluation and findings regarding this project pursuant to Section 404 of the Clean Water Act (CWA) and the Rivers and Harbors Act (RHA).

The following actions are covered by this document:

a. Disposal of maintenance material dredged from the Quillayute River Navigation Channel via hydraulic dredge on the Quileute reservation at disposal Site A, with eventual placement of this material onto First Beach below MHHW in November or December

b. Disposal below MHHW at Site 2A and Site 1

The information contained in this document reflects the findings of the project record. Specific sources of information included the following:

a. Quillayute River Navigation Channel Sediment Characterization Summary for Disposal (2011)

b. Dredged Material Evaluation Procedures and Disposal Site Manual, dated June 1995

c. 404(b)(1) Evaluation (see below)

d. Public Interest Review (see below)

This document addresses the substantive compliance issues of the Clean Water Act 404(b)(1) Guidelines [40 CFR §230.12(a)] and the Regulatory Programs of the Corps of Engineers [33 CFR §320.4(a)].

2. Project Background. Public Notice CENWS-OD-TS-NS-46 and a NEPA Environmental Assessment describe the maintenance dredging of the Federal navigation channel and adjacent boat basin. The Quillayute River navigation channel was originally authorized in 1930 and has been routinely dredged since the 1950s. The proposed action is routine maintenance dredging to maintain the channel and boat basin's authorized depth of -10 feet below mean lower low water (MLLW).

3. Project Need. The Quillayute River navigation channel is typically dredged every other year. Without maintenance dredging, shoaling would reduce the ability of vessels to enter and leave the Quillayute marina safely under full load or during low tide conditions. The USCG's rescue capabilities are hindered if the bar becomes too shallow. Additionally, the entire boat basin requires maintenance dredging for use of the marina consistent with its authorized dimensions.

4. Project Purpose. The purpose of this dredging work is to return the partially filled-in channel and boat basin to authorized depth of -10 feet MLLW, and to properly dispose of the dredged material. In addition, the placement of dredged materials below MHHW on First Beach is required to prevent wave activity from the Pacific Ocean from overtopping and flanking these structures, subsequently filling the navigation channel, as well as flooding and damaging waterfront properties and the marina in the town of La Push. Placement of material on sites 1 and 2A provides an efficient means of material disposal and has incidental benefits to surf smelt and the beach profile since Rialto Beach has been cut off from fluvial sediment due to shoreline modifications.

5. Availability of Less Environmentally Damaging Practicable Alternatives to Meet the Project Purpose. The alternatives evaluated for this project were as follows:

a. Alternative 1 (No Action). Under this alternative, the Corps would not dredge the Quillayute River navigation channel, and consequently no aquatic disposal would occur. The channel would continue to fill in by accumulating sediments that are delivered downstream by the river and into the bar from the ocean. Allowing the channel to fill in would cause boats to run aground and could cause the risk of fuel spills if boat hulls are damaged by the shallowness of the channel. Additionally, the USCG would not be able to embark on patrolling and rescue missions. The Quileute Tribe would suffer economic losses due to being unable to embark on fishing trips, and loss of recreational boat traffic income. Without the aquatic disposal of dredged material for beach nourishment, the two jetties would suffer erosion that would likely lead to breaching. This would cause damage to infrastructure and therefore the local economy at La Push.

b. Alternative 2 (Maintenance Dredging beginning 1 November). In previous years, the Corps followed an advisory fish window that required no dredged material placement on the ocean side of the spit until the surf smelt spawning season had passed. Dredging during the winter storm season has posed a variety of problems for dredgers including risks to human safety and loss of machinery during storms. In the 2007 dredge cycle, the Corps received no bids on the contract for the work worth roughly $1,000,000. In 2009, the Corps analyzed the risks of advertising a dredge contract with the 1 November start date, but has rejected this alternative in favor of negotiating an earlier start date with the natural resource agencies for the FY2009-14 dredging cycles. A monitoring study of surf smelt spawning and stability of habitat in 2009 indicated that earlier placement would have little or no impacts on surf smelt.

c. Alternative 3 (Maintenance Dredging commencing September 1). Preferred Alternative. Dredging the channel and boat basin with authorized widths and depths (+2'overdredge) would require dredging approximately 100,000 cubic yards (CY) in 2013 and through the balance of the project period. The areas that would be dredged include the boat basin, and the navigation channel, which is approximately 3,500 feet long and ranges from 100 to 275 feet wide. A hydraulic dredge would remove material from the channel and pump it through a pipeline first to upland Site A starting on 1 September, and then to the ocean side of the spit at Site 2A and Site 1 starting on 1 October. Material placed at site A would desiccate for approximately one to two months and then, no earlier than 1 November, would be pushed onto the sloped bank at First Beach to assist in preventing flanking of the jetty root from ocean waves from the south and subsequent filling in of the navigation channel. The grain size distribution of accumulated sediments varies by area of deposition. The inner channel and boat basin accumulate finer sediments up to gravel size; the outer channel accumulates mostly sand with cobbles as large as six inches in diameter. The size of hydraulic dredge that is appropriate for this project is too small to be able to tow safely the very long length of pipeline that is required to reach sites 1 and 2A on the bar from the outer channel (approximately 3,000 feet). For this reason, outer channel sediment has typically been disposed at upland Site A during past maintenance dredging (approximately 15,000 CY). This site is closer to the outer channel and requires a shorter length of pipeline connected to the dredge. Since the material from upland Site A would not be pushed onto First Beach until well after the surf smelt spawning season and egg incubation period, EPA has allowed material to be deposited at Site A earlier than at Sites 1 and Site 2A. For this reason, the Corps has proposed the staggered start dates of 1 September for the outer channel and 1 October for the inner channel and boat basin. Dredging the outer channel would begin on 1 September 2013 with disposal at Site A; dredging of the inner channel and boat basin would begin 1 October 2013 with disposal at Site 2A and Site 1. Material from Site A would not be pushed onto First Beach until no earlier than1 November. The Corps conducted monitoring of surf smelt spawning activity and stability of beach habitat in 2009 to determine impacts of material disposal on the spit. Results indicated that material placement beginning 1 October has a minimal amount of disturbance to surf smelt spawning. The duration of the work would be approximately 60 days if the dredge is able to work 24 hours per day. Disruptions are expected due to weather or for allowances for Tribal fisheries.

Findings. The Corps rejected Alternative 1 because it would not meet the project purpose. Alternative 2 was rejected due to the risks of receiving no bids on the contract and thus losing the opportunity to dredge the channel across the bar for an entire year, which would preclude the USCG from being able to launch rescue missions, as well as the risks of having a dredge on the dangerous bar during winter storms. Alternative 3 was selected because the timing allows the dredge to begin during the calmer month of September and minimizes the risk to surf smelt while still achieving the purpose of the project.

6. Significant Degradation, either Individually or Cumulatively, to the Aquatic Environment

a. Impacts on Ecosystem Function. Benthic habitat in the navigation channel and in the disposal areas would be disturbed by dredging and placement operations, and would result in temporary depression of benthic invertebrate populations; however, these populations would be restored in a relatively short time due to recruitment from adjacent, non-dredged areas. The Corps has assessed potential impacts to the aquatic ecosystem from channel maintenance operations and determined that they would be localized to previously disturbed areas, short in duration, and minor in scope. Impacts of dredging operations on salmonids and forage fish would be reduced and/or avoided through implementation of timing restrictions. Due to these measures, impacts to these important aquatic ecosystem resources should not be significant either individually or cumulatively.

b. Impacts on Recreational, Aesthetic, and Economic Values. No significant adverse effects on recreation, aesthetics, or the economy are anticipated. Businesses rely on access to the water, and maintenance of the navigation channel is crucial for these water-dependent businesses. Completing the proposed dredging would allow the current level of recreational vessel traffic to continue using the marina for permanent and transient moorage, as well as refueling and restocking boat supplies and groceries. For the roughly 60 days of dredging activity, the dredge would be visible from the shore of the marina, and could be seen as an industrial interruption to the viewscape of the Quillayute estuary. However, the marina itself is a built environment with vessel traffic, so the presence of a dredge would not be a substantial degradation of the local aesthetics and would not be a permanent fixture.

Findings. The Corps has determined that there would be no significant adverse impacts to aquatic ecosystem functions and values.

7. Appropriate and Practicable Measures to Minimize Potential Harm to the Aquatic Ecosystem

a. Potential impacts of dredging and disposal operations on juvenile salmonids and forage fish would be avoided through implementation of timing restrictions. Fish work windows for allowing in-water work in marine areas are as follows:

- Juvenile salmon window closure 1 March to 15 June
- Coastal forage fish window closure 1 March to 15 September

These restrictions provide for an opening of 16 September through 28 February for in-water work in the Quillayute estuary and ocean beach. Through negotiations with National Park Service, Environmental Protection Agency, Washington Department of Fish and Wildlife, and the Quileute Tribe, the Corps obtained concurrence with the proposal to begin dredging on 1 September in the outer channel with disposal at Site A (upland). The Corps would follow with beginning dredging on 1 October with disposal at Sites 2A and 1 on the spit south of Rialto Beach. Material from Site A would not be pushed onto First Beach until no earlier than1 November. Identification of adverse impacts necessitating changes to disposal windows may require revisiting this 404(b)(1) evaluation and reassessing its conclusions.

b. **Impact Minimization Measures.** Impacts to fish, shellfish, and other benthic invertebrates entrained or damaged by dredging equipment would be minimized by dredge timing restrictions involving juvenile salmonids and forage fish.

Dissolved oxygen (DO) levels may be temporarily reduced, but generally only on the order of 1 to 2 milligrams per liter (mg/l) from ambient levels. Turbidity and dissolved oxygen are monitored during dredging. If DO levels drop below 5.0 mg/l, operations would be suspended until conditions improve; additionally, if turbidity shows an exceedance of state water quality standards, dredging is stopped until conditions improve.

Other impact minimization measures include the following:

- Best management practices (BMPs) would be used to ensure that no unnecessary damages to the environment occur. BMPs would include holding the operation of heavy equipment in the intertidal areas to the minimum necessary, use of hay bales to direct runoff and minimize turbidity of runoff, minimizing disturbance of vegetation, and removing all construction debris from the project.
- A spill kit would be onboard the dredge at all times.
- Fuel hoses, oil drums, oil or transfer valves and fittings, etc., shall be checked regularly for drips and leaks, and shall be maintained and stored properly to prevent spills into tribal or state waters.
- Refueling shall be monitored by the contractor for the duration of each event.

c. **Compensatory Mitigation Measures**. Because environmental impacts are estimated to be unsubstantial, as assessed through the Biological Evaluation and the Environmental Assessment, no compensatory mitigation measures have been proposed for this action.

Findings. The Corps has determined that all appropriate and practicable measures have been taken to minimize potential harm to the environment.

8. Other Factors in the Public Interest.

a. **Fish and Wildlife**. The Corps has consulted with state and Federal agencies, as well as the Quileute Tribe, to assure careful consideration of fish and wildlife resources. The Corps prepared a Biological Evaluation in accordance with the Endangered Species Act and submitted the evaluation to National Marine Fisheries Service (NMFS) for their concurrence. Concurrence was received from NMFS on 23 July 2009. Both agencies were contacted with the proposed project changes for the FY2013 dredging and both replied that it is not necessary to reinitiate consultation.

b. **Water Quality.** The Corps is pursuing a water quality certification with the EPA and would abide by the conditions to ensure compliance with state water quality standards when undertaking activities involving the discharge of dredged material into waters of the United States.

c. **Historic and Cultural Resources.** There are no documented properties listed in, or eligible for listing in the National Register of Historic Places (NRHP) within the project area of potential effects (APE). The Quillayute River Navigation Project Long-range Operations and Maintenance Final EIS states that an ethno-historic survey of the area was conducted to determine potential effects of all scheduled operations and maintenance work on cultural and religious sites of importance to the Quileute people. To comply with Section 106 of the NHPA, Corps archaeologists conducted cultural resources reconnaissance surveys of the proposed project Areas of Potential Effect (APEs). Cultural resources studies conducted for the project included a search

of the Washington Department of Archaeology and Historic Preservation (DAHP) Electronic Historic Sites Inventory Database, and other background and archival research. In addition, the Corps conducted an on-the-ground, pedestrian reconnaissance of the upland disposal sites and jetty alignments. Although a number of cultural resources sites were documented within the general vicinity of the project, they are outside of the project APE as defined. Moreover, based on the nature of the undertaking (maintenance work entirely within an existing federal navigation project of long standing) the Corps has determined No Potential to Cause Effects to Historic Properties. The Corps has reinitiated Section 106 consultation with the Washington SHPO to include the currently proposed fill placement action at First Beach. The Corps has also notified the Quileute Indian Tribe of the proposed action to identify cultural resources or tribal concerns.

d. **Activities Affecting Coastal Zones**. The Corps has determined that this work is consistent to the maximum extent practicable with the Coastal Zone Management Act.

e. **Environmental Benefits.** No substantial benefits to the environment have been identified as part of this proposed work.

f. **Navigation.** A minor, temporary disruption of navigation traffic may result from dredging and disposal operations. The dredge would not block the navigation channel but may impinge on the total width available to vessel traffic. A Notice to Mariners would be issued before dredging and disposal operations are initiated. The result of the project would be an improvement to the shallow condition of the navigation channel and boat basin, returning it to its authorized depth of -10 feet MLLW.

Findings. The Corps has determined that this project is within the public interest.

9. **Conclusions.** Based on the analyses presented in project NEPA and ESA documents, as well as the following 404(b)(1) Evaluation and General Policies for the Evaluation of Permit Applications analysis, the Corps finds that this project complies with the substantive elements of Section 404 of the Clean Water Act.

Potential Impacts on Physical and Chemical Characteristics (Subpart C)

1. Substrate [230.20] The Quillayute River Federal Navigation Channel is dredged roughly every two years. The channel was last dredged in 2011. A bathymetric survey shows that as much as eight feet of sediment has accumulated in areas of the channel since the last maintenance dredge. The dredged material analysis performed in 2011 showed that the material meets the suitability guidelines of the inter-agency Dredged Material Management Program (DMMP) for in-water disposal. Maintenance dredging would return the channel to the authorized depth of -10 feet MLLW.

2. Suspended Particulate/Turbidity [230.21] Residual dredged material that escapes the hydraulic dredge would result in a temporary increase in turbidity and suspended particulate levels in the water column, mainly in near-bottom waters. The material is mostly sand and gravel. Sand and gravelrapidly to the bottom, while a small percentage of finer material is expected to remain in suspension. Increases in turbidity associated with disposal operations would be minimal and of short duration.

3. Water Quality [230.22] No significant water quality effects are anticipated. A small plume of turbidity would occur around the suction pipeline mouth, but is expected to return to background levels within 300 feet. During disposal operations, a localized turbidity plume may enter the water column at the disposal site. All of the sediments have been tested and approved for open water disposal under the guidelines of the DMMP, which is administered by the Corps, EPA, Ecology, and Washington Department of Natural Resources (DNR).

4. Current Patterns and Water Circulation [230.23] Dredging accumulated sediment from the Quillayute River Navigation Channel would not obstruct flow, change the direction or velocity of water flow/circulation, or otherwise change the dimensions of the receiving water body. The material would be distributed among three beach disposal sites. The Corps is anticipating that the same current patterns known to exist now would continue to erode the material off its beach disposal locations.

5. Normal Water Fluctuations [230.24] The disposal of material dredged from the Quillayute River Navigation Channel would not impede normal tidal fluctuations. The beach disposal sites are expected to allow material to erode rapidly.

6. Salinity Gradients [230.25] The dredging and disposal of material from the Quillayute River Navigation Channel would not divert or restrict tidal flows, nor would it change the salinity in the project area.

Potential Impacts on Biological Characteristics of the Aquatic Ecosystem (Subpart D)

1. Threatened and Endangered Species [230.30] Pursuant to Section 7 of the Endangered Species Act, the Corps prepared a Biological Evaluation to assess potential impacts of the proposed work on species protected under the Act. This document concluded that Quillayute River Navigation Channel maintenance dredging would have no effect Coastal/Puget Sound bull trout (*Salvelinus confluentus*), Northern spotted owl, marbled murrelet, brown pelican, short-tailed albatross, Southern Resident killer whale (*Orcinus orca*), and Steller sea lion (*Eumetopias jubatus*), and not likely to adversely affect Pacific smelt (*Thaleichthys pacificus*).

2. Aquatic Food Web [230.31] Turbidity associated with dredging and disposal operations may interfere with feeding and respiratory mechanisms of benthic, epibenthic, and planktonic invertebrates. Some sessile invertebrates at the dredge location may suffer mortality from entrainment and smothering after placement of materials. Several studies have found that benthic infauna recolonize dredging and disposal sites quickly, but that they may never reach mature equilibrium benthic communities. More

mobile epibenthic organisms are expected to escape the immediate impact area without significant injury. Potential impacts of dredging and disposal operations on salmonids and forage fish would be reduced and/or avoided with dredge timing restrictions.

3. Wildlife [230.32] Noise associated with disposal operations may have an effect on birds and marine mammals in the project vicinity. The impacts of any sound disturbance may result in displacement of animals rather than injury. Increases in turbidity associated with dredged material disposal could reduce visibility in the immediate vicinity of disposal activities, thereby reducing foraging success for any animals in the area. Any reduction in availability of food would be highly localized and would subside rapidly upon completion of the dredging and disposal operations. Disposal operations are not expected to result in a long-term reduction in the abundance and distribution of prey items. No breeding or nesting areas would be directly affected.

Potential Impacts to Special Aquatic Sites (Subpart E)

1. Sanctuaries and Refuges [230.40] The Olympic Coast National Marine Sanctuary is located offshore from the Quileute Tribe's reservation and to the north and south. The maintenance dredging of the navigation channel does not pose a threat to Sanctuary resources. Disposal of dredged material is intended to keep the estuarine sediments within the local environment and provide appropriate-sized sediment for surf smelt spawning. The proposed project would not adversely impact any designated sanctuary or refuge area.

2. Wetlands [230.41] There are no wetlands associated with this project.

3. Mudflats [230.42] There are no mudflats associated with this project.

4. Vegetated Shallows [230.43] Dredged material would not be discharged onto or adjacent to vegetated shallows.

5. Coral Reefs [230.44] Not applicable.

6. Riffle and Pool Complexes [230.45] The portion of the river to be dredged is the lower estuary, downstream from riverine riffle and pool complexes. The navigation channel is heavily tidally influenced as it has a direct connection to the Pacific Ocean.

Potential Effects on Human Use Characteristics (Subpart F)

1. Municipal and Private Water Supplies [230.50] Not applicable.

2. Recreational and Commercial Fisheries [230.51] Dredging is timed to avoid critical life stages of salmonids. The proposed dredging would significantly improve navigation after completion thereby enhancing the ability of sport and commercial fishermen to enter and exit the marina.

3. Water-related Recreation [230.52] Water-related recreation is not expected to be affected in the vicinity during the dredging and disposal.

4. Aesthetics [230.53] Localized, temporary increases in noise and turbidity would occur while equipment is operating, but are not expected to be significant. **Parks, National and Historic Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves [230.54]** Olympic National Park shares a **border with the Quileute Tribe's reservation. Disposal of dredged material on the ocean side of the spit is intended to provi**de sediment that has the appropriate grain size distribution for surf smelt spawning as the drift cell moves the sediment northward along Rialto Beach within the Park boundary. No adverse effect to any reserved areas is expected as a result from the proposed dredging and disposal operations.

Evaluation and Testing (Subpart G)

1. General Evaluation of Dredged or Fill Material [230.60] The material to be dredged is predominantly sand, gravel, and cobbles. Samples were collected and analyzed in 2011. The material meets the suitability guidelines of the inter-agency DMMP for in-water disposal.

2. Chemical, Biological, and Physical Evaluation and Testing [230.61] Testing is required of this material, and results are as indicated above.

Action to Minimize Adverse Effects (Subpart H)

1. Actions Concerning the Location of the Discharge [230.70] The effects of the discharge would be minimized by timing restrictions and the choice of disposal site. Approximately 15,000 CY from the outer channel would be placed at Site A to desiccate for approximately one to two months and then would be pushed onto First Beach no earlier than 1 November. Approximately 85,000 CY of sand and gravel would be disposed at Sites 2A and Site 1 on the ocean side of the spit. This material is intended to provide sediment for the surf smelt spawning habitat in the vicinity of Rialto Beach. No material would be placed at Site 2A or Site 1 until 1 October to avoid the spawning season.

2. Actions Concerning the Material to be Discharged [230.71] The material to be discharged would not be treated before being hydraulically piped to the disposal sites since no chemicals of concern are known to be present in the sediments (See Section 3 below). The material would be discharged by pipeline dredge, a very accurate method of placement.

3. Actions Controlling the Material after Discharge [230.72] Since the dredged materials have been approved for non-confined open water disposal by the inter-agency DMMP, no containment levee or capping is necessary for the beach disposal sites.

4. Actions Affecting the Method of Dispersion [230.73] The disposal sites have been selected to make use of currents, waves, and tidal circulation patterns to gradually move the material to lower tidal levels.

5. Actions Related to Technology [270.74] Appropriate machinery and methods of transport of the material for discharge would be employed. All machinery would be properly maintained and operated.

6. Actions Affecting Plant and Animal Populations [270.75] The timing of the proposed dredging and discharge operations would minimize potential for adverse effects to marine fish, wildlife, and vegetation.

7. Actions Affecting Human Use [230.76] The discharge would not result in damage to aesthetically pleasing features of the aquatic landscape. The discharge would not increase incompatible human activity in the remote fish and wildlife areas.

8. Other Actions [230.77] Not applicable.

Application by Analogy of the General Policies for the Evaluation of Permit Applications [33 CFR §320.4]

1. **Public Interest Review [320.4(a)]** The Corps finds these actions to be in compliance with the 404(b)(1) guidelines and not contrary to the public interest.
2. **Effects on Wetlands [320.4(b)]** No wetlands would be altered by the disposal of the dredged materials.

3. **Fish and Wildlife [320.4(c)]** USFWS, NMFS, and WDFW and the Quileute Tribe were consulted to ensure that direct or indirect loss and damage to fish and wildlife resources attributable to dredging and disposal operations would be minimized.

4. **Water Quality [320.4(d)]** The Corps would abide by the conditions of the Section 401 Water Quality Certification issued by the EPA to ensure compliance with water quality standards, when undertaking activities involving the discharge of dredged material into waters of the United States .

5. **Historic, Cultural, Scenic, and Recreational Values [320.4(e)]** No wild and scenic rivers, historic properties, National Landmarks, National Rivers, National Wilderness Areas, National Seashores, National Recreation Areas, National Lakeshores, National Parks, National Monuments, estuarine and marine sanctuaries, or archeological resources would be adversely impacted by dredging and disposal operations.

6. **Effects on Limits of the Territorial Sea [320.4(f)]** Dredging and disposal operations would not alter the coastline nor base line from which the territorial sea is measured for the purposes of the Submerged Lands Act and international law.

7. **Consideration of Property Ownership [320.4(g)]** The entire project would occur on Quileute Tribal reservation land. The Corps would seek permission to access the spit across NPS property.

8. **Activities Affecting Coastal Zones [320.4(h)]** The proposed work complies with the policies, general conditions, and general activities specified in the Coastal Zone Management Act.

9. **Activities in Marine Sanctuaries [320.4(i)]** The Quileute Tribal reservation land shares a border with the Olympic Coast National Marine Sanctuary (OCNMS). The FY2009-14 EA was provided to OCNMS staff for review and comment, and they were consulted again for the proposed work described in this document.

10. **Other Federal, State, or Local Requirements [320.4(j)]**

    a. **National Environmental Policy Act.** A Supplemental Environmental Assessment (SEA), addressing project changes as compared to the FY 2009-14 EA, has been prepared to satisfy the documentation requirements of NEPA.

    b. **Endangered Species Act.** In accordance with Section 7(a)(2) of the Endangered Species Act of 1973, as amended, federally funded, constructed, permitted, or licensed projects must take into consideration impacts to federally listed or proposed threatened or endangered species. A Biological Evaluation (BE) was submitted to NMFS for species under their jurisdiction on 1 June 2009 and, in a letter dated 23 July 2009, NMFS concurred with the Corps' "not likely to adversely affect" determinations. A "no effect" determination was made for species under the jurisdiction of USFWS, therefore no consultation is required. Both agencies were notified on 15 January 2013 of the proposed changes for the 2013 dredging cycle, and both replied that reinitiating consultation was not necessary.

    c. **Clean Water Act.** The Corps must demonstrate compliance with the substantive requirements of the Clean Water Act. This document records the Corps' evaluation and findings regarding this project pursuant to Section 404 of the Act. Public Notice CENWS-OD-TS-NS-46 and a Joint Aquatic Resources form were provided to EPA for a Section 401 Water Quality Certification. The Corps will abide by the conditions of the Water Quality Certification to ensure compliance with water quality standards, when undertaking activities involving the discharge of dredged material into waters of the United States.

    d. **Coastal Zone Management Act.** The Coastal Zone Management Act of 1972 (CZMA), as amended, requires Federal agencies to carry out their activities in a manner that is consistent to the maximum extent practicable with the enforceable policies of the CZMA. The proposed action is considered consistent to the maximum extent practicable with the CZMA.

e. **Marine Protection, Research, and Sanctuaries Act.** Section 102 of the Marine Protection, Research, and Sanctuaries Act (MPRSA) authorizes the EPA to promulgate ocean dumping criteria and designate recommended ocean disposal sites.

f. **National Historic Preservation Act.** The National Historic Preservation Act (16 USC 470) requires that the effects of proposed actions on sites, buildings, structures, or objects included or eligible for the National Register of Historic Places must be identified and evaluated. It is the policy of the Corps (33 CFR 336.1[c][6]) that historic resources surveys should not be conducted for maintenance dredging and disposal activities proposed within the boundaries of previously constructed navigation channels or previously used disposal areas. Since the proposed dredging is confined to the removal of recently deposited sediments within the previously dredged channel width and depth boundaries, no submerged cultural resources would be affected by the project.

g. **Fish and Wildlife Coordination Act.** The Fish and Wildlife Coordination Act (16 USC 470) requires that wildlife conservation receive equal consideration and be coordinated with other features of water resource development projects. A Fish and Wildlife Coordination Act Report is not required for the proposed work in the Quillayute River Navigation Channel, because the FWCA does not apply to operations and maintenance activities on existing projects.

11. **Safety of Impoundment Structures [320.4(k)]** Not applicable.
12. **Floodplain Management [320.4(l)]** Dredging and disposal operations would not alter any floodplains.
13. **Water Supply and Conservation [320.4(m)]** Not applicable.
14. **Energy Conservation and Development [320.4(n)]** Not applicable.
15. **Navigation [320.4(o)]** Dredging would maintain the channel and boat basin at the authorized depth of -10 feet MLLW for vessels.
16. **Environmental Benefits [320.4(p)]** Clean, sandy material dredged from the navigation channel would be used to benefit longshore movement of sediment.
17. **Economics [320.4(q)]** The economic benefits of the Quillayute River Navigation Channel are important to the local community.
18. **Mitigation [320.49(r)]** Potential impacts of dredging and disposal operations on salmonids and forage fish would be avoided through implementation of timing restrictions and choice of disposal locations

Appendix B: Coastal Zone Management Act Consistency Determination

Amended Coastal Zone Management Act Consistency Determination

Quillayute River Navigation Channel Maintenance Dredging
Fiscal Years 2009-2014

The Coastal Zone Management Act of 1972, as amended, requires Federal agencies to carry out their activities in a manner that is consistent to the maximum extent practicable with the enforceable policies of the approved state Coastal Zone Management (CZM) Programs. The Shoreline Management Act (SMA) of 1972 (RCW 90.58) is the core of authority of Washington's CZM Program. Primary responsibility for the implementation of the SMA is assigned to local governments.

According to 16 U.S.C. 1453 Section 304(1), "Excluded from the coastal zone are lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal Government, its officers or agents." The routine maintenance dredging and disposal activity proposed by the Corps occurs entirely within Quileute Tribal reservation land. However, disposal of approximately 100,000 cubic yards (CY) below mean higher high water on the Quillayute spit and First Beach is anticipated to cause this sediment to travel northward along the beach within land controlled by the Quileute Tribe and National Park Service, which are exempt from the Clallam County Shoreline Master Program (SMP). Disposed sediment would also enter land and water controlled by the Olympic Coast National Marine Sanctuary, which includes "Waters of Statewide Significance" and is subject to the Clallam County SMP.

1. INTRODUCTION

The proposed Federal action analyzed in this consistency determination is FY2009-14 maintenance dredging of the Quillayute River Navigation Channel as described in the 2009 Environmental Assessment and its 2013 Supplement. The Quillayute River Navigation Channel project consists of routine maintenance dredging of roughly 100,000 CY of material from the navigation channel and boat basin once every two years. All of this material would be disposed on Quillayute Spit and First Beach. The navigation channel is dredged to the authorized depth of -10 feet (MLLW) plus two feet overdredge to an overall depth of -12-feet (MLLW). The project includes the 3,500-foot long navigation channel, which varies in width from 100 to 275 feet wide, and the 335,000 square foot area within the boat basin.

The Corps maintains three areas of the lower Quillayute estuary: the outer channel, the inner channel, and the boat basin. The inner channel begins upstream at station 6+00 and extends downstream to station 20+00. The outer channel is considered to be station 20+00 to 35+00. This reach of the river mouth includes the bar, a ridge that forms at the river and ocean interface. Dredged sediments would be disposed at three locations: Site A is a one-acre site on the Quileute Tribe's reservation (placement here would be temporary, with pushing of material onto First Beach after November 1), and Site 2A and Site 1 are on the westward spit south of Rialto Beach.

This determination of consistency with the Coastal Zone Management Act is based upon review of applicable sections of the State of Washington Shoreline Management Program, and policies and standards of the adopted Clallam County Shoreline Management Master Program. Applicable sections of the plan are presented below, with the Corps' consistency indicated in ***bold italics***.

2. WASHINGTON STATE COASTAL ZONE MANAGEMENT PROGRAM

The Shoreline Management Act of 1972 (RCW 90.58) is the core of authority of Washington's CZM Program. Primary responsibility for the implementation of the SMA is assigned to local government. Clallam County has no jurisdiction over waters in or adjacent to the Quileute Tribal Reservation lands.

3. CLALLAM COUNTY SHORELINE MASTER PROGRAM
Clallam County's jurisdiction over the Quillayute River is stated as being "from the confluence of the Sol Duc and Bogachiel Rivers (S 20, T28N, R15W) downstream to Olympic National Park boundary (S 24, T28N, R15W), which does not include the Quileute Reservation or Olympic National Park. The Shoreline Management Act applies to all marine waters of the state below the Ordinary High Water Mark (OHWM), as does local shoreline jurisdiction. The Pacific Ocean coastline has been designated a "Shoreline of Statewide Significance," a category in which specific priority uses are preferred.

The proposed project footprint is located on a "Marine Beach" in an area designated as "Natural."

Chapter 2 – Goals and General Policies; VI
Governmental units shall be considered in this Master Program as bound by the same requirements as private interest. The fact that a shoreline use is advocated by a governmental unit shall not be considered in a different light than a private use, except insofar as it is of benefit to the general public. The guiding policy in every instance would be its effect upon the public good as concerns the shorelines.
Consistent: The U.S. Army Corps of Engineers is authorized to maintain the Quillayute River Navigation Channel with material disposal on the Quillayute Spit. The general public is served by having access to the harbor of refuge and other services in the marina, and by the U.S. Coast Guard being able to transit the river mouth to engage in rescue missions. Additionally, the Spit and adjacent beach under National Park Service control have been experiencing high rates of erosion. Placement of dredged material would contribute natural sediment to the shoreline and thereby slow the rate of erosion of sand from the beach.

3.02 Natural Environment; B. Objective
In placing a shoreline in the category of a Natural Environment, it is intended to preserve, maintain or restore such a shoreline as a natural resource relatively free of human influence; to discourage or prohibit those activities which might destroy or degrade the natural characteristics which make these shorelines unique and valuable.
Consistent: Channel dredging and disposal of sediments would not destroy or degrade the natural characteristics present along the Quillayute Spit, Rialto Beach, and First Beach shorelines. Dredged material disposal would not contribute any appearance of human influence.

3.02 Natural Environment; C. Use Element Policies; 5. Shoreline Use Element
The use of a shoreline of a Natural Environment should be limited to those activities which preserve the natural features unchanged.
Consistent: The proposed dredging and disposal activities are routine operations and maintenance and have been practiced since 1949. All natural features of the Quillayute Spit shoreline would remain unchanged.

3.02 Natural Environment; C. Use Element Policies; 6. Conservation Element
Activities on shorelines of a Natural Environment should be confined to those which conserve the features and characteristics which are an integral part of this environment. The scenic vistas and aesthetic qualities should be preserved without alteration.
Consistent: All dredged material is naturally delivered riverborne sediments and marine-derived gravel. The proposed dredging and disposal would not alter any aesthetic qualities of the natural shoreline.

3.02 Natural Environment; C. Use Element Policies; 7. Historical/Cultural Element

In general, shorelines of historic, cultural, scientific or educational value shall be regarded as belonging in a Natural Environment. As such, any change or alteration which tends to change or degrade this value should be prohibited. The only activities which should be permitted should be those designed to preserve, protect or restore such features.
Consistent: The selected disposal sites around the lower Quillayute estuary have both cultural and scientific value. The Corps has coordinated with the Quileute Tribe and State Historic Preservation Office for approved disposal locations to avoid impacts to cultural resources. The Corps conducted scientific research at disposal site 2A on the Quillayute Spit to measure changes to the beach slope profile and grain size distribution to detect effects, if any, to surf smelt spawning habitat. Disposal of sediments has been thought to preserve this reach of beach environment; the study results would help reduce uncertainties.

4.01 Marine Beaches; A. Natural Environment; 1. The building of structures such as jetties, groins, and bulkheads is prohibited.
Consistent: No new jetties, groins, bulkheads or other structures would be constructed as part of the FY2013 routine maintenance of the navigation channel.

4.01 Marine Beaches; A. Natural Environment; 2. Piers and jetties of historic value or those built before 1971 shall be allowed to remain.
Consistent: Currently existing navigational features under the Corps authority were constructed in 1962 and would not be altered as part of the proposed maintenance dredging and disposal.

4.01 Marine Beaches; A. Natural Environment; 3. The accumulation of driftwood or other material washed in from the sea must not be disturbed.
Consistent: No marine derived materials, other than the accumulated sediment in the navigation channel, would be disturbed. No materials on the marine beach would be removed. Several large driftwood logs would be temporarily moved for the bull dozer to move material from Site A to First Beach; these logs would then be put back in their original location.

4.01 Marine Beaches; A. Natural Environment; 4. Removal of sand and rock is prohibited.
Consistent: No sand or rock would be removed from the natural marine beach environment. Sand and rock sediments would be deposited as a result of the proposed work in an effort to keep the natural materials within the estuarine and marine ecosystem.

4.01 Marine Beaches; A. Natural Environment; 5. The dumping of any material is prohibited.
Consistent: The Corps has coordinated the disposal of dredged material with the Washington Department of Fish and Wildlife, who expressed the need for the dredged material not to be removed from the estuarine and marine environment. Approximately 100,000 CY of sand and gravel would be disposed at a rate of roughly 1,500 CY per 24-hour period. This material is expected to be carried along the marine beach and incorporated into the overall natural environment along the Quillayute Spit, Rialto Beach, and First Beach.

4.01 Marine Beaches; A. Natural Environment; 6. The forest and vegetation and cliffs and benches within the wetlands behind the beach shall not be disturbed.
Consistent: No vegetation would be removed or disturbed as part of the proposed project.

4.01 Marine Beaches; A. Natural Environment; 7. Excavations or the removal of material from the shoreline or the cliffs behind are prohibited.
Consistent: No excavations would occur along the marine beach shoreline. Dredging is proposed as routine maintenance of the navigation channel.

4.01 Marine Beaches; A. Natural Environment; 8. Any activity which would contribute to erosion along the shoreline is prohibited.
Consistent: Corps coastal engineers recommend disposal of sediments on the Quillayute Spit and First Beach as a method of reducing erosion along this reach of shoreline.

4. STATEMENT OF CONSISTENCY
Based on the above evaluation, the Corps has determined that the proposed disposal of 100,000 CY of dredged material during the period FY2009-14 complies with the policies, general conditions, and activities as specified in the Clallam County Shoreline Master Program adopted in 1976 and approved by the Director of the Washington Department of Ecology. The proposed action is considered to be consistent to the maximum extent practicable with the State of Washington Shoreline Management Act and the policies and standards of the Clallam County Shoreline Master Program.

Appendix C: Water Quality Certification from Environmental Protection Agency (Pending)

Appendix D: Endangered Species Act Memo

CENWS-EN-ER **13 February 2013**

MEMORANDUM FOR RECORD
SUBJECT: ESA consultation for proposed project changes to the 2013 Quillayute dredging

1. Background: The Corps is proposing the following project under the Rivers and Harbors Act of 3 July 1930 (House Document 290, 71st Congress, 2nd Session), which authorized the construction and maintenance of the Quillayute River Navigation Channel. The project was modified by the Rivers and Harbors Act of 2 March 1945 and 3 September 1954.

Maintenance dredging of the navigation channel is required roughly every two years as riverborne sand and gravel forms shoals within the navigation channel. The purpose of the proposed work is to return the navigation channel and boat basin to the authorized depth of minus 10 feet below mean lower low water (MLLW) and to reinforce the structures protecting the channel and boat basin. This work is needed so that vessels may safely transit the channel for entry and exit from the marina and harbor of refuge, and so that the U.S. Coast Guard can keep their vessels stationed at this location for search and rescue operations.

2. Proposed Project Changes from Previous Dredge Cycles: The Quillayute River Navigation Channel project consists of routine maintenance dredging of approximately 100,000 cubic yards of material from the navigation channel and USCG basin once every two years. The navigation channel is dredged to the authorized depth of minus 10 feet MLLW plus 2-feet overdredge for a total depth of minus 12 feet MLLW. The project includes the 3,500-foot long navigation channel, which varies in width from 100 to 275 feet wide, and a 335,000 square foot area within the boat basin. Dredging will be accomplished with a hydraulic dredge with pipeline. The proposed start date for dredging is 1 September for the outer channel, with disposal at Site A. Dredging of the inner channel will commence 1 October with disposal at Sites 1 and 2A. A 5 year consultation was completed for the dredge years 2009-14 in 2009. Concurrence of *may affect, but is not likely to adversely affect* was received for three species from National Marine Fisheries Service (NMFS). A *no effect* determination was made for all other species and their critical habitat.

In previous years the material placed at Site A was hauled offsite after desiccation to be used by the Quiluete Tribe on their reservation and only a portion of the boat basin was dredged. For the remaining dredging years in the project period material placed at Site A will desiccate there until November and then be pushed onto First Beach (below MLLW) to prevent winter storm surges from flanking the South jetty root. In addition, the entire 335,000 square foot boat basin will be dredged instead of the 115,000 square foot area dredged in previous years.

3. ESA Consultation Conclusions:
The proposed project changes will not change the effect determinations for ESA listed species made in the 2009-14 Biological Evaluation and NMFS concurrence letters. The actions will still occur during work windows that avoid impacts to listed fish and their prey. No additional impacts are expected to listed marine mammals or birds due to the same timing as previous years and a similar amount of material being dredged. The added footprint does not contain any critical habitat or foraging areas. Therefore, the determinations of *may affect, but is not likely to adversely affect* still remain for Steller sea lions, Southern Resident killer whales, and Pacific smelt, and *no effect* for all other species in the vicinity of the project or their critical habitat. National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) were notified via email of the proposed 2013 project changes on January 15, 2013, and both agencies agreed that reinitiating consultation was not necessary via email.

4. POC: Please contact Chemine Jackels, Environmental Resources Branch biologist at (206) 764-3646 or chemine.r.jackels@usace.army.mil with questions.

Appendix E: Draft FONSI

DRAFT AMENDED FINDING OF NO SIGNIFICANT IMPACT
Quillayute River Federal Navigation Channel Maintenance Dredging FY 2009-14
La Push, Clallam County, Washington

1. Background. The Corps is proposing the following project under the Rivers and Harbors Act of 3 July 1930 (House Document 290, 71st Congress, 2nd Session), which authorized the construction and maintenance of the Quillayute River Navigation Channel. The project was modified by the Rivers and Harbors Act of 2 March 1945 and 3 September 1954.

Maintenance dredging of the navigation channel is required roughly every two years as riverborne sand and gravel forms shoals within the navigation channel. The purpose of the proposed work is to return the navigation channel and boat basin to the authorized depth of minus 10 feet below mean lower low water (MLLW). This work is needed so that vessels may safely transit the channel for entry and exit from the marina and harbor of refuge, and so that the U.S. Coast Guard can keep their vessels stationed at this location for search and rescue operations. The project purpose and need reflects a change from that described in the FONSI of August 2009, as reflected in the draft Supplemental Environmental Assessment of March 2013, in that stabilization of the eroding jetty root at the landward terminus of the South Jetty is required in order to reduce the risk of a breach and obstruction of the Federal navigation channel.

2. Proposed Action. The Quillayute River Navigation Channel project consists of routine maintenance dredging of approximately 100,000 cubic yards of material from the navigation channel and boat basin once every two years. The navigation channel is dredged to the authorized depth of minus 10 feet MLLW plus 2-feet overdredge for a total depth of minus 12 feet MLLW. The project includes the 3,500-foot long navigation channel, which varies in width from 100 to 275 feet wide, and a 335,000 square foot area within the boat basin. Dredging will be accomplished with a hydraulic dredge with pipeline. The proposed start date for dredging is 1 September for the outer channel, with temporary disposal at Site A for approximately two months and eventual placement onto First Beach on or after 1 November; dredging will commence 1 October with disposal at Sites 1 and 2A. The Corps has negotiated the staggered start dates with the Washington Department of Fish and Wildlife, National Park Service, the Environmental Protection Agency, and the Quileute Tribe. This start date was initially agreed upon for the fall 2009 dredging. For subsequent years, the Corps considered the results of a surf smelt monitoring study conducted in 2009, which provided guidance on the impacts of beach disposal to the surf smelt population that spawns on Rialto Beach. Results from this study showed no surf smelt eggs to be present during the timing of proposed material placement on the beach. Each dredging event would be completed no later than 28 February. This document is intended to expire on 1 March 2015 to allow for the possibility that dredging may be required throughout the fifth dredging year, beginning 1 September 2014, in the event the Corps may need the entire fish window to complete the work.

This description of the proposed action also reflects a change from that described in the FONSI of August 2009, as reflected in the draft Supplemental Environmental Assessment of March 2013. The proposed changes for all dredging conducted within the project period during and following Dredging Year 2013 are that a) material disposed at Site A will be relocated to the sloped bank above First Beach, and b) the Corps will dredge the entire boat basin rather than just a portion. The material placed at Site A will desiccate for approximately one to two months and then be pushed toward First Beach on or after November 1 to avoid surf smelt spawning. Some material may be placed below mean higher high water. The additional incremental environmental impacts of this change are a slightly longer duration of

turbidity in the boat basin, temporary loss of shore grasses on the bank above First Beach, and broader area of disturbance to benthic invertebrates in the boat basin. Given the temporary, localized, and discountable nature of these incremental effects, they are not considered significant.

3. Summary of Impacts and Compliance. Impacts of the proposed work will be minor and temporary, considering the overall project effects in conjunction with the proposed changes reflected in the Supplemental Environmental Assessment of February 2013. This project complies with the Endangered Species Act; a biological evaluation was prepared and transmitted to National Marine Fisheries Service dated 1 June 2009, with a determination of "not likely to adversely affect" Steller sea lion, Southern Resident killer whale, and Pacific smelt. The Corps received concurrence with this determination. A "no effect" determination was made for species under the jurisdiction of USFWS; therefore, no consultation is required. NMFS and USFWS were notified of the proposed project changes for 2013 and both agencies agreed that reinitiating ESA consultation was not necessary. This project complies with Sections 401 and 404 of the Clean Water Act. The Corps is seeking a Water Quality Certification from the Environmental Protection Agency for this work. The project complies with the National Historic Preservation Act and the Corps has coordinated the work with the Quileute Indian Tribe.

4. Finding. Based on the attached environmental documentation, I have determined that the proposed action, including the changes in project description reflected in the Supplemental Environmental Assessment of February 2013, will not result in significant adverse environmental impacts, and therefore the project will not have significant effects on the quality of the human environment and does not require preparation of an environmental impact statement.

_____ _____

Date

Bruce A. Estok
Colonel, Corps of Engineers
District Commander