FINDING OF NO SIGNIFICANT IMPACT

For

REHABILITATION OF THE JETTY SYSTEM AT THE MOUTH OF THE COLUMBIA RIVER, OREGON AND WASHINGTON

I find that the selected course of action to maintain a resilient jetty system at the mouth of the Columbia River (MCR) will not significantly affect the quality of the human environment, and an Environmental Impact Statement is not required. The selected course of action in this Finding of No Significant Impact (FONSI) is the *Preferred Alternative* as summarized below and analyzed in the *Revised Final Environmental Assessment, Columbia River at the Mouth, Oregon and Washington, Rehabilitation of the Jetty System at the Mouth of the Columbia River* (U.S. Army Corps of Engineers, June 2012), otherwise known as the revised final EA. This revised final EA and FONSI list all of the important considerations of the proposed project and their environmental impacts, and the 2012 revised final EA is incorporated herein and provides a basis for the following information and conclusions. These impacts, both individually and cumulatively, are NOT SIGNIFICANT as *significant* is defined by National Environmental Policy Act (NEPA) and case law.

Introduction and Background Information

Features of the MCR navigation project were authorized by the River and Harbor Acts of 1884, 1905, and 1954. The navigation project consists of a 0.5 mile wide navigation channel extending for about 6 miles through a jettied entrance between the Columbia River and Pacific Ocean. The North Jetty and Jetty A are located in Pacific County, Washington, near the cities of Ilwaco and Long Beach on the Long Beach Peninsula. The South Jetty is located in Clatsop County, Oregon near the cities of Warrenton/Hammond and Astoria.

The MCR is the ocean gateway for maritime navigation to and from the Columbia-Snake River navigation system. The MCR jetties serve as the opening point to the larger Columbia/Snake River navigation system, carrying about 40 million tons of cargo on an annual basis, with an estimated value of $20 billion. The MCR jetty system is in a state of structural decay. Continued deterioration, ongoing storm activity and the continued loss of sand shoal material — the foundation of each of the three MCR jetties — has positioned the jetty system for a potential series of frequent, costly emergency repairs. Consequently, substantial repairs to the MCR jetties are necessary to maintain the location of the entrance and for the continued safe entry of ships into the Columbia River federal navigation channel. Actions identified in the June 2012 *MCR Jetty System Major Rehabilitation Evaluation Report* and proposed at the North and South Jetties and Jetty A will begin to address these issues. The revised 2012 EA provides a comprehensive analysis for all actions proposed at the MCR, including actions for the South Jetty dune augmentation, actions at the North Jetty described in the *North Jetty Major Maintenance Report* (MMR), May 2011, and actions described in the *MCR Jetty System Major Rehabilitation Evaluation Report*. All of these actions are described in the revised EA along with an evaluation of their cumulative effects.

In June 2006, the Corps issued a draft EA (*Draft Environmental Assessment, Columbia River at the Mouth, Oregon and Washington, Rehabilitation of the Jetty System at the Mouth of the Columbia River, June 2006*) for public review and comment. This 2006 draft EA identified a preferred alternative for major rehabilitation and repairs including rebuilding the jetty lengths, adding spur groins, and capping the head at each of the jetties. In January 2010, the Corps issued a revised draft EA (*Revised Draft Environmental Assessment Columbia River at the Mouth, Oregon and Washington Rehabilitation of the Jetty System at the Mouth of the Columbia River, January 2010*) for public review and comment, which

superseded the 2006 draft EA. The preferred alternative included a smaller-scaled project without the rebuilt lengths and included head-capping, spur groins, and repair and rehabilitation actions at the jetties. The 2010 revised draft EA also included the following actions: South Jetty foredune augmentation at the jetty root near the neck of Clatsop Spit; fill of the lagoon at the North Jetty; and critical repairs to Stations 86-99 of the North Jetty.

After public review of the 2010 draft EA, the Corps modified the preferred alternative for the North Jetty, South Jetty, and Jetty A. The modification also included avoidance of fill in Trestle Bay. These combined modifications avoided and minimized some of the formerly identified environmental impacts by reducing the final structure and construction footprints necessary to achieve a resilient jetty system at the MCR. The 2010 draft EA was finalized in May 2011, *Final Environmental Assessment Columbia River at the Mouth, Oregon and Washington Rehabilitation of the Jetty System at the Mouth of the Columbia River* and *Finding of No Significant Impact, May 31, 2011* (2011 final EA). In addition to avoiding fill in Trestle Bay, the preferred alternative in the 2011 final EA included: spur groin and head-capping features at all jetties; scheduled repairs as the South Jetty; North Jetty lagoon fill; dune augmentation at Clatsop spit; immediate rehabilitation at Jetty A; and a proposed schedule of activities in a 20-year period. The Corps signed a FONSI in 2011 for a subset of the preferred alternative described in the 2011 final EA, which included the following: critical repairs at the North Jetty, North Jetty lagoon fill; and the dune augmentation at Clatsop spit. This FONSI replaces the 2011 FONSI.

The 2012 revised EA updates the 2011 final EA. It makes the clarification that the No Action Alternative is not the same as the Base Condition; since the Base Condition includes some action (these were the selected course of action in the 2011 FONSI).

The cumulative effects evaluation has been updated in the revised final EA to incorporate the Corps' proposal to designate nearshore dredge disposal sites at the MCR (see the April 24, 2012 Public Notice for: *Nearshore Disposal Locations at the Mouth of Columbia River Federal Navigation Project Pacific County, Washington Clatsop County, Oregon*).

The Selected Course of Action

The preferred alternative is composed of four categories: (1) engineered designs elements and features of the physical structures for each jetty ; (2) construction measures and implementation activities for all actions; (3) proposed Clean Water Act (CWA) 404 mitigation actions for impacts to wetlands and waters of the US; and (4) proposed establishment of and coordination with an Adaptive Management Team (AMT) composed of representatives from the Corps and Federal and State resource management agencies.

The selected course of action will have a smaller footprint than described in the 2006 and 2010 draft EAs and the previous 2011 final EA. This selected action is based on current modeling which eliminates the immediate need for spur groins and larger head-capping features. The key elements of this selected course of action include the following to maintain the MCR navigation project over the next 8 years:

- South Jetty foredune augmentation at Clatsop Spit
- North Jetty lagoon fill
- ***North Jetty***:
    - Critical repairs as described in the 2011 final and the 2012 revised final EAs
    - Scheduled repairs
    - Stabilizing the jetty length but no head capping
- ***South Jetty***:

- Interim repairs
- Monitor intensely
- Understand more work may be required in the future

- ***Jetty A***:
  - Scheduled repairs
  - Stabilizing the jetty length but no head capping.

The Corps identified these actions to protect the rubble-mound structures at the MCR over the next 8 years. Because these jetties are built on sand, are subject to extreme physical environmental conditions, and have been established for over 125 years, they would require work and repair beyond the 8-year period. Throughout and at the end of 8-years, via inspections and monitoring, the Corps would need to continue assessment of any potential necessary future maintenance, rehabilitation, or reconstruction.

The construction schedule begins in 2013 with the South Jetty dune augmentation, and then lagoon fill and culvert replacement is scheduled in 2014, with stone placement for critical interim repairs to begin in 2014. The overall schedule for all actions is expected to last for about 8 years, concluding in year 2020 depending on the project's funding stream. Design elements and structural features of the preferred alternative for each jetty include the following:

- North Jetty – The Corps will conduct scheduled repairs addressing the existing loss of jetty cross section and to minimize future cross-section instability. The cross-section repairs are primarily above mean lower low water (MLLW), with a majority of stone placement likely not to extend beyond -5 feet below MLLW. The jetty head will be stabilized with large stone. Shore-side improvements include lagoon fill, repairs between Station 86-99, and culvert replacement accomplished under the base-condition scenario. These actions are designed to stop the current ongoing erosion of the jetty root.

- South Jetty – Interim repair actions will be conducted as described in the Base Condition in the revised final EA. The cross-section repairs are primarily above MLLW, with a majority of stone placement not likely to extend beyond -5 feet below MLLW. Augmentation of the dune at the western shoreline extending south from the jetty root is described and included to prevent the degradation of the jetty root and prevent the potential breaching of the foredune.

- Jetty A – The Corps will conduct scheduled repairs addressing the existing loss of jetty cross-section and to minimize future cross-section instability. The cross-section repairs are primarily above mean lower low water (MLLW), with a majority of stone placement not likely to extend beyond -5 feet below MLLW. The jetty head will be stabilized in its current location with large armor stone.

Construction measures and implementation activities for all three jetties include the following:

- Storage and staging areas for rock stockpiles and all associated construction and placement activities such as roadways, parking areas, turn-outs, crane set-up pads, haul roads, weigh stations, yard area for sorting and staging actions, and other ancillary activities.
- Stone delivery from identified quarries either by barge or by truck. Possible transit routes have been identified in the revised final EA. This also includes construction and use of permanent barge offloading facilities and causeways with installation and removal of associated piles and dolphins.
- Stone placement either from land or water, which includes the construction, repair, and maintenance of a haul road on the jetty itself, crane set-up pads, and turnouts on jetty road.

- Regular dredging and disposal of infill at offloading facilities with frequency dependent on a combination of evolving conditions at the site and expected construction scheduling and delivery. Disposal of infill will occur at existing approved in-water sites.

The selected course of action, including the duration of the construction activities, remain within the scope of effects previously evaluated in the 2011 Biological Opinion (May 18, 2011, *Endangered Species Act Biological Opinion and Conference Report and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Major Rehabilitation of the Jetty System at the Mouth of the Columbia River* – NMFS No 2010/06104, and; February 23,2011, *Major Rehabilitation of the Jetty System at the Mouth of the Columbia River Navigation Channel, Clatsop County, Oregon and Pacific County, WA* – USFWS # 13420-2011-I-0082).

In addition, the Corps has identified specific and potential mitigation for impacts to CWA 404 wetlands and waters of the US. Wetland mitigation opportunities have been identified adjacent to the impacted wetlands at the North Jetty. Wetland mitigation for Jetty A would also be implemented at the North Jetty because space is unavailable at Jetty A. Mitigation for wetland impacts at the South Jetty would occur within the State Park but southwest of the impact area in a location south of Trestle Bay. The mitigation for the impacted wetlands would be creation of wetlands of similar type and function. Specific mitigation for impacts to waters other than wetlands has not been determined, but a suite of potential projects and examples has been identified. Depending on further development of both the project and potential mitigation alternatives and commensurate with final impacts, a specific mitigation project or combination of projects would be selected and constructed concurrently. Mitigation will provide environmental benefits to offset impacts as portions of the proposed action are completed over time. This EA has identified and quantified the maximum amount of impacts and mitigation likely under the Preferred Alternative, and further details and selection of specific appropriate mitigation actions for waters other than wetlands will be refined as the project moves forward. Depending on the method of project implementation, commensurate mitigation could also be reduced if impacts are avoided. Generally, possible mitigation measures could include but are not limited to an individual project or a combination of projects and actions such as the following list.

- Excavation and creation of tidal channel and wetlands to restore and improve hydrologic functions including water quality, flood storage, and salmonid refugia.
- Culvert and tide gate replacements or retrofits to restore or improve fish passage and access to important spawning, rearing, and resting habitat.
- Beneficial uses of dredged material from MCR hopper dredge to replenish littoral cells.
- Invasive species removal and control and revegetation of native plants to restore ecological and food web functions that benefit fisheries.

Mitigation meets compliance obligations under the Clean Water Act and would be commensurate with impacts from construction activities. It also complements Corps obligations to protect and restore critical habitat for ESA listed species.

Due to the construction duration over 8 years, an Adaptive Management Team (AMT) will be established. This forum will: provide an opportunity for periodic evaluation; facilitate continued coordination; and allow the Corps to inform agency partners should unforeseen changes arise. Results regarding marine mammal and fish monitoring, wetland mitigation and habitat improvement monitoring, and water quality monitoring will be made available to the AMT to fulfill reporting requirements and address any unexpected field observations. Results of jetty monitoring surveys will also inform the AMT of schedule and design refinements that become necessary as the proposed action evolves over time. Final selection and design of the mitigation proposal would be determined by the Corps and would be vetted through this

forum to facilitate obtaining final environmental clearance documents for this component of the MCR proposed action.

Environmental Effects

Physical Characteristics. The preferred alternative enables the jetty structures to continue protecting the MCR inlet, adjacent morphology, shore lands, and side channels from becoming destabilized by waves and currents. Various modeling described in the revised final EA has indicated that the preferred alternative will have no calculable effect on nearshore or shore lands beyond 1-2 miles north or south of the MCR inlet. Stabilizing the jetty heads will stop the migration of littoral sediment into the federal navigation channel. Because jetty lengths will be about the same as existing conditions, a negative impact on the sediment budget in the littoral cell or on Clatsop and Peacock Spits is not be expected. Likewise, there will be little to no changes to salinity or plume conditions.

Anadromous and Resident Fish. Several listed anadromous species occur in the vicinity of the MCR, including salmonids, steelhead, eulachon, and green sturgeon. Proposed actions may have some adverse effects on these species, but they are not expected to be measurable at the population or species scale. Protection of water quality via best management practices, the use of a vibratory hammer, and the avoidance and minimization of wetland impacts are all components of the selected action that reduce the extent and intensity of any effects. Possible effects of the preferred alternative on anadromous and resident fish species include:

- Temporary and permanent interruption/alteration of adult and juvenile migration pathways.
- Temporary and/or permanent loss of shallow-water habitat.
- Juvenile predator attraction to the jetty substrate and habitat type.
- Temporary disruption and displacement from piling installation and barge offloading traffic.
- Temporary loss of benthic organisms.
- Temporary displacement from dredging and rock placement activities.
- Temporary water quality impacts from construction activities and potential spills.
- Temporary increase in turbidity.
- Temporary and permanent immeasurable changes to salinity, velocity, and bed morphology.

In accordance with Section 7(a) (2) of the Endangered Species Act, federally-funded, constructed, permitted, or licensed projects must take into consideration impacts to federally listed or proposed threatened or endangered species. Information on federally listed species and designated critical habitat is presented in the final revised EA. The Corps prepared Biological Assessments (BAs) covering the preferred alternative as described in the 2011 final EA to address federally listed species under the jurisdiction of both the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS), and these BAs considered a larger project footprint and longer construction schedule than the revised 2012 preferred alternative. The BAs were provided to the respective agencies for review and consultation.

On March 18, 2011, The Corps received a Biological Opinion from NMFS indicating that the Corps' previously preferred alternative was not likely to adversely affect any listed species, with the exception of eulachon, humpback whales, and Stellar sea lions (2010/06104). For these species, NMFS determined that Corps' actions were not likely to jeopardize the existence of the species. NMFS also concluded that Corps actions were not likely to adversely modify any of the current or proposed critical habitats. There was a Conservation Recommendation to carry out actions to reverse threats to species survival identified in the NMFS 2011 *Columbia River Estuary ESA Recovery Plan Module for Salmon and Steelhead,* (NMFS Northwest Region. Portland, OR, January. Prepared for NMFS by the Lower Columbia River

Estuary Partnership (contractor) and PC Trask & Associates, Inc., subcontractor)... The Corps also provided a conference report for critical habitat that NMFS proposed for leatherback turtles, eulachon, and Lower Columbia River coho salmon. The Corps will request NMFS adopts its conference report when this critical habitat becomes designated. The Corps also will request an Incidental Harassment Authorization of Stellar sea lions, humpback whales, California sea lions, and harbor seals prior to the start of construction.

On February 23, 2011 the Corps received a Letter of Concurrence from USFWS regarding potential effects to species under their jurisdiction (13420-2011-I-0082). The Corps determined its actions would have no effect on listed species, with the exception of bull trout, marbled murrelets, and snowy plover. The Corps concluded that its actions were not likely to adversely affect these species or their critical habitat. The USFWS concurred with the Corps' determination. USFWS also included four Conservation Recommendations to protect and improve snowy plover habitat and manage attractant waste derived from construction actions.

In the Biological Assessments, the Corps considered the following actions and effects: rock placement; spur groins, jetties and causeways, barge offloading facilities and dredging; water quality and turbidity; system effects; and aquatic habitat.

Essential Fish Habitat (EFH). The preferred alternative will directly affect EFH for Chinook salmon, coho salmon, English sole, sand sole and starry flounder from the spatially limited, small amount of permanent loss of sandy bottom habitat from jetty construction. Short-term disturbances to EFH will result for lingcod, English sole, sand sole, starry flounder, black rockfish, brown rockfish, China rockfish, copper rockfish, and quillback rockfish. The addition of rock would increase EFH for lingcod, black rockfish, brown rockfish, China rockfish, copper rockfish, and quillback rockfish. These effects are not expected to be measureable at a species or population scale. An EFH assessment under the Magnuson-Stevens Act was provided as part of the Biological Assessment submitted to the NMFS for the preferred alternative. Although NMFS did identify minor adverse effects on EFH associated with the preferred alternative, in the subsequent Biological Opinion, no additional EFH Conservation Measures were recommended.

Marine Mammals and Sea Turtles. Six ESA-listed whale species and four sea turtle species could occur in the vicinity of the MCR. All of these species are migratory, generally are not found close to shore, and are highly mobile. Moreover, the MCR is not preferred habitat for these species, they are unlikely to feed in the vicinity of the jetties, and jetty work will have inconsequential impacts on their prey base. Acoustic effects from pile installation will be damped by the use of vibratory hammers, and will be temporary and intermittent. The impacts are expected to attenuate to near background levels near the source. Therefore, sound levels are not expected to reach levels harmful to species. The preferred alternative is not expected to measurably affect these whale and sea turtle species such that there will be an adverse effect to the population or species.

The South Jetty is a non-breeding haul-out site for Steller sea lions. They primarily use the concrete block structure at the jetty head. Their use of the jetty is concentrated in the winter months and is least used during the May-July breeding season. Stabilizing the jetty head and placing jetty rock near the head will disturb Steller sea lions by forcing them to move off haul out areas; however, they will be able to haul out elsewhere in the vicinity. Prey resources for sea lions are not expected to be affected. Conservation measures to avoid and minimize impacts to sea lions also have been proposed. Prior to construction activities, an incidental harassment authorization (IHA) for marine mammals at the South Jetty will be obtained from the NMFS. The Corps anticipates that the new IHA permit will entail requirements similar to those in the previous permit for repair of the South Jetty. Effects to Steller sea lions are not expected to be measureable.

Macrophytes and Invertebrates. The mobile sand community at the MCR provides habitat for invertebrate species such as polychaetes, clams, amphipods, and crabs. This is a high-energy zone and generally less productive than other areas of the estuary. The jetties provide rocky intertidal and subtidal habitat. Dominant macrophytes include brown and green seaweeds and sea lettuce that are attached to the jetty rocks. Invertebrate species include sponges, hydroids, sea anemones, crabs, tubeworms, limpets, and mussels that live on the rocks or in crevices. There will be some loss of invertebrates with construction; however, those species occupying rocky habitats will colonize newly placed rock. No permanent adverse effects to macrophyte and invertebrate populations are expected.

Dungeness Crab. Crabs are known to occur on sandy bottom areas on the south side of the North Jetty and to a lesser extent on the north side of the South Jetty. Crabs move out of the estuary in large numbers along the northern part of the channel (south side of North Jetty) in the fall and move into the estuary as megalops in the spring. Megalops enter the estuary passively by current mainly along the north side of the entrance (on the south side of North Jetty) where current is strongest and salinity highest. No adverse impacts to adult and juvenile Dungeness crabs will be expected from the preferred alternative because modeling shows no appreciable permanent changes to velocity, salinity, and bed morphology at the MCR. The inconsequential changes to water velocities from adding spur groins also will not adversely alter the migration paths of young crabs moving in or out of the estuary (though they are no longer proposed).

Terrestrial Wildlife, Seabirds, and Plants. The preferred alternative is not expected to measurably affect terrestrial wildlife and seabird species. These species could readily avoid the construction areas, any impacts to shallow intertidal habitat will be small relative to the availability of adjacent foraging habitat, and the short temporal loss is likely to be replaced with some ephemeral accreted habitat that is formed behind the repaired jetty structures.

ESA-listed Species Under USFW Jurisdiction. There are several listed species that could occur in the counties where the preferred alternative is located: short-tailed albatross, northern spotted owl, Columbian white-tailed deer, Oregon silverspot butterfly, and Nelson's checker-mallow. There is small likelihood that these species will be present in the project vicinity or encounter any elements of the preferred alternative, or that the action will occur in or measurably affect any portion of their critical habitat. Therefore, effects to these species are highly unlikely.

Periodic minor disturbance could occur to marbled murrelets from noise generated from trucks on haul roads. The following measures will be employed during the murrelet nesting season (April 1 to September 15) to reduce potential impacts from noise: trucks will only be allowed to use roads through Cape Disappointment during daylight hours; trucks will not unnecessarily stop along the park roads; and trucks will be prohibited from using compression brakes (jake brakes). These measures will reduce and limit the duration and extent of exposure to acoustic effects. Consequently, the preferred alternative will not adversely affect marbled murrelets at a level to the population or species.

Western snowy plovers have occurred in the vicinity of Clatsop Spit although no breeding or wintering plovers have been reported in recent years. Two birds were sighted in the 2012 surveys. A Habitat Conservation Plan (HCP) for snowy plovers was developed for Clatsop Spit by the Oregon Parks and Recreation Department (OPRD). The area proposed for construction, storage, and staging is mostly outside the area on Clatsop Spit identified in HCP. The Corps is currently investigating opportunities to create western snowy plover nesting habitat on Clatsop Spit within Fort Stevens State Park. As staging areas could be attractive to plovers, the Corps would consider creation of 10 -20 acres of habitat during or after use of the Spit for rock storage is completed. This habitat would be created with the intent to avoid potential limitations to rock storage and transport on the Spit if plovers begin to nest in construction areas.

The options to create plover habitat concurrently with rock storage is preferable if it plover use of the created habitats and beaches would not interfere with the Corps' ability to use Clatsop Spit throughout the life of the project. This scenario would instead provide preferable alternative habitat away from the potential attractive nuisance of open sands that the construction disturbance would create. In other words, the Corps would be creating bare sand habitat that would attract birds away from construction site impacts. Habitat maintenance each year after creation would be required to provide functional habitat. The Corps would maintain these sites during construction, but after project completion maintenance would not be the responsibility of the Corps. The Corps has had initial discussions with OPRD regarding plover habitat creation and has signed a Memorandum of Agreement with the OPRD, USFWS, and other agencies regarding management of snowy plovers at Clatsop Spit and on other Corps lands. The Corps would be implementing best management practices (BMPs) that are in alignment with its efforts under the HCP. Consequently, the preferred alternative is not expected to have negative effects to snowy plovers that are measurable at a population or species level.

On February 23, 2011 the Corps received a Letter of Concurrence from USFWS regarding effects to species under their jurisdiction (13420-2011-I-0082). The Corps' determined its actions will have no effect on listed species, with the exception of bull trout, marbled murrelets, and snowy plover. The Corps concluded that its actions were not likely to adversely affect these species or their critical habitat. The USFWS concurred with the Corps' determination. USFWS also included four Conservation Recommendations to protect and improve snowy plover habitat and manage attractant waste derived from construction actions.

Fill and Removal Impacts on CWA 404 Wetlands and Waters.
The process used to determine mitigation was to first maximize avoidance of the impacts. However, some impacts to wetlands and waters remained unavoidable. Mitigation for unavoidable impacts was then based on the extent and quality of the habitat affected.

As mentioned initially, the actions evaluated in the 2012 EA and this FONSI include South Jetty dune augmentation, actions at the North Jetty described in the *North Jetty Major Maintenance Report* (MMR), May 2011, and actions described in the Major Rehabilitation Report (MRR) (*MCR Jetty System Major Rehabilitation Evaluation Report*, June 2012). Though these actions will be funded as separate projects, they were analyzed together. The following mitigation is required as a result of their associated cumulative effects. The breakdown of effects from fill are indicated in the table below and then described in further detail.

Area Affected	Impacted Acreage	Mitigation Acreage	Comment
		North Jetty	
Wetland	1.14	2.28	Base Condition: MMR
404 Waters Lagoon	8.02	12.03	Base Condition: MMR
Other 404 Waters	4.36	6.54	
		South Jetty	
Wetlands	2.65	5.30	
404 Waters	13.84	20.76	
		Jetty A	
Wetlands	0.91	1.82	
404 Waters	6.60	9.90	

Impacts associated with wetlands had a known and quantified footprint and were the same under all the construction alternatives. Specific wetland mitigation sites and methods were identified and developed. The exact extent of impacts to 404 waters of the US remained unknown because they were contingent

upon the delivery method of the rock which would be determined during contract bidding. Therefore, the extent of mitigation for impacts to 404 waters remained uncertain and variable based on the mode of stone delivery and placement. Impacts would be greater if the contractor chooses to use offloading facilities; hence, the maximum potential effects were evaluated in the 2012 EA (and in the BAs). Because of this, maximum mitigation requirements were also assumed for 404 waters. Mitigation requirements would be further coordinated with the AMT and may be reduced if offloading facilities are not constructed.

Wetland Fill. In accordance with *Executive Order 11990, Protection of Wetlands* and Section 404 of the Clean Water Act, the Corps closely evaluated the proposed construction staging and stockpile areas and their wetland impacts. Official wetland delineations have been completed for all three jetties. The selected action has been and will continue to be developed during design and construction to avoid and minimize the project's ecological impacts to habitats and species. However, there will be unavoidable effects to wetlands and shallow-water habitat that will be filled and converted as a result of the project. After avoidance and minimization measures, the following effects were unavoidable.

North Jetty: All wetlands south of the North Jetty Access Road will be impacted and filled in order to reduce processes eroding and undermining the jetty root, to which the lagoon also contributes. Additionally, a few small wetlands north of the roadway will be impacted in order to provide the necessary space for adequate rock storage (enough for 2 years-worth of rock placement) and efficient construction, staging, and access areas. There will also be some wetland impacts during replacement of the damaged culvert crossing under the North Jetty Access Road. After avoidance and minimization measures, including implementation of an 80-foot (ft) buffer around conserved wetlands north of the roadway and a 200-ft shoreline buffer beyond the Highest High Tide, unavoidable total wetland impacts are estimated to total about 1.14 acres out of the 31 acres identified for construction actions, and impacts to other waters of the U.S. via the lagoon are estimated to total about 8.02 acres.

These wetlands all will be mitigated onsite, in an area north of the North Jetty Access Road adjacent to the conserved wetland fringe that extends further north. At a 2:1 mitigation ratio, this equals about 2.28 acres of wetland mitigation, plus the required buffer. This amount of upland area is available immediately adjacent to the impact area, and wetland creation via excavation to appropriate depths, appropriate native plantings, invasive species removal, and buffer requirements will offset impacts to wetland within the same vicinity in which they are proposed. This 2:1 ratio also aligns with mitigation requirements in Washington (WA) that were developed in partnership with WA Department of Ecology (WADOE), the Environmental Protection Agency (EPA), and the Corps. According to this guidance, estuarine ratios are developed on a case-by-case basis. Given the ample rainfall and close proximity to higher functioning wetlands, the likelihood of successful wetland establishment further supports the proposed amount of wetland mitigation.

Jetty A: A total of about 0.91 acre of wetland at Jetty A also will be filled due to rock storage and construction staging activities. Unfortunately, these wetlands cannot be avoided, but impacts to adjacent waters of the U.S. will be minimized by implementing a 100-ft buffer beyond the Highest High Tide elevation, which is consistent with the setbacks required for lands designated by Pacific County as "Conservancy".

Because of onsite space constraints and site conditions, these wetlands will be mitigated in the same vicinity as the mitigation area identified at the North Jetty, north of the North Jetty Access Road. At a 2:1 mitigation ratio, this equals about 1.82 acres of wetland mitigation, plus the required buffer. These requirements were determined as described for the North Jetty and align

with WADOE guidance (2006). Wetland creation will occur in conjunction with and in addition to the area and process described for mitigation at the North Jetty. Reduced disturbance coupled with improved potential hydrology and adjacent functioning wetlands at North Jetty compared to at Jetty A make the success of wetland creations more likely at the location at the North Jetty compared to any creation at Jetty A. The total mitigation acreage at the North Jetty is 4.1 acres, and this area is available at the North Jetty mitigation site.

South Jetty: In order to acquire the 44 acres needed for staging and rock stockpiles, 2.65 acres of unavoidable wetland impacts will occur at the South Jetty. However, by slightly revising locations, maintaining hydrologic connections at wetland crossings, and by maintaining a 50-ft wetland, shoreline, and riparian buffer for preserved areas whenever possible, these impacts have been greatly reduced and minimized relative to initial conservative impact estimates. This includes limiting the roads required to cross wetlands to a 20-ft width and requiring culverts to maintain hydrologic connectivity at crossings. In addition to wetlands, about 3.5 of the existing 5.2 acres of other waters of the US will be impacted in the form of fill in a lagoon area adjacent to and along the jetty. There will be a road and crossing over these waters, which will include culverts in order to maintain flows into and out of the marsh wetland complex. The 40-ft wide causeway/jetty access roadway will be constructed immediately adjacent to the jetty in order to minimize interference with and impacts to the inlet of the marsh complex.

These wetlands will be mitigated near the impact site in an area identified in Trestle Bay near the channel entrance to Swash Lake. At a 2:1 mitigation ratio, this equals about 5.3 acres of wetland mitigation. Anecdotally, it is thought that the uplands in this area are the result of previous historic fill from the dredging the adjacent channel, so that excavation of uplands would result in restoration of wetland that are likely to be intertidal. There is also a former Oregon Department of Transportation (ODOT) mitigation site that the Corps' selection action likely will abut. This is an appropriate mitigation site because it is within the same sub-watershed Hydrologic Unit Code (HUC) 7 and per the Oregon Rapid Wetland Assessment Protocol (ORWAP) scoring and Cowardin classification, the adjacent areas have wetland types similar to those being impacted.

The Corps anticipates that effects from wetland impacts and lagoon fill will be immeasurable on river functions, as the wetlands are not within the channel prism of the Columbia River. Although these wetlands are connected hydrologically to the Columbia River, wetland fill impacts likely will not negatively alter groundwater-stream exchange or hyporheic flow because the wetlands are on accreted land that has formed on stabilized sand shoals behind the jetties. Wetland hydrology is mostly elevation and rainfall dependent, and fill impacts will be relatively minimal relative to the Columbia channel. Culverts will be installed to maintain wetland hydrology and connectivity with permanent replacement at the North Jetty and where temporary construction roadways cross wetlands. In addition, mitigation opportunities have been identified and include wetland excavation, additional native revegetation and plantings, invasive species removal, or other actions as appropriate. Final mitigation plans for wetland impacts will be developed by the Corps and vetted through the AMT.

A further evaluation of effects of the preferred alternative on wetlands and other waters of the U.S. can be found in the 2012 EA and the 404 (b) (1) analysis, which is incorporated in the 2012 revised final EA. Based on the above considerations, the Corps has determined that there is no practical alternative to the proposed construction in wetlands, and the preferred alternative includes all practicable measures to minimize harm to wetlands and waters that may result from such use.

Fill and Removal Impacts on CWA 404 Waters of the US. In-water habitats (below MHHW), both shallow intertidal and deeper subtidal areas, will also be affected by the project. These waters are considered "waters of the US" as defined by the Clean Water Act.

Barge offloading facilities are a potential method of delivery for stone and other construction materials. If barge offloading facilities are used, this would create the largest impacts to 404 waters of the US and associated aquatic habitat. Therefore, the associated fill acreages and volumes represent the worst-case scenario for spatial and temporal effects. Habitat conversions and impact to 404 waters will occur from maintenance dredging and stone placement for the jetty cross-section repairs and head stabilization, turnouts, crane set-up pads, barge offloading facilities, and causeways (but no longer from spur groins, as they no longer components of the selected action). There also will be permanent lagoon fill at the North Jetty root and temporary fill at the South Jetty lagoon. Alteration of bottom habitat would occur from dredging, which would create temporary disturbance and greater depths that could affect the composition of benthic communities. These effects are anticipated to be minimal, as the character of the area is naturally dynamic and prone to extreme energy conditions, and benthic organisms are adapted for such conditions and usually rapidly recolonize.

Permanent removal and conversion of some shallow-water, nearshore sandy habitat likely used by juvenile salmonids for migrating, foraging, or rearing will result from rock placement for repairs, and some habitat also will be unavailable for the 8-year construction duration due to the development of turnouts, set-up pads, causeways and stone docks for barge offloading facilities along the North Jetty, Jetty A, the South Jetty, and at the east end of Clatsop Spit near the South Jetty adjacent to Parking Area D (spur groins were evaluated as well, but no longer proposed). Some causeway structures will be removed upon project completion, and others will remain.

The calculated extents that follow were strictly based on the area of habitat that was converted. They did not include value or functional assignments regarding the importance of the conversion; whether it was a beneficial, neutral, or detrimental effect to specific species; or if conversions created unforeseen, indirect far-field effects. For example, acreage of conversion for shallow sandy sub-tidal habitat to rocky sub-tidal habitat was calculated in the same manner as conversion from shallow intertidal habitat to shallow sub-tidal habitat. Without drawing a distinction between depths or tidal elevations, initial acreage estimates for all in-water impacts and habitat conversions were estimated at a total of approximately (~) 32.84 acres and include:

- North Jetty ~12.38 acres (8.02 acres for lagoon fill; 0.63 acre for barge offloading facilities, crane set-up pads, and turnouts; 3.73 acres for dredging at offloading facility; [without previously proposed 1.55 acres for spur groins])
- South Jetty ~13.84 acres (3.5 acres for lagoon fill; 0.4 acre for crane set-up pads, and turnouts; 1.56 acres for barge offloading facilities; 8.38 acres for dredging at offloading facilities [without previously proposed 1.1 acres for spur groins])
- Jetty A ~7.82 acres (1.2 acres of cross-section fill; 2.89 acres for barge offloading facility and causeway; 3.73 acres for dredging at offloading facility [without previously proposed 0.61 acre for spur groins])

Shallow-water habitat is especially important to several species in the estuary; therefore, specific initial estimates were also calculated regarding shallow-water habitat (shallow here defined as -20-ft or -23-ft below MLLW). About 21 acres of area at these depths will be affected by maintenance dredging and construction of the causeways and barge offloading facilities. About 12 acres would be affected by lagoon fill. However, these shallow-water footprints are very small as a relative percentage of the ~19,575 acres of shallow-water habitat available within a 3-mile proximity to the MCR.

Because of these impacts, the Corps has proposed mitigation actions at a ratio of 1.5:1 to offset temporal and spatial impacts to 404 waters and associated aquatic resources. This ratio was determined with input from the resource agencies considering several factors including: beneficial use listings that involve species with EFH and critical habitat designations in the impacted areas, the duration of the construction period, the number of different CWA beneficial uses in the area impacted by the project, and the temporal and spatial extent of the actions. These actions are not proposed to directly mitigate or compensate for any project-related impacts to ESA-listed species but will mitigate for effects to CWA 404 waters of the US. However, the 404 mitigation actions would also complement but are not driven by Conservation Recommendations in the NMFS BiOp for recovery of ESA-listed salmonid habitats and ecosystem functions and processes.

Mitigation features would be commensurate with impacts and would be designed to create or improve aquatic habitat. In-kind mitigation opportunities for impacts to 404 waters were investigated specifically tidal marsh, swamp, and shallow water and flats habitat. Though a specific site or action has yet to be determined for mitigation of impacts to waters other than wetlands, if possible fish access to these mitigation features would be an important consideration.

A list of possible mitigation features has been identified and one or a combination of actions would be selected for further development and implementation in order to offset actions affecting 404 waters. Selection would occur by the Corps after coordinating with the AMT. Supplementary compliance documentation may be necessary and work is anticipated to be completed concurrent with jetty repair actions.

Uplands Disturbance and Re-stabilization:
Rock storage and staging areas would impact both wetlands as well as uplands. Best Management Practices (BMP) to reduce the environmental footprint and to avoid, and minimize impacts have been incorporated and would be implemented, including appropriately locating staging sites, implementing stormwater management plans, and stabilizing the site during and after construction. Post-construction upland re-stabilization to meet CWA National Pollution Discharge Elimination System (NPDES) requirements would include re-establishing native grasses, shrubs, and trees where appropriate; controlling and removing invasive species like scotch broom and European beach grass in the project vicinity; and re-grading/tilling the area to restore pre-project natural contours. The Oregon Parks and Recreation Department (OPRD) has requested that the Corps utilize the State Forester as one resource for determining optimal revegetation plans.

Upland Replanting - (1:1) NPDES site stabilization

- North Jetty total acres: 28.7
- South Jetty total acres: 18.7-28.7 (Depending on snowy plover habitat creation)
- Jetty A total acres: 12
- Approximate total acres of stabilization: 69.4

On Clatsop Spit, there is a unique opportunity to partner with USFWS and OPRD regarding creation and management of snowy plover habitat. The OPRD (2010) developed a HCP to manage snowy plover habitat. There may be locations in the vicinity and away from projected construction and staging areas to convert upland habitat to snowy plover habitat via invasive species removal, tilling, and application of shell hash. Operation and maintenance during the project via regular tilling and shell hash distribution could possibly be coordinated between the agencies through a Memorandum of Agreement (MOA) or similar avenue. This scenario would also provide preferable alternative habitat away from the potential attractive nuisance of open sands that the construction disturbance would create. The Corps currently has

a signed MOA indicating it will cooperate with OPRD in the implementation of the snowy plover management plan under development.

Cultural and Historic Resources. Section 106 of the National Historic Preservation Act (NHPA) requires that federally assisted or federally permitted projects account for the potential effects on sites, districts, buildings, structures, or objects that are included in or eligible for inclusion in the National Register of Historic Places (Register). The selected action will be conducted in an area that is highly erosive and has previously been disturbed by jetty construction and prior dredging. The North and South Jetties are eligible for listing on the Register because they are associated with important historical events and thus meet Criterion A under the National Register criteria. The Corps plans to nominate these structures to the Register. There are no known historic properties recorded within the immediate project footprint other than the jetties and associated trestle remains. The South Jetty and trestle remains are not contributing elements to Fort Stevens (OR-CLT-1), which was officially listed on the Register in 1971, and the North Jetty and trestle remains are not contributory to the Cape Disappointment (formerly Fort Canby State Park) Historic District. The jetties do not retain original materials of workmanship as they have been repaired many times, but they do retain their original alignments. Much of the area around each jetty is composed of accreted material from littoral drift with little or no potential for historic properties. Previous cultural resources surveys provide coverage over portions of the project footprints and adjacent areas, though much of this selected action will be conducted in an area that is highly erosive and has previously been disturbed by jetty construction and prior dredging. The rehabilitation and repair work; the staging/work, and mitigation areas are on landforms created in historic times from accretion or dredged material disposal after the jetties were constructed. Work in these areas has little chance of impacting historic resources, though there is the possibility of encountering shipwreck remains.

The Corps coordinated with the Grande Ronde Tribe in accordance with Section 106 of the NHPA, and the Grande Ronde Tribe indicated they have no concerns in regards to this project's effects to properties on or eligible to the Register. The Corps determined that the selected course of action will result in a determination of *no adverse effect* under Section 106 of the National Historic Preservation Act. Letters were sent to WA Department of Antiquities and Historic Preservation (DAHP) on April 16, 2012, and to Oregon State Historic Preservation Office (SHPO) on April 16, 2012. Preliminary consultations indicated that the jetties will be found eligible to the Register. The Corps anticipated concurrence from the respective State Historic Preservation Officers of Washington and Oregon if monitoring was conducted during excavations and the usual inadvertent discovery protocols followed. Subsequently, SHPO and DAHP have concurred that the undertaking would have no effect on historic properties as the action would not affect the criteria that make the structures eligible, essentially, importance in historic events and alignment.

Socioeconomic Resources. Construction vehicles hauling jetty rock will have an intermittent 8-year effect on local traffic patterns in the Long Beach/Ilwaco area and in Warrenton/Hammond area. The preferred alternative could have an adverse impact to recreationists at Cape Disappointment and Fort Stevens State Parks, those participating in water-sports and beach activities near the jetties, and those using the jetty structures for fishing and crabbing. A number of restrictions will be in place near the construction zones at each jetty to protect park visitors, water sport and beach recreationists, and the public. However, large portions of the park and beach will remain open and accessible to the public, and the bulk of the construction activities are likely to be seasonally concentrated. The long-term reduction in the levels of recreational activity could also affect the local economy of Long Beach peninsula and Warrenton/Hammond, which are highly dependent on tourism. However, these recreation and local economy impacts are not expected to reach levels of significance.

Furthermore, rehabilitation of the MCR jetty system is expected to have a long-term, positive effect on recreational vessel safety. Maintenance of the shoreline at Clatsop Spit and Benson Beach is also

expected, which preserves these areas for recreational opportunities mentioned above. The selected action will have no effect on utilities and public services in the area.

The MCR is the gateway to the Columbia-Snake River system, accommodating commercial traffic with an approximate annual value of $20 billion dollars a year. The preferred alternative will have a long-term positive effect on maintaining this vital transportation link and associated economy for the states of Oregon, Washington, Idaho, and Montana, as well as for the nation as a whole.

Cumulative Effects. A cumulative effects analysis considered the effects of implementing the selected action in association with past, present, and reasonably foreseeable future actions in and near the MCR. The potential cumulative effects associated with the preferred alternative were evaluated with respect to each resource evaluation category, and no cumulatively measurable adverse effects were identified.

Public and Agency Input

The draft Environmental Assessments (EA) and public meetings in 2006 and 2010 served as the forum for public input. Comments received during the Public Notice postings of the EA were considered, and where applicable addressed and incorporated in the 2012 revised final EA.

Several public input opportunities occurred regarding this project. An agency coordination meeting was held on May 25, 2006, for the purpose of introducing the project to several agencies to be involved with review of environmental documents. Staff from the Corps' Portland District presented the current state of environmental review and engineering modeling to the NMFS, USFWS, WDOE, Oregon Department of Environmental Quality (ODEQ), and Oregon Department of Land Conservation and Development. The Corps conducted a public information meeting on the project in Astoria, Oregon in July 2006. After a presentation about the MCR jetty rehabilitation project, the public was invited to ask questions and talk to USACE staff about the project.

On April 13, 2007 the USACE met with the U.S. Geological Survey (USGS) and Portland State University regarding numerical modeling in support of the MCR rehabilitation project. Also in 2007, four resource agency meetings and presentations were held regarding the MCR project on April 27, May 30, July 11, and September 5. A public information meeting was held in Astoria, Oregon on July 31, 2006. In addition, the Corps Portland District established and currently maintains a web site to keep the public informed about the repair/rehabilitation of the MCR jetties located at https://www.nwp.usace.army.mil/issues/jetty/home.asp.

When a revised draft EA was prepared and was issued for a 30-day public and agency review period in January 2010, it was provided to federal and state agencies, organizations and groups, and various property owners and interested publics. The revised draft EA was revised to reflect and address the 2006 comments, as appropriate. Thirteen comment letters/emails were received in response to the 2010 revised draft EA. To date, most comments have been supportive of the project. Of these, two mentioned concern with traffic impacts; several had specific suggestions regarding design elements; and one had various concerns with NEPA and other compliance processes; all were addressed in the EA as appropriate. A public information meeting on the project also was held in Astoria, Oregon in February 3, 2010. After a presentation by the Corps about the MCR jetty rehabilitation project, the public was invited to ask questions and talk to USACE staff about the project. A public information meeting to describe likely construction techniques was also held on June, 4, 2010, at Fort Vancouver, WA to solicit input from potential construction contractors and to provide additional information regarding the feasibility of the Major Rehabilitation and Repair approach. A final EA was posted on the Corps' website in May 2011; that version is replaced by the revised 2012 EA. The 2012 revised final EA reflects the trend towards further reduction in the project footprint.

Besides official public information meetings and distribution of the EA, the Corps has also had multiple meetings with various regulatory agencies to ensure regular coordination throughout project development. As mentioned in the overview of the Preferred Alternative, the Corps has also proposed formation of a modified interagency Adaptive Management Team to keep resource agency partners apprised of any potential project changes or challenges during implementation.

Final Determination

The Corps is required to fulfill all statutory authorized project purposes and directions provided by the Congress in the project authorization documents. The MCR jetty system was authorized to improve and maintain navigation in the Columbia River and at its mouth. This also entails operations and maintenance activities as well as major maintenance and major rehabilitation at the jetties.

However, in fulfilling the authorization, the Corps is also required to take into account other applicable legal mandates. While acknowledging the impacts discussed in the EA and outlined above, the Corps is required by NEPA to make a determination of the significance of those impacts. A checklist of considerations that help in making the determination of whether impacts of a project rise to the level of "significantly affecting the human environment" is provided at 40 CFR 1508.27. Following is the checklist from (1) to (10):

1. *Impacts:* Beneficial impacts of this project are primarily related to maintaining safe and reliable navigation at the mouth. The repairs and Jetty A, South Jetty, and North Jetty including lagoon fill and the augmentation of the foredune at the South Jetty will ensure the navigational functionality of the structure, reduce the need for emergency dredging, and help to avoid a potential breach of the Clatsop Spit. Both beneficial and harmful environmental impacts are addressed in the 2012 revised final EA.
2. Public health and safety: Construction effects are considered short-term, localized, and temporary, and as such will have no significant adverse effects on public health and safety. Work area boundaries and proper signage will ensure public exclusion from construction zones. Once construction and repairs are completed, the resilience of the jetty structure and the maintenance of a reliable and safe navigation channel and entrance will be improved and maintained over the next 8 years. The presence of a maintained navigation system with functional jetty structures is a benefit to public health and safety, particularly those that involve vessel passage at the MCR.
3. Unique characteristics of geographical area: The construction sites will be located adjacent to both Fort Clatsop and Cape Disappointment State Parks. These parks are located on accreted land that has formed as a result of the jetties, and with jetty deterioration, their shorelines are also currently receding. Though there will be some interruption to visitors via altered traffic flows and reduced access to certain portions of the Parks during construction, this is not expected to rise to the level of adverse impacts because effects will be temporary, seasonally concentrated, and of limited geographic scope. Historic and cultural resources will be protected by project design. Riparian areas including wetlands, shorelines, and streams will be buffered where feasible, and mitigation will offset any unavoidable impacts. There will be no any measurable adverse effects to Essential Fish Habitat. There are no prime farmlands, wild and scenic rivers, wilderness, ecologically critical areas, or other unique natural features in the project area and therefore no effects on unique geographical characteristics.

4. Highly controversial effects on quality of human environment: The effects of the selected action on the environment have been analyzed and re-analyzed by the Corps and resource agencies such as NMFS and USFWS. The results of these analyses show that the project will have no highly controversial effects on the quality of the human environment in or near MCR or adjacent action areas. Further, a majority of the public comments received were positive regarding the anticipated effects from repairing and rehabilitating the jetty system. Any concerns expressed by commenters were addressed in the 2012 revised final EA. There is no known scientific controversy over the impacts of the project. The types of activities proposed have taken place previously in the same location and in similar areas, and the resulting effects are well-known and understood.
5. Highly uncertain or unique or unknown risks: There are no highly uncertain, unknown, or unique risks associated with implementing the selected course of action. Uncertainty and risk of jetty failure or a potential breach are actually expected to increase in the absence of the selected action. The repairs and all associated construction activities will be implemented using Best Management Practices and in accordance with all terms and conditions of the Biological Opinions received and Water Quality Certifications to be obtained by WADOE and ORDEQ. The preferred alternative is not expected to provide unique or uncertain risks beyond those addressed in the 2012 revised final EA.
6. Future Precedents: The Corps is authorized to maintain the Federal Navigation Channel (FNC) in the Columbia River and at its entrance. The preferred alternative described in the 2012 revised final EA for maintenance of the MCR do not set a precedent for future actions outside of those previously authorized by Congress. Safe and reliable navigation is a beneficial effect for navigational purposes and does not constitute an irrevocable or irretrievable step toward future changes in the scope, scale, orientation, or design of the current jetty system, nor in the current and historic method or approach to maintaining the navigational system at MCR. For these reasons, the selected action is not likely to establish a precedent for future actions that have not been previously taken as repair strategies at MCR or elsewhere in similar environments.
7. Significant Cumulative Impacts: The effects of this selected action were considered with past, present, and reasonably foreseeable actions within and adjacent to the project area. The 2012 revised final EA contains an effects analysis for each resource which discusses cumulative effects. None were found to be significant.
8. NRHP and Other Historical and Culturally Significant Places: The North and South Jetties are eligible for listing on the Register, and the Corps plans to nominate these structures. SHPO and DAHP have concurred that the undertaking would have no effect on historic properties as the action would not affect the criteria that make the structures eligible.
9. Endangered or Threatened Species or Habitat: Although there will be impacts as a result of the project, every effort has been made to minimize those impacts by incorporating conservation measures and best management practices for the repair and construction operations in order to minimize the project's footprint and described effects. Also, the selection of construction staging and storage areas was made to avoid and minimize impacts to 'waters of the United States' as required under the Clean Water Act. The Corps received a Biological Opinion from NMFS indicating that the Corps' original, larger-scaled suite of proposed actions was not likely to adversely affect any listed species, with the exception of eulachon, humpback whales, and Stellar sea lions (2010/06104). For these species, NMFS determined that Corps' actions were not likely to jeopardize the existence of the species. NMFS also concluded that Corps actions were not likely to adversely modify any of the

current critical habitats. There was a Conservation Recommendation to carry out actions to reverse threats to species survival identified in the *Columbia River Estuary ESA Recovery Plan Module for Salmon and Steelhead.* The Corps also provided a conference report for critical habitat that NMFS proposed for leatherback turtles, eulachon, and Lower Columbia River coho salmon. The Corps will request NMFS adopts its conference report when this habitat becomes designated. The Corps also will also request an Incidental Harassment Authorization of Stellar sea lions, humpback whales, California sea lions, and harbor seals prior to the start of construction.

On February 23, 2011 the Corps received a Letter of Concurrence from USFW regarding potential effects to species under their jurisdiction (13420-2011-I-0082). The Corps determined its actions will have no effect on listed species, with the exception of bull trout, marbled murrelets, and snowy plover. The Corps concluded that its actions were not likely to adversely affect these species or their critical habitat. The USFW concurred with the Corps' determination. USFWS also included four Conservation Recommendations to protect and improve snowy plover habitat and manage attractant waste derived from construction actions. The Corps would be implementing best management practices (BMPs) that are in alignment with these efforts as we;; as the Habitat Conservation Plan (HCP) that Oregon Parks and Recreation has developed for the Spit.

10. Other Legal Requirements: Discussion of compliance with applicable environmental laws or requirements is identified in 2012 revised final EA. This selected action will not violate any environmental laws and regulations.

Other Concerns and Factors:

No construction actions will begin until receipt of all applicable environmental clearance documents, including both State 401 Water Quality Certifications (WQCs) and States' concurrence with the Coastal Zone Management Act (CZMA) Consistency determinations. Construction is expected to begin at the earliest on the South Jetty foredune augmentation in 2013, depending on receipt of appropriations. Upon receipt of the Water Quality Certifications and CZMA Consistency concurrences, I will review all existing environmental documentation to determine if conditions have changed or whether existing documentation and clearances continue to adequately describe the effects of the selection and unless an EIS is deemed necessary, issue a revised FONSI.

Conclusion:

Based upon the revised final EA prepared that encompasses this project and contingent upon receipt of the above mentioned clearance documents, I have determined that the preferred alternative will not significantly affect the quality of the human environment and that an Environmental Impact Statement will not be prepared.

Date: 7/26/12

John W. Eisenhauer

John W. Eisenhauer, P.E.
Colonel, Corps of Engineers
District Commander