

**Supplemental Environmental Assessment and
Biological Evaluation for the**

South Jetty Breach Fill Maintenance

**Westport, Grays Harbor County, Washington
July 2010**



**US Army Corps
of Engineers®**
Seattle District

South Jetty Breach Fill Maintenance

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Supplemental Environmental Assessment and Biological Evaluation

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

Abstract: This document supplements the February 2004 *South Jetty Breach Fill Maintenance Final Environmental Assessment* and supplements of December 2004, and November 2005. Those documents evaluated the impacts of placement of approximately 25,000 cubic yards of sand on the south jetty breach fill in February 2004, as well as expected additional contingent placements of sand over the period extending through 2008. These documents established “triggers” that, if met, would prompt prescribed response measures. These triggering criteria have been met as of 2009, and responsive action is thus proposed. Although the evaluation presented in those 2004 and 2005 NEPA documents has since expired, the Corps proposes to continue to apply the triggering approach described therein. The purpose of this document, therefore, is to describe the specific actions proposed during the summer/fall of 2010 to address erosion that occurred primarily in the fall of 2009. The 2010 proposed action is an interim response placement of approximately 30,000 cubic yards of sand at the breach fill site. This interim action would be undertaken as an intermediate measure pending implementation of the Operations and Maintenance Long Term Management Strategy that is currently under development.

The Corps has determined that the preferred alternative of sand placement, is similar in scope and location to previous breach fill sand placements at the site, and as proposed would have no effect on listed species or critical habitat, including the recently listed green sturgeon and eulachon. The preferred alternative is not a major Federal action significantly affecting the quality of the human or natural environment, and therefore does not require preparation of an environmental impact statement.

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TABLE OF CONTENTS

1. INTRODUCTION	4
1.1 Background	4
1.2 Project Purpose and Need	5
1.3 Location	5
1.4 Authority	5
1.5 Previous documents	5
2. ALTERNATIVES EVALUATION.....	8
2.1 No Action Alternative.....	8
2.2 Preferred Alternative, Sand placement in response to established triggering thresholds	8
2.3 Detailed Description of the 2010 Interim Sand Placement Preferred Alternative.....	9
3. EXISTING ENVIRONMENT.....	10
3.1 Green Sturgeon	11
3.2 Eulachon	11
4. ENVIRONMENTAL EFFECTS	12
4.1 No Action Alternative.....	12
4.2 Preferred alternative.....	12
4.3 Green sturgeon	15
4.4 Eulachon	17
4.5 Bull Trout.....	17
4.6 Western Snowy Plover.....	19
4.7 Marbled murrelet	19
5. CUMULATIVE EFFECTS	20
6. COMPLIANCE OF PREFERRED ALTERNATIVE WITH ENVIRONMENTAL PROTECTION STATUTES AND OTHER ENVIRONMENTAL REQUIREMENTS	20
6.1 National Environmental Policy Act.....	20
6.2 Environmental Justice (E.O. 12898).....	20
6.3 Endangered Species Act, as amended. 16 U.S.C. 1531, et seq.....	20
6.4 Clean Water Act, as amended. (Water Pollution Control Act) 33 U.S.C. 1251, et seq.	21
6.5 Coastal Zone Management Act.....	22
6.6 National Historic Preservation Act	22
6.7 Magnuson-Stevens Fishery Conservation and Management Act	23
6.8 Clean Air Act, as amended, 42 U.S.C 7401 et seq	24
6.9 Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712) as amended	24
7. CONCLUSION.....	24
8. REFERENCES	25

FIGURES

FIGURE 1. Location and Vicinity Maps	7
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APPENDICES

APPENDIX A FY10 South Jetty Breach Fill Maintenance Design Plan
APPENDIX B Finding of No Significant Impact (FONSI)
APPENDIX C Comments Received and Corps Responses
APPENDIX D 2004 EA, with 2005 supplement and Biological Evaluation

1. INTRODUCTION

Pursuant to the National Environmental Policy Act (NEPA), this environmental assessment (EA) supplements the February 2004 *South Jetty Breach Fill Maintenance Final Environmental Assessment*, and the December 2004 and November 2005 supplements to that document. Those documents evaluated the impacts of placement of approximately 25,000 cubic yards (cy) of sand on the south jetty breach fill in February 2004, as well as additional placements of sand over the subsequent three to five years (2004-2008). Specific “trigger” events were established in order to provide adequate reaction time to address potential breach events at the site. The purpose of this supplement is to describe the specific actions proposed during the fall of 2010. The volume loss trigger (loss of 15,000 cy from the breach fill area) as well as the overtopping trigger criteria were both achieved in the fall of 2009. The preferred alternative to address the 2009 erosion with an interim placement of approximately 30,000 cy of sand is described below. The proposed 2010 action would be implemented as part of a larger contingent interim program initiated in 2004, covering the interval of time until an Operations and Maintenance Long Term Management Strategy (LTMS) currently under development is implemented.

1.1 Background

After winter storms breached the sand spit adjacent to the Grays Harbor south jetty in 1993, there were concerns about the stability of the south jetty structure and potential damages to the navigation channel. In response, the Corps placed about 600,000 cy of sand to close the breach. As described in the February 2004 EA, a breach at the South Jetty site would pose a serious risk to the Federal navigation features at Grays Harbor.

The persistent loss of sediment from the Grays Harbor entrance and adjacent beaches is expected to continue indefinitely. Shoreline erosion in the vicinity of the south jetty could result in the eventual breaching of the landmass adjacent to the south jetty. In order to assess the threat of such a breach to the Federal navigation project and to develop a long-term strategy to maintain and protect Federal navigation project features, the Corps has continued studies to formulate and assess various management alternatives. The Long Term Management Strategy (LTMS) study, will conclude with a recommendation for how to best ensure the continued operability of navigation project features. The LTMS effort is ongoing and will be followed by implementation of recommendations made by the study.

Prior to completion of the LTMS study, there is a tangible risk that, without further preventative action, continued erosion in the vicinity of the south jetty could produce another breach. Pending completion and review of the data collection and analysis efforts presently underway, there is uncertainty regarding the degree of risk of another breach occurring, as well as the nature and scope of any resultant impacts on the navigation project. In view of this uncertainty, the Corps plans to take action to preserve the status quo and protect against a breach recurrence until a definitive evaluation of the effects of another breach on the Federal interest in maintaining existing navigation project features is complete.

The prior EA and its supplements established two sets of triggering criteria as thresholds indicating development of an undue risk to the Federal project and its navigation features. Each set of triggering criteria was accompanied by a prescribed response measure to address that risk. The approach established in those NEPA documents has expired, but this SEA evaluates the

reapplication of those triggers and response measures to address risk factors documented as a result of 2009 damages.

1.2 Project Purpose and Need

The purpose of the proposed work is to continue to preserve the status quo, by protecting against an undue risk of the recurrence of a breach in the vicinity of the South Jetty. Conditions indicate that an undue risk of a breach is developing, based on trigger events described below, both of which events were achieved in the fall of 2009. As a result, two concurrent sand placement actions would be implemented to nourish the area(s) adjacent to the south jetty. This is needed to protect the south jetty and navigation channel from damage which could be caused in the event of another breach. Over the short term, during the interim while an LTMS is being developed, preventative maintenance of the breach fill is a more cost-effective strategy to maintain the status quo than after-the-fact emergency repairs, and requires a relatively small quantity of material to restore the height and width of the fill area. Proactive action could prevent more costly and voluminous replacement if a breach were allowed to develop. The LTMS study is ongoing and will be followed by implementation of recommendations made by the study.

1.3 Location

The project area is located in Westhaven State Park, Westport, Grays Harbor County, Washington (T16N, R12W, Section 1). The location of the proposed work is shown on the vicinity and location maps in Figure 1.

1.4 Authority

The Grays Harbor and Chehalis River Project, including maintenance of the Federal navigation channel and the South Jetty, is authorized by the River and Harbor Act of August 30, 1935 (House Document 53, 73rd Congress, 2nd Session) and the Water Resources Development Act of November 17, 1986 (Public Law 99-662). The proposed work is within the Grays Harbor and Chehalis River Project operations and maintenance (O&M) authority because its intent is to maintain and protect navigation features, including the south jetty and navigation channel. This is a proper use of O&M funds because, until a definitive determination can be made of any connection between a breach and the Federal interest in maintaining navigation facilities, the Corps acknowledges uncertainty in the degree of risk of a breach, as well as in the nature and scope of any impacts of the navigation project as a result of such a breach. In view of this uncertainty, during the interim while an LTMS is being developed the Corps will take action to preserve the *status quo* by protecting against the risk of a breach recurrence.

1.5 Previous documents

Additional information on the history of Grays Harbor and Chehalis River Navigation Project engineering structures, erosion in the project area, and the natural resources of Grays Harbor can be found in previous Corps documents. The following documents are incorporated herein by reference, and are available for inspection at the Seattle District office. Complete bibliographic information for these documents can be found in the reference section of this assessment. The 2004 final environmental assessment and its supplements are available at

<http://www.nws.usace.army.mil/ers/index.cfm?status=1> as well as in Appendix C of this document.

- Native Char Utilization, Lower Chehalis River and Grays Harbor (July 2006)
- Half Moon Bay Shorebird Assessment (June 2006)
- Final Supplement to the Final Supplemental Environmental Assessment for the South Jetty Breach Fill Maintenance (November 2005)
- Half Moon Bay Baseline Fish Survey, Grays Harbor, Washington (January 2005)
- Final Supplemental Environmental Assessment for the South Jetty Breach Fill Maintenance (December 2004)
- Biological Evaluation, South Jetty Breach Fill Maintenance Westport, Grays Harbor County, Washington (November 2004)
- South Jetty Breach Fill Maintenance Final Environmental Assessment (February 2004)
- South Jetty Sediment Processes Study, Grays Harbor Washington: Evaluation of Engineering Structures and Maintenance Measures (April 2003)
- Half Moon Bay Transition Gravel and Cobble Placement Final Environmental Assessment (November 2003), rescinded December 15, 2003
- Design Analysis (Revised), Grays Harbor, Washington FY 1999 South Jetty Repair (September 1999)
- Long Term Maintenance of the South Jetty at Grays Harbor, Washington, Evaluation Report (June 1997)
- Point Chehalis Revetment Extension Project, Westport, Washington, Interagency Mitigation Agreement (October 1998)
- Review of Long-Term Maintenance Plans for the South Jetty, Grays Harbor, Washington; Report by a Special Subcommittee of the Committee on Tidal Hydraulics and Coastal Engineering Research Board (1995)
- South Jetty Breach Fill Final Environmental Assessment (April 2002)
- South Jetty Repair Final Environmental Assessment (July 1999)
- Final Environmental Assessment: Fiscal Years 2001-2006 Maintenance Dredging and Disposal, Grays Harbor and Chehalis River Navigation Project, Grays Harbor County, Washington (April 2001)
- Programmatic Biological Evaluation: Fiscal Years 2001-2006 Maintenance Dredging and Disposal, Grays Harbor and Chehalis River Navigation Project, Grays Harbor County, Washington (December 2000)
- North Jetty Performance and Entrance Navigation Channel Maintenance, Grays Harbor, Washington September 2003 ERDC/CHL TR-03-12

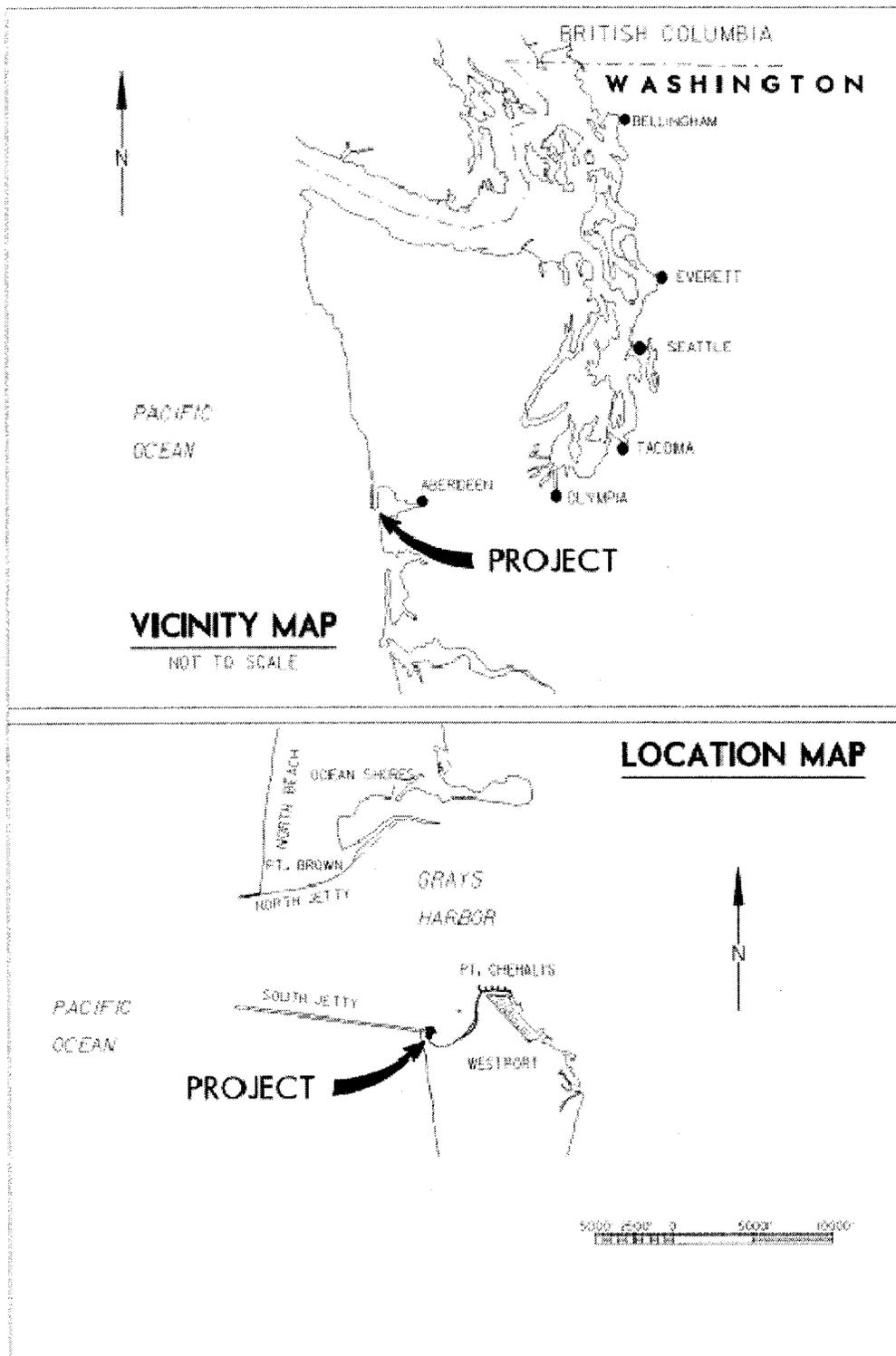


Figure 1. Location and Vicinity Maps

2. ALTERNATIVES EVALUATION

The Corps has considered two alternatives for breach fill maintenance, no action and a 2010 interim sand placement.

2.1 No Action Alternative

Under the no action alternative, the Corps would not take any actions to prevent further loss of breach fill material and recession of the shoreline along the southwest corner of Half Moon Bay. As a result, significant damage to the breach fill could occur prior to the implementation of a long-term strategy for the south jetty and Grays Harbor entrance. There is a large degree of uncertainty relating to predictions of the status of the breach fill during this time period. The risk of a breach similar to the December 1993 event has been reduced by elevating the dune on South Beach above +30 feet MLLW, planting dune grass to slow wind-blown erosion, and placing cobble on Half Moon Bay. However, the equilibrium shoreline of Half Moon Bay (which is controlled by the position of the terminus of the south jetty) and the persistent erosion to South Beach would ultimately create a breach if left unchecked.

The no action alternative has not changed from the description in the 2004 Environmental Assessment. Refer to the February 2004 final environmental assessment, and supplements (Appendix C) for a more in depth impacts discussion of this alternative. Additional information gathered since February 2004 has not changed the effects determination for this alternative.

2.2 Preferred Alternative, Sand placement in response to established triggering thresholds

Two triggering thresholds, which consider the specific conditions of a given storm season have been established to guide the decision about which alternative should be implemented. Each threshold has a corresponding responsive action. These triggering standards were established in order to make use of readily measurable and objectively verifiable indicators of risk of a breach. The triggering thresholds are set at a level permitting the Corps adequate response time to procure and implement the placement of sand once the thresholds are met. The action-triggering thresholds and corresponding responses are as follows:

Threshold No.1: The Corps determines through evaluation of pertinent survey data that 15,000 cy of sand has eroded from the southwest corner of the Half Moon Bay beach since the most recent sand placement event.

Responsive Action No.1: Placement of clean sand along approximately 1,000 linear feet of beach in the southwest corner of Half Moon Bay. Sand would be excavated from the existing buried revetment mitigation stockpile and truck-hauled on the existing state park access road. Minor grading will occur for pioneering an access route on the sand and for safety when bulldozing sand over the bank top. No road building materials (i.e., rock) will be used in transporting the sand. The excavated material will be end-dumped shoreward of the +9 foot MLLW contour line (the mean higher high water contour) at its natural angle of repose to minimize impacts on intertidal ecology. Some mechanical grading and reworking of the sand would be required in addition to current and wave actions which are expected to subsequently regrade and disperse this sand eastward along the beach and offshore. Sand grain size will be consistent with existing beach sand grain size. Care will be taken to minimize impacts on dune grass.

Threshold No. 2: The breach fill footprint south of the South Jetty is overtopped by water from the west, resulting from a storm event.

Responsive Action No. 2: Placement of clean sand on top of the breach fill area, above elevation +9 feet MLLW (mean higher high water) at a location within the fill footprint. The precise location and quantity of placed sand will be selected based on an analysis of the most effective means of responding to the observed overtopping conditions and the most efficacious means of addressing the risk of further overtopping and head-cutting. The sand will be excavated and mechanically transferred from the existing buried revetment mitigation stockpile to the placement area, utilizing either track vehicles that require no improved road or with trucks, by constructing a temporary access route using removable steel plates.

The most rapid erosion occurred in the northwest section of Half Moon Bay shoreline since the January 2005 beach nourishment. Measurements of the scarp line on both South Beach and Half Moon Bay indicate the dune width has narrowed to less than 135 feet in the most critical section, 250 feet south of the jetty.

Presently seven of the ten white monitoring stakes, that provided visual indicators to assist in applying the trigger 1 threshold criteria, remain. As of the 20 April 2009 detailed survey, the total volume eroded from monitoring points 1-10 was 17,570 cy, indicating trigger 1 has been met.

Half Moon Bay and South Beach have been surveyed quarterly by the Corps since the January 2005 breach nourishment activity. Since January 2005, in Half Moon Bay, the beach scarp has moved approximately 80 feet landward as it continues to approach the classic log spiral shoreline shape described by Silvester and Hsu (1997). The relation indicates that shoreline position is controlled by the position of the fixed hard point (i.e. south jetty root) and the directionality of waves propagating into Half Moon Bay.

The South Beach area has in recent years been eroded near the connection to the South Jetty and has formed a concave pocket immediately adjacent to the jetty. There is strong evidence of the beginning of flanking along the jetty here. The dune elevation here is lower in height and has lost much of the vegetation in this region. Site visits have documented sediments washed up over the jetty in this region indicating waves are overtopping the structure and south beach area here. The physical evidence thus confirms that trigger 2 (overtopping of the breach fill area from the west) has occurred, presumptively as a result of the extraordinary forces of storm events.

2.3 Detailed Description of the 2010 Interim Sand Placement Preferred Alternative

The 2010 interim action alternative would be initiated during the late summer to fall of 2010 in order to address the 2009 erosion to Half Moon Bay and the region immediately south of the jetty on South Beach where recent evidence of jetty flanking has been observed. This alternative involves a cumulative placement of approximately 30,000 cy of sand. Both of these areas will be nourished above the mean higher high water depth contour, or +9 feet MLLW. Approximately 20,000 cy would be placed on the South Beach side and approximately 10,000 cy on the south east section of Half Moon Bay as depicted in the design plans (Appendix A). The fill placement is planned for late summer, early fall 2010.

As was the case with the previous sand placement actions, the sand will be excavated from the existing Half Moon Bay direct beach nourishment dredged material disposal site, which is an upland stockpile situated above the Point Chehalis revetment extension constructed in 1999. Material will be excavated in a uniform layer over the eastern portion of the stockpile. The stockpile serves both as a cover for the buried revetment and as an upland supply of material to nourish the Half Moon Bay shoreline. The stockpile would not be entirely depleted by this action and material would be periodically supplemented from future maintenance dredging activities within Grays Harbor, to ensure continued compliance with the obligations assumed in the Point Chehalis Revetment Extension Project Interagency Mitigation Agreement of October 7, 1998. The material will be moved to the breach fill site by truck via the Westhaven State Park access road. The borrow site is located approximately 3,000 feet east of the placement site. Flagmen would be present at both the stockpile site and main parking area to insure park visitors are safely routed around construction activities. The existing state park access road and Coast Guard access road would be used to transport material to the fill sites. Crushed rock would not be used to facilitate truck access to the borrow or fill sites. Little, if any, native dune grass vegetation will be disturbed by the transportation and re-placement activities, and the Corps will make every effort to avoid such impacts.

Sand may be temporarily stockpiled on upland areas adjacent to the shoreline. The sand would then be pushed off the erosion scarp during low tides, into the area above the MHHW elevation. By placing material uniformly over a larger area all at once, erosion of newly placed material may be minimized (i.e., no creation of small headlands to receive focused wave energy) and final placement would be timed so that the material would be placed at low tides and completely in the dry.

3. EXISTING ENVIRONMENT

This section provides a supplemental discussion of the existing environment at the site. A more in-depth discussion of the existing environment of Grays Harbor can be found in the previous technical studies listed in Section 1.5, as well as the 2004 and 2005 environmental and biological evaluations (Appendix D). The discussion of the balance of the existing environmental considerations can be found in these documents, and is incorporated herein by reference. With the exception of the previous sand placement and subsequent beach erosion, the existing environment concerning geology, vegetation, benthic invertebrates, fish, shorebirds, and recreation has not changed appreciably since 2004. Threatened and endangered species information for the project area has changed and is discussed in detail below. The US Fish and Wildlife Service has delisted the bald eagle (*Haliaeetus leucocephalus*), and brown pelican (*Pelecanus occidentalis*) since 2004. Both the green sturgeon (*Acipenser medirostris*), and eulachon (*Thaleichthys pacificus*) have since been Federally listed as threatened.

As discussed in the December 2004 Supplemental EA, a documented surf smelt spawning area is located along the Pacific Ocean southwest of the project and herring spawning occurs in the Elk River estuary and South Bay to the southeast, but no forage fish spawning is known to occur in Half Moon Bay. The preferred substrate for surf smelt spawning is coarse sand and pea gravel. Substrate on the Half Moon Bay shoreline is either of a small grain size, or much larger grain size, and receives too much wave energy, and it is considered unsuitable for forage fish spawning.

Since the 2004 effort the Corps has completed both a shorebird assessment and a forage fish survey at the Half Moon Bay project site (USACE2005; 2006). The shorebird assessment consisted of transect surveys at the ocean beach, Half Moon Bay, and inner dunal areas. The study concluded that the vast majority (94%) of shorebirds used the ocean beach on the west side of the south beach spit. Dunlins (*Calidris alpina*) were the most observed species (37%) followed by sanderlings (*Calidris alba*) (30%) and sandpipers (*Actitis macularia*) (21%). Although suitable habitat appears to exist in the inner dunal area, no shorebirds or snowy plovers were observed. This is thought to be due to the heavy human use, along with pets, observed in the area. The forage fish survey utilized near shore beach seining to assess fish abundance in Half Moon Bay. Northern anchovy (*Engraulis mordax*) and American shad (*Alosa sapidissima*) dominated the catch at 46% and 35% respectively, while smelt (primarily surf smelt) comprised 17% of the catch. No eulachon were captured, or observed.

3.1 Green Sturgeon

Green sturgeon are long-lived, slow-growing fish and the most marine-oriented of the sturgeon species. Adults range from approximately 4.5-6.5 feet and do not mature until they reach 15 -17 years of age. Maximum ages of adult green sturgeon are likely to range from 60-70 years. This species is found along the west coast of Mexico, the United States, and Canada. Green sturgeon occur sporadically in small numbers throughout coastal Washington, Grays Harbor is the northern most estuary with summer concentrations (Adams, et al 2002). Green sturgeon are believed to spend the majority of their lives in nearshore oceanic waters, bays, and estuaries. Early life-history stages reside in fresh water, with adults returning to freshwater to spawn when they are more than 15 years of age and more than 4 feet in size. Spawning is believed to occur every 2-5 years. Adults typically migrate into fresh water beginning in late February, and spawning occurs from March-July, with peak activity from April-June. Juvenile green sturgeon generally spend 1-4 years in fresh and estuarine waters before dispersal to saltwater. They are believed to disperse widely in the ocean after their out-migration from freshwater. Specific spawning habitat preferences are unclear, but eggs likely are broadcast over large cobble substrates, but range from clean sand to bedrock substrates as well. The actual historical and current distribution of where this species spawns is unclear as green sturgeon may make non-spawning movements into coastal lagoons and bays in the late summer to fall, and because their original spawning distribution may have been reduced due to harvest and other anthropogenic effects. Today green sturgeon are believed to spawn in the Rogue River, Klamath River Basin, and the Sacramento River. Spawning appears to rarely occur in the Umpqua River.

3.2 Eulachon

Eulachon (commonly called smelt, candlefish, or hooligan) are a small, anadromous fish from the eastern Pacific Ocean. Eulachon typically spend 3 to 5 years in saltwater before returning to freshwater to spawn from late winter through mid spring. During spawning, males have a distinctly raised ridge along the middle of their bodies. Eggs are fertilized in the water column. After fertilization, the eggs sink and adhere to the river bottom, typically in areas of gravel and coarse sand. Most eulachon adults die after spawning. Eulachon eggs hatch in 20 to 40 days. The larvae are then carried downstream and are dispersed by estuarine and ocean currents shortly after hatching. Juvenile eulachon move from shallow nearshore areas to mid-depth areas.

Eulachon occur in nearshore ocean waters and to 1,000 feet in depth, except for the brief spawning runs into their natal (birth) streams. Spawning grounds are typically in the lower reaches of larger snowmelt-fed rivers with water temperatures ranging from 39 to 50° F. Spawning occurs over sand or coarse gravel substrates. Eulachon abundance exhibits considerable year-to-year variability.

Given the high wave energies and steep bathymetry of Half Moon Bay and South Beach, only sparse marine vegetation is present, including patches of *Fucus*, *Ulva* sp. and bull kelp (*Nereocystis* sp.). Substrate on the Half Moon Bay shoreline is either of a small grain size, or much larger grain size in the case of previously placed transition gravel/cobble. An intensive 2005 Corps near shore seining effort at Half Moon Bay found that from late June through August, juvenile Chinook salmon (*Onchorhynchus tshawytscha*) and juvenile/adult surf smelt (*Hypomesus pretiosus*) were the most numerous and consistent inhabitants (USACE 2004). The survey failed to find any eulachon in the Half Moon Bay survey area.

4. ENVIRONMENTAL EFFECTS

This section provides a supplemental discussion of the environmental effects of the 2010 preferred alternative of sand placement. As with the existing environment discussion, a more in depth description of the environmental effects can be found in the previous technical studies, as well as the 2004 and 2005 environmental and biological evaluations (Appendix C). The discussion of the balance of the environmental effects can be found in these documents and is hereby incorporated by reference.

4.1 No Action Alternative

Under the no action alternative there would be no placement of sand. Half Moon Bay, along with other exposed areas of the Pacific Coast, is a dynamic environment that is routinely subjected to intense wave energy. Any organisms that do currently exist at higher elevations in this dynamic environment are regularly exposed to strong wave action, periodic erosion, sloughing, and burial events. Sloughing of beach and dunal sands would occur throughout the area, especially during storm events. This would temporarily alter high intertidal habitat as sloughed areas would bury existing benthic organisms. However, the sand would eventually flatten due to wave action. Thus, over the long-term, this habitat, with its similar grain size composition and physicochemical composition, would be available for benthic colonization and production. The no action alternative would represent no changes to the baseline conditions, and no changes to the current, naturally occurring impacts to environmental conditions at the site.

4.2 Preferred alternative

Implementation of the 2010 preferred alternative would replace some of the breach fill material lost through normal erosion processes. The single episode of restoring the height of the breach fill would reduce the risk of overtopping, and therefore the risk of a catastrophic breach, but would not slow the normal erosion rates. Future re-nourishment would likely be required to maintain the height of the breach fill and/or shoreline position in this high energy environment. Approximately 2.5 acres of upland would be directly impacted by implementation of the two sand placement responsive actions. No intertidal habitat would be directly affected. The

existing beach substrate is predominately sandy, so the nourishment material would be of a similar grain size to the native material. It is expected that a substantial portion of any sand placed directly along the shoreline would likely be redistributed along the beach and down to lower elevations by waves and currents, further extending the footprint affected by the placement action. Sand from Half Moon Bay would be transported by cross and longshore currents to deeper waters in the outer bay and the Grays Harbor inlet, where tidal flushing contributes to permanent loss of sediment offshore.

Due to the similar nature (both in location and sand fill quantities) of the proposed 2010 interim sand placement to the 2004 and 2005 maintenance actions, similar environmental effects to area geology, vegetation, benthic invertebrates, fish, shorebirds, and recreation are expected. No significant changes in any of these parameters have been noted since the 2004 analysis was completed. The project utilizes only clean sand of like size from the stockpile area. Beach recreation and activities would not be affected. Impacts to threatened and endangered species evaluated in the 2004 analysis are summarized in Table 1. The U. S. Fish and Wildlife Service consulted on the 2004 project and concurred with the Corps determinations of may affect, not likely to adversely affect bull trout, brown pelican, western snowy plover, marbled murrelet, and bald eagle in January 2004. It was determined that the 2004 project would have no effect to critical habitat for any of the listed species as well. Both the brown pelican, and bald eagle have since been delisted. Since the 2004 sand placement the Corps has conducted specific surveys for both shorebirds and nearshore seining at the site. The shore bird survey included a targeted effort at finding snowy plovers in the dunal area, an area of preferred plover habitat. No plovers were found. The survey did however, document heavy human, and pet use of the area which is noted as a common limiting factor for ground nesters such as plovers. Project timing of the 2010 project (August) as compared to the 2004 effort (January/February) would exclude marbled murrelet from the project site. Likewise project timing places the 2010 effort inside of the approved construction window for bull trout. These surveys and the implications they have on the listed species determinations, specifically bull trout, western snowy plover, and marbled murrelet, are discussed below. The previous documents did not address impacts to the green sturgeon or eulachon. These impacts are addressed here.

Table 1. 2004 Determination summary and current (2010) status.

Species	Current (2010) Status	2004 Effect Determination	2010 Effect Determination
Bull Trout <i>Salvelinus confluentus</i>	Threatened	Not likely to adversely affect	No effect
Brown Pelican <i>Pelecanus occidentalis</i>	Delisted	Not likely to adversely affect	No determination Required
Western Snowy Plover <i>Charadrius alexandrius nivosus</i>	Threatened	Not likely to adversely affect	No effect
Marbled Murrelet <i>Brachyramphus marmoratus</i>	Threatened	Not likely to adversely affect	No effect
Bald Eagle <i>Haliaeetus leucocephalus</i>	Delisted	Not likely to adversely affect	No determination Required
Oregon Silverspot Butterfly <i>Speyeria zerene hippolyta</i>	Threatened	No effect	No effect
Steller Sea Lion <i>Eumetopias jubatus</i>	Threatened	No effect	No effect
Humpback Whale <i>Megaptera novaeangliae</i>	Endangered	No effect	No effect
Blue Whale <i>Balaenoptera musculus</i>	Endangered	No effect	No effect
Fin Whale <i>Balaenoptera physalus</i>	Endangered	No effect	No effect
Sei Whale <i>Balaenoptera borealis</i>	Endangered	No effect	No effect
Sperm Whale <i>Physeter macrocephalus</i>	Endangered	No effect	No effect
Leatherback Sea Turtle <i>Dermochelys coriacea</i>	Endangered	No effect	No effect
Loggerhead Sea turtle <i>Caretta caretta</i>	Threatened	No effect	No effect
Green Sturgeon <i>Acipenser Medirostris</i>	Threatened	None	No effect
Eulachon <i>Thaleichthys pacificus</i>	Threatened	None	No effect

4.3 Green sturgeon

In April 2006, the southern distinct population segment (DPS) of North American green sturgeon was listed as threatened under the Endangered Species Act. The listing was due in part to the degradation of the primary spawning habitat in the Sacramento River and the declining numbers of green sturgeon. As noted by the National Marine Fisheries Service, a principal factor in the decline of the green sturgeon is the reduction of the spawning area to a limited section of the Sacramento River. This remains a threat due to increased risk of extirpation due to catastrophic events. Insufficient freshwater flow rates in spawning areas, contaminants (e.g., pesticides), by catch of green sturgeon in fisheries, potential poaching (e.g., for caviar), entrainment by water projects, influence of exotic species, small population size, impassable barriers, and elevated water temperatures likely pose a threat to this species. The 2010 preferred alternative sand placement and responsive actions evaluated in this document would not affect any of the factors of decline listed above.

Due to the lack of any known spawning habitat in the Chehalis Basin and juvenile life history characteristics, the proposed actions would have no impact on juvenile green sturgeon or spawning. The construction activities are entirely above MLLW. Due to the high energy nature at the site, disturbances such as erosion plumes are a normal condition, and the project activities will not change that. Adult sturgeon are mobile enough to avoid burial by erosion plumes and likely have done this for centuries at the site, or have avoided it entirely. Some minor quantity of prey resources may be lost due to habitat disturbances caused by natural erosion plumes or plumes associated with the proposed actions. Green sturgeon are opportunistic predators that eat a variety of prey and switch foods as prey availability changes (Turner 1966). Sturgeon generally feed on benthic invertebrates, such as shrimp, crabs, worms, mollusks, and epibenthic crustaceans. Adult green sturgeon caught in Washington have preyed on sand lance and *callinassid* shrimp. There would be no effect to the sturgeon prey base given the extremely small portion of their foraging range impacted and the wide variety of prey utilized by this species, and the fact that erosion plumes are a naturally occurring event in the area that will continue with or without this project.

Critical habitat for green sturgeon was designated October 2009, and includes Grays Harbor. Effects to green sturgeon critical habitat are covered under the seven Primary Constituent Elements (PCE) essential for the conservation of the green sturgeon as outlined below:

PCEs – For freshwater riverine systems and estuarine habitats
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<p>1. Food resources- The 2010 sand placement activity is above MHHW and project activities would not alter the pre-project conditions. The proposed project would not have a significant adverse effect on infaunal and bottom-dwelling organisms, as no significant populations of these organisms have been observed in higher intertidal elevations (above +9.0 feet, MLLW) in the HMB side and the high energy environment on the ocean side also precludes permanent populations of most infaunal and bottom-dwelling organisms.</p>

<p>2. Substrate type or size – The project utilizes dredged material from the navigation channel, which is of like size and character to the placement sites at HMB and South Ocean Beach. The sand placement would not significantly change benthic habitats resulting from erosion, sloughing</p>
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or lateral displacement of surrounding bottom deposits. While erosion and sloughing of sand would no doubt occur during storm events, this process mimics a natural process that routinely occurs in the region. If the Corps chooses not to place sand along the shore of Half Moon Bay, storm waves would erode the existing dune and cause sloughing and/or possible lateral displacement of the surrounding bottom deposits. The project would only cause minor and temporary potential losses of habitat due to burial. Minimal numbers and diversity of benthic organisms currently exist in and adjacent to the sand placement footprint. Any organisms that do currently exist at higher elevations in this dynamic environment are regularly exposed to strong wave action, periodic erosion, sloughing, and burial events. Sloughing of placed sand would occur throughout the winter, especially during storm events. This would temporarily alter high intertidal habitat as sloughed areas would bury existing benthic organisms. However, the sand would eventually flatten due to wave action. Thus, over the long-term, this habitat, with its similar grain size composition and physicochemical composition, would be available for benthic colonization and production. Thus, the sand placement above 9.0 feet, MLLW, is not expected to significantly alter Half Moon Bay or South Beach

3. Water flow – The 2010 sand placement activity is above MHHW and project activities would not alter the pre-project conditions.

4. Water quality – The 2010 sand placement would not significantly change the chemistry and physical characteristics of the receiving water. Any sand entering the water would be from the existing stockpile of dredged sand from the neighboring Grays Harbor navigation channel. This dredged material is very similar chemically to the existing material along the shorelines of Half Moon Bay, and South Beach as the material all originates from a common source.

5. Migratory corridors – The 2010 sand placement activity is above MHHW. The project area does not represent a green sturgeon migratory corridor.

6. Depth – The 2010 sand placement would not significantly change the depth of Half Moon Bay or offshore of South Beach from any resulting erosion, sloughing or lateral displacement of surrounding bottom deposits. Half Moon Bay, along with other exposed areas of the Pacific Coast, is a dynamic environment that is routinely subjected to intense wave energy that routinely moves sediment in and around the area.

7. Sediment quality – The 2010 sand placement activity is above MHHW and project activities would not alter the pre-project conditions. Any sand entering the water would be from the existing stockpile of dredged sand from the neighboring Grays Harbor navigation channel. This dredged material is very similar chemically to the existing material along the shorelines of Half Moon Bay, and South Beach as the material all originates from a common source.

The proposed project does not include any in water work and does not affect any of the Service's factors of decline listed above. Project related disruptions to prey resources are expected to be negligible. Therefore, the project would have **no effect** on green sturgeon or critical habitat.

4.4 Eulachon

According to the Services, threats to eulachon include habitat loss and degradation, particularly in the Columbia River basin. Hydroelectric dams block access to historical eulachon spawning grounds and affect the quality of spawning substrates through flow management, altered delivery of coarse sediments, and siltation. The release of fine sediments has been negatively correlated with Cowlitz River eulachon returns 3 to 4 years later, though the exact cause of the effect is undetermined. Dredging activities in rivers during spawning runs may entrain and kill fish or otherwise result in decreased spawning success. Eulachon have been shown to carry high levels of chemical pollutants, and although it has not been demonstrated that high contaminant loads in eulachon result in increased mortality or reduced reproductive success, such effects have been shown in other fish species. Eulachon harvest has been curtailed significantly in response to population declines. Global climate change may threaten eulachon, particularly in the southern portion of its range where ocean warming trends may be the most pronounced and may alter prey, spawning, and rearing success.

The proposed project does not include any in water work and does not affect any of the above noted threats to eulachon. Small fish and invertebrates in the area may be displaced due to habitat disturbances caused by erosion plumes associated with the proposed actions, however as mentioned above this is a normal condition in this high energy environment and erosion induced plumes are likely to continue in the area whether or not the project is implemented.

Since eulachon were not found in intensive beach seining efforts in 2005, and are unlikely to be in the project area due to the high energy environment and the associated naturally occurring erosion plumes, the project would have **no effect** on eulachon. Critical habitat has not been designated for eulachon.

4.5 Bull Trout

Twelve sites within Grays Harbor, including Half Moon Bay (HMB), were sampled in 2001, 2002, 2003, and 2004 (R-2 Consultants 2006) for bull trout. Acoustic tags were implanted in the bull trout captured in 2004, so additional data was collected in 2005. The results of the literature review and sampling effort indicate that bull trout are present in the lower Chehalis River beginning in mid- to late February and continuing through mid-July. The tagged fish appeared to display a preference for the mainstem reach of the Chehalis River between the Elliott Slough Turning Basin and Cow Point Reach.

The results of the study are consistent with historical native char captures and indicate that native char are present in the lower Chehalis River beginning in early March and continuing through mid-July. A substantial body of evidence indicates that bull trout are least likely to be present in the lower Chehalis River/Grays Harbor from mid-July through the end of February, substantiating the USFWS bull trout closure period for marine waters (February 15 - July 15).

No fish tagged as part of the R2 Resources study were detected at a fixed receiver station installed in Half Moon Bay. No native char were captured during beach seines in Half Moon Bay conducted in April-May 1999 and June-August 2004 (USACE 2006a).

Bull trout do not appear to spawn in the Chehalis River basin, and probably originate from spawning populations of native char in the Olympic Peninsula drainage. Two of the fish tagged as part of the R2 study were recaptured in the Hoh River basin. Therefore, no effect on spawning behaviors or habitat would occur as a result of the proposed actions. The bull trout life history stages requiring the lowest fine sediment levels—spawning, incubation, and fry rearing—do not occur in the project area. The breach fill work will occur during a portion of the year when bull trout are least likely to be present in the project area, so no direct effects are expected.

Bull trout critical habitat for marine nearshore areas, including tidally influenced freshwater heads of estuaries, extends to the depth of -33 feet MLLW for the purpose of encompassing the photic zone (70 FR 56266). Within this designated marine nearshore area, there are four Primary Constituent Elements (PCEs):

PCE's for marine nearshore areas
<p>1. Water temperatures that support bull trout use- The 2010 sand placement breach fill work is entirely above Mean Higher High Water (MHHW) and will not have any effect on the area water temperatures at HMB or South Beach.</p>
<p>2. Migratory corridors with minimal physical, biological, or water quality impediments between spawning, rearing, overwintering, and foraging habitats- The 2010 sand placement occurs above MHHW and would not represent a migratory barrier. Any sand entering the water would be from the existing stockpile of dredged sand from the neighboring Grays Harbor navigation channel. This dredged material is very similar chemically to the existing material along the shorelines of Half Moon Bay, as the material all originates from a common source.</p>
<p>3. An abundant food base including terrestrial organisms of riparian origin, aquatic macroinvertebrates, and forage fish- The 2010 sand placement activity is above MHHW and project activities would not alter the pre-project conditions. The proposed project would have a negligible effect on infaunal and bottom-dwelling organisms, as no significant populations of these organisms have been observed in higher intertidal elevations (above +8.0 feet, MLLW) in the project area.</p>
<p>4. Permanent water of sufficient quantity and quality such that normal reproduction, growth, and survival are not inhibited- The 2010 sand placement would not significantly change the chemistry and physical characteristics of the receiving water. Any sand entering the water would be from the existing stockpile of dredged sand from the neighboring Grays Harbor navigation channel. This dredged material is very similar chemically to the existing material along the shorelines of Half Moon Bay, as the material all originates from a common source.</p>

Due to project timing (August), bull trout are highly unlikely to be in the project area during sand placement activities, and the impacts to the bull trout prey base are negligible. The 2010 breach fill sand placement would have **no effect** on bull trout or their designated critical habitat.

4.6 Western Snowy Plover

The western snowy plover nests at three sites in Washington: Leadbetter Point, Midway Beach, and Damon Point/Oyhut Wildlife Area. The Damon Point site is located in the Grays Harbor inlet, approximately two miles north of the project site across the mouth of Grays Harbor from Half Moon Bay, and has been designated as critical habitat. The Midway Beach nesting area is located approximately seven miles south of the project site. Historically, the Westport area supported plover nesting.

The 2006 shorebird survey conducted multiple transect surveys at the ocean beach, Half Moon Bay, and inner dunal areas. The study concluded that the vast majority (94%) of shorebirds used the ocean beach on the west side of the south beach spit. Although suitable habitat does exist in the inner dunal area, no snowy plovers were observed in any of the transect areas. This is thought to be due to the heavy human use, along with pets, documented in the area.

The current habitat at Half Moon Bay is unsuitable for western snowy plover nesting. Foraging habitat would not be impacted as a result of the proposed project because plovers are not known to forage on the beaches at Half Moon Bay. Primarily due to the high human usage of the area and the documented lack of plovers usage of the area, and the expected no impacts to prey availability, the proposed project will have **no effect** on the western snowy plover. The project simply replaces eroded sand in two small areas at Half Moon Bay and South Beach and will have **no effect** on designated critical habitat for this species.

4.7 Marbled murrelet

Marbled murrelets are generally present in Grays Harbor during the fall, winter, and spring, (Speich and Wahl, 1995). However, sightings are rare during the nesting season (May-September), as birds tend to stay closer to their nesting areas. Project timing of the 2010 project (August) as compared to the 2004 effort (January/February) would largely exclude marbled murrelets from the project site. No designated critical habitat is located in or along the shoreline of Grays Harbor.

Marbled murrelets nest in old growth forests in the foothills. The 2010 sand placement would have **no effect** on murrelet nests, nesting habitat, or nesting season foraging behaviors. Truck traffic and related noise would be concentrated on existing roadways and the highly eroded/disturbed portion of the breach fill area, that is also heavily used by park visitors. Marbled murrelets are relatively opportunistic foragers; they have flexibility in prey choice, which likely enables them to respond to changes in prey abundance and location. This indicates that if murrelets are present in the immediate vicinity of maintenance activities, and they are disturbed while foraging, they would likely move without incident. The loss of prey as a result of the sand placement would be insignificant.

The 2010 sand placement would have no effect on nests or nesting habitat. Any disruption to foraging activities and the murrelet prey base are expected to be negligible, since they would be

highly localized relative to this species' foraging range. The proposed project will have **no effect** on marbled murrelet. There is no marbled murrelet critical habitat within the project area.

5. CUMULATIVE EFFECTS

The cumulative effects of Half Moon Bay and vicinity maintenance activities up to February 2004 are discussed in Section 7 and Appendix B of the February 2004 South Jetty Breach Fill Maintenance Final EA. The 2010 interim action, implemented in response to trigger thresholds being met, would merely maintain the status quo through the placement of sand in the vicinity of Half Moon Bay and South Beach, in order to protect against an undue risk of development of conditions that could eventually lead to a breach of the South Jetty area. The Responsive Actions (placement of sand along the west/southwest shoreline of the bay, and South Beach) would simply be replacing sand lost to erosive forces. Truck traffic would be primarily confined to the existing state park access road and the Coast Guard access road. Dune grass areas would be preserved. Contingent interim actions, if implemented, would also function to preserve the status quo, and would not produce any incremental or cumulative environmental effects on biological resources or recreational uses of the South Jetty, Half Moon Bay, and surrounding area.

6. COMPLIANCE OF PREFERRED ALTERNATIVE WITH ENVIRONMENTAL PROTECTION STATUTES AND OTHER ENVIRONMENTAL REQUIREMENTS

6.1 National Environmental Policy Act

In compliance. This draft supplemental environmental assessment (EA) satisfies the documentation requirements of NEPA. A public comment period ran from 11 June to 11 July 2010, three comments were received. Letters were received from Grays County and the city of Westport supporting the project. A letter from the Lummi Nation recommended further coordination with affected tribes, this was completed as discussed in Appendix C. A Finding of No Significant Impact (FONSI) letter can be found in Appendix B.

6.2 Environmental Justice (E.O. 12898)

In compliance. Federal agencies shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States. Grays Harbor County has a very small minority population base and is arguably one of the more economically depressed parts of the state. The project represents a potential for very few, short term employment opportunities to the area. The project does not disproportionately impact minority or low-income populations.

6.3 Endangered Species Act, as amended. 16 U.S.C. 1531, et seq

In compliance. 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. The Corps produced a Biological Evaluation for the 2004 action. USFWS responded to the Corps on December 2, 2004 concluding that effects to the federally listed bull trout, western snowy plover,

bald eagle, brown pelican, and marbled murrelet associated with the proposed project would be “discountable and insignificant.” Therefore, they concurred with the Corps determination of “may affect, not likely to adversely affect” determination for these species. Since 2004 both the bald eagle and brown pelican have been delisted. Since the 2004 sand placement the Corps has conducted specific surveys for both shorebirds and nearshore fish species at the site. The shore bird survey included a targeted effort at finding snowy plovers in the dunal area, an area of preferred plover habitat. No plovers were sighted. The survey did however, document heavy human, and pet use of the area which is noted as a common limiting factor for ground nesters such as plovers. Project timing of the 2010 project (August) as compared to the 2004 effort (January/February) would exclude marbled murrelet from the project site. Likewise project timing places the 2010 effort inside of the approved construction window for bull trout. As discussed in Section 4 and as depicted in Table 1, the Corps has determined that the 2010 sand placement would have **no effect** on any of the above listed species or the recently listed eulachon and green sturgeon. There would be no effect on designated critical habitat for any listed species. A no effect determination does not require consultation with the Services.

6.4 Clean Water Act, as amended. (Federal Water Pollution Control Act) 33 U.S.C. 1251, et seq.

In compliance. The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the nation’s waters (33 U.S.C. 1251). The Corps regulates the discharges of dredge or fill material into waters of the United States pursuant to Section 404 of the Clean Water Act. This permitting authority applies to all waters of the U.S., including navigable waters and wetlands. The selection of disposal sites for dredged or fill material is done in accordance with Section 404(b)(1) guidelines, which were developed by the U.S. Environmental Protection Agency (EPA) (see 40 CFR Part 230).

The 2010 sand placement would fall completely within the footprint of the previously authorized breach fill, and would utilize the same sand material derived from the same source as used for the 600,000 cy breach fill action conducted in 1994. As the Interim Action sand placement would not alter the character, scope, or design of the initial 1994 breach fill placement, the proposed action constitutes maintenance of a dike or similar structure, as the breach fill was constructed as an engineered barrier between the Pacific Ocean on one side, and Half Moon Bay, and the infrastructure of the City of Westport on the other. The breach fill is appropriately characterized as a “structure” even though it was not constructed with traditional durable materials, but with natural sands that were intended to mimic natural accretion, decretion, and erosion characteristics over time. The consequences of these natural processes were intended to be addressed through maintenance on a periodic basis, as required, or through other responsive measures deemed necessary. Thus, although not a typical dike, the breach fill was an engineered structure designed for the control of water, and such placements of material for repair and maintenance purposes are therefore exempt from the requirements of Section 404 under Section 404(f)(1)(B) of the Clean Water Act. Because no activity subject to regulation under Section 404 will take place a Section 401 certification is not required.

6.5 Coastal Zone Management Act

In compliance. The Coastal Zone Management Act of 1972, as amended, requires Federal agencies to carry out their activities in a manner which is consistent to the maximum extent practicable with the enforceable policies of the approved state Coastal Zone Management Program. For the 2004 sand placement activities the Corps prepared a Coastal Zone Management Act Consistency Determination for the proposed action to ensure that the proposed work complies with the policies, general conditions, and general activities specified in the City of Westport Shoreline Management Master Plan and the State of Washington Shoreline Management Program. The consistency determination was submitted to the Department of Ecology (Ecology) for review on October 18, 2004, with a copy provided to the City of Westport. By letter of November 19, 2004 to the Corps, Ecology stated that the proposed placement of material on the beach at Half Moon Bay and the breach area south of the South Jetty had previously (October 31, 2003) been determined to be consistent with Ecology's Coastal Zone Management Program. Because the 2010 sand placement action, if conducted by a private permit applicant, would fall within the scope of Corps Nationwide Permit (NWP) 3, as repair or rehabilitation of an existing, serviceable, authorized structure, the proposed action enjoys the procedural efficiencies established under NWP 3 by analogy. The State Department of Ecology has issued a general concurrence that activities conducted in accordance with NWP 3 are consistent to the maximum extent practicable with the enforceable conditions of the Coastal Zone Management Plan, as long as a project-specific water quality certification under CWA Section 401 is not required. As indicated above, a Section 401 water quality certification is not required for the proposed 2010 sand placement action, and thus a consistency determination need not be prepared and project-specific consistency concurrence need not be obtained.

6.6 National Historic Preservation Act

In compliance. Section 106 of the National Historic Preservation Act of 1966 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. The project area is composed of fill material and recently deposited sand deposits which precludes the possibility of prehistoric or early historic-period archeological deposits being present. A professional pedestrian archeological survey of the project area in late 2003 conducted by the Corps did not produce evidence of possible shipwreck remains. Background research indicates that there are no reported shipwrecks within the project area. Prior to the 2004 sand placement the Corps sent a letter report to the Washington State Historic Preservation Officer (SHPO) stating the negative results of the archeological survey and background research and recommending a determination of no historic properties affected for the project. A letter concurring with this determination was received from the SHPO on September 30, 2003. The project footprint has not changed since the large (600,000 cy) 1994 breach fill, and very little from the 2004, sand placement. With the exception of the stockpile area, the project does not involve any excavation. The project adds additional material (30,000 cy) to a highly disturbed site that has had multiple episodes of material added to it over the years. This has been accomplished in an attempt to slow the erosion process in an area of very high energy and strong natural erosive properties. Further document review by Corps archeologists indicate that the project area has low probability for the existence of properties that could be eligible for listing in the National Register of Historic Places. More pertinently, the nature of the undertaking (maintenance work within an existing Corps structure)

is of a type that has No Potential to Cause Effects to Historic Properties. Accordingly, no additional work beyond inclusion of this document evidencing the Corps' compliance with Section 106 in the permanent project files is necessary.

6.7 Magnuson-Stevens Fishery Conservation and Management Act

In compliance. The Magnuson-Stevens Fishery Conservation and Management Act requires Federal agencies to consult with the NOAA-Fisheries regarding actions that may affect Essential Fish Habitat (EFH) for Pacific coast ground fish, coastal pelagic species, and Pacific salmon. The Act defined EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Descriptions of EFH are provided in Fishery Management Plans produced by the Pacific Fisheries Management Council. As determined from the analysis below the project would have no effect on EFH.

The 2010 sand placement:

- Would have no effect on infaunal and bottom-dwelling organisms, as no significant populations of these organisms have been observed in higher intertidal elevations (above +9.0 feet, MLLW), or the high energy area of South Beach.
- Would not significantly change benthic habitats resulting from erosion, sloughing or lateral displacement of surrounding bottom deposits. While erosion and sloughing of sand would no doubt occur during storm events, this process mimics a natural process that routinely occurs in the region. If the Corps chooses not to place sand along the shore of Half Moon Bay, storm waves would erode the existing dune and cause sloughing and/or possible lateral displacement of the surrounding bottom deposits. Half Moon Bay, along with other exposed areas of the Pacific Coast, is a dynamic environment that is routinely subjected to intense wave energy.
- Would only temporarily elevate turbidity levels, and therefore, would not significantly impact aquatic vegetation or directly affect fish species. Specifically, sand placement would occur in the dry above +9 feet MLLW. While some sand would enter the water during storm events, any increased turbidity would be a temporary increase in nearshore turbidity that would equally be expected to be caused by the current existing sandy and dunal shoreline eroding in the water during storm events. In addition, no aquatic vegetation has been observed in the project area and therefore no significant effects to bay vegetation are expected from the temporary turbidity increases. Direct effects to fish species are not expected as increased turbidity levels during storm activity after sand placement would mimic existing background conditions.
- Would not significantly change the chemistry and physical characteristics of the receiving water. Any sand entering the water would be from the existing stockpile of dredged sand from the neighboring Grays Harbor navigation channel. This dredged material is very similar chemically to the existing material along the shorelines of Half Moon Bay, as the material all originates from a common source. The project would only cause minor and temporary losses of habitat due to burial. Minimal numbers and

diversity of benthic organisms currently exist in and adjacent to the sand placement footprint. Any organisms that do currently exist at higher elevations in this dynamic environment are regularly exposed to strong wave action, periodic erosion, sloughing, and burial events. Sloughing of placed sand would occur throughout the winter, especially during storm events. This would temporarily alter high intertidal habitat as sloughed areas would bury existing benthic organisms. However, the sand would eventually flatten due to wave action. Thus, over the long-term, this habitat, with its similar grain size composition and physicochemical composition, would be available for benthic colonization and production. Thus, sand placement above +9.0 feet, MLLW, is not expected to significantly alter existing Half Moon Bay habitat.

Since the 2010 sand placement would involve maintenance sand placement above +9.0 feet, MLLW, in an approximately 2.3 acre area, in order to maintain the *status quo* of the upper beach area, the Corps has determined that there would be no effect of this action on Essential Fish Habitat in Half Moon Bay.

6.8 Clean Air Act, as amended, 42 U.S.C 7401 et seq

In compliance. The purpose of this Act is to protect public health and welfare by the control of air pollution at its source. Some temporary mobile source emission releases are expected during construction (sand hauling and placement) activities; however air quality is not expected to be impacted to any measurable degree. The project constitutes a routine facility repair activity, generating an increase in emissions that is clearly *de minimis* under 40 CFR 93.153(c)(2)(iv), and is thus exempt from the Clean Air Act conformity requirements.

6.9 Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712) as amended

In compliance. The Migratory Bird Treaty Act (MBTA) of 1918 is the domestic law that affirms, or implements, the United States' commitment to four international conventions with Canada, Japan, Mexico, and Russia for the protection of shared migratory bird resources. The MBTA governs the taking, killing, possessing, transporting, and importing of migratory birds, their eggs, parts, and nests. The take of all migratory birds is governed by the MBTA's regulation of taking migratory birds for educational, scientific, and recreational purposes and requiring harvest to be limited to levels that prevent over-utilization. Minor construction related impacts to migratory birds may occur; however, the breach area habitat is largely disturbed due to the high energy environment present and the heavy use of humans and their pets. Truck traffic and related noise would be restricted as much as possible to existing roadways and access to the site would be only via the existing Coast Guard access road on the breach dune. Impacts to area dune grass would be minimized as fill areas are largely restricted to un-vegetated eroded areas. No significant impacts to migratory birds are expected.

7. CONCLUSION

Based on the preceding environmental assessment, Seattle District has determined that the proposed action is not a major Federal action significantly affecting the quality of the human or natural environment, and therefore does not require preparation of an environmental impact statement.

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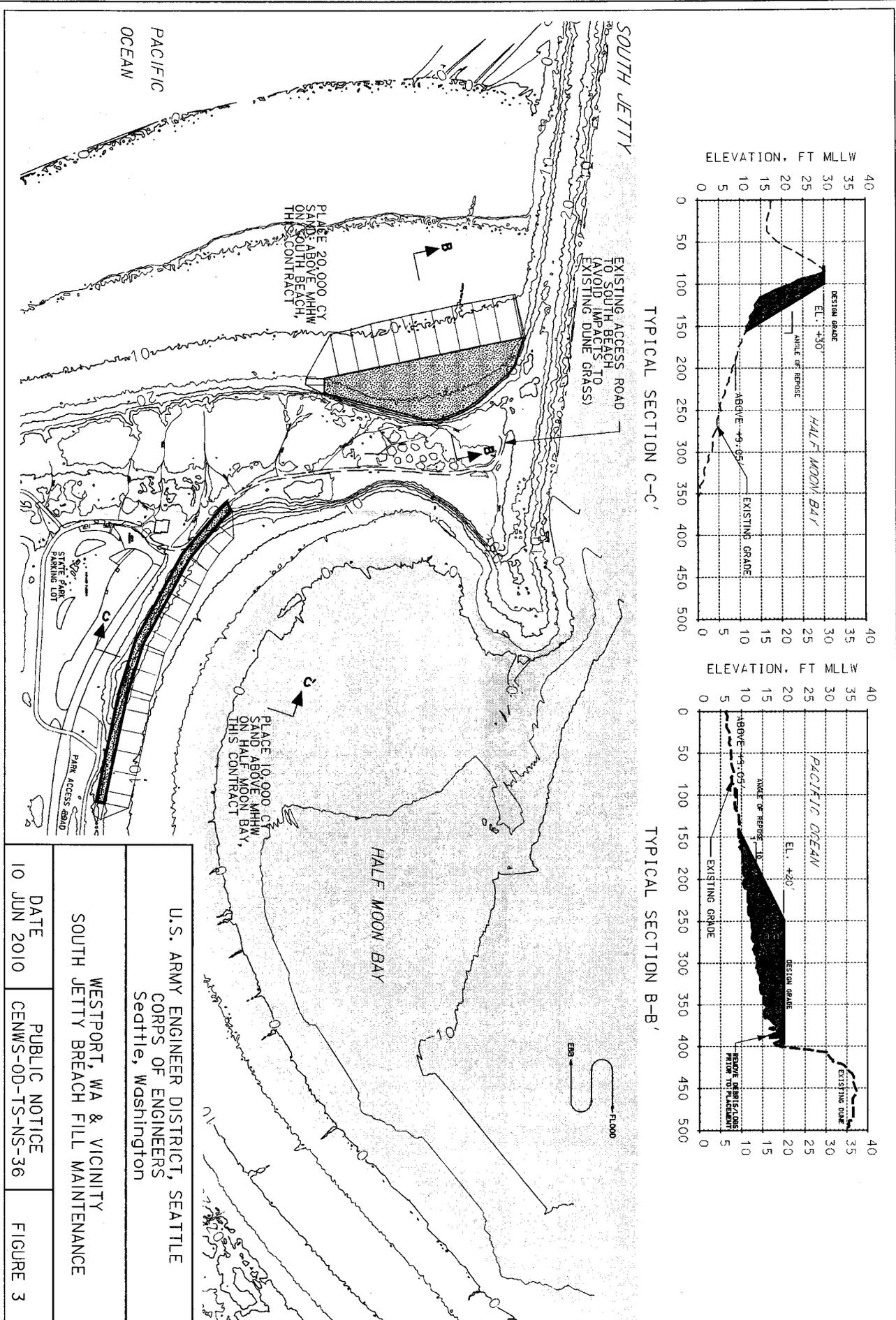
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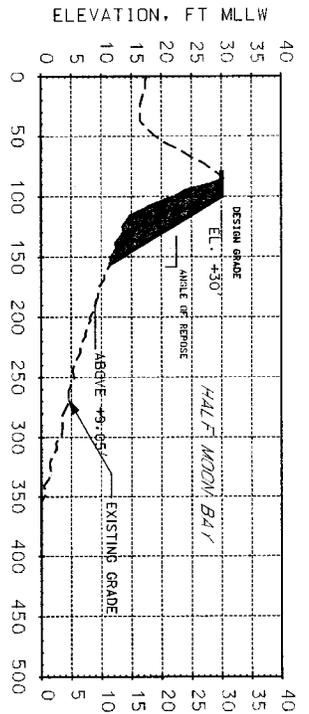
U.S. Army Corps of Engineers. 1997. *Long Term Maintenance of the South Jetty at Grays Harbor, Washington, Evaluation Report*. U.S. Army Corps of Engineers, Seattle District, Seattle, WA.

U.S. Army Corps of Engineers. 1995. *Review of Long-Term Maintenance Plans for the South Jetty, Grays Harbor, Washington*. U.S. Army Corps of Engineers, joint subcommittee of the Committee on Tidal Hydraulics and Coastal Engineering Research Board, Vicksburg, MS.

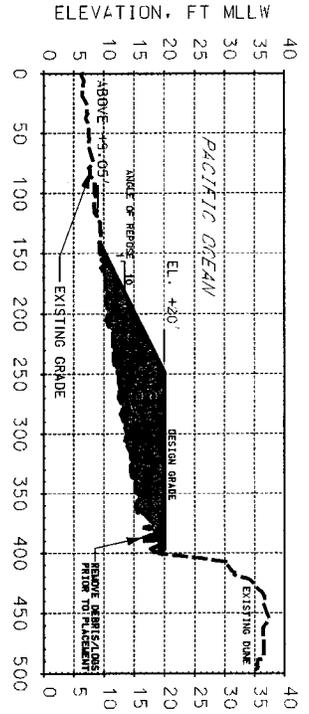
Appendix A
South Jetty Breach Fill Maintenance Design Plan



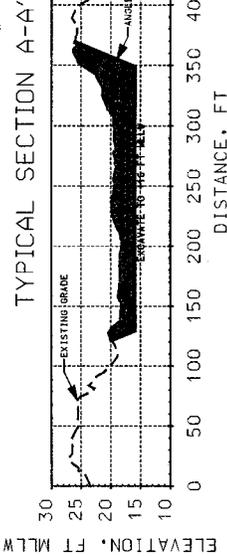
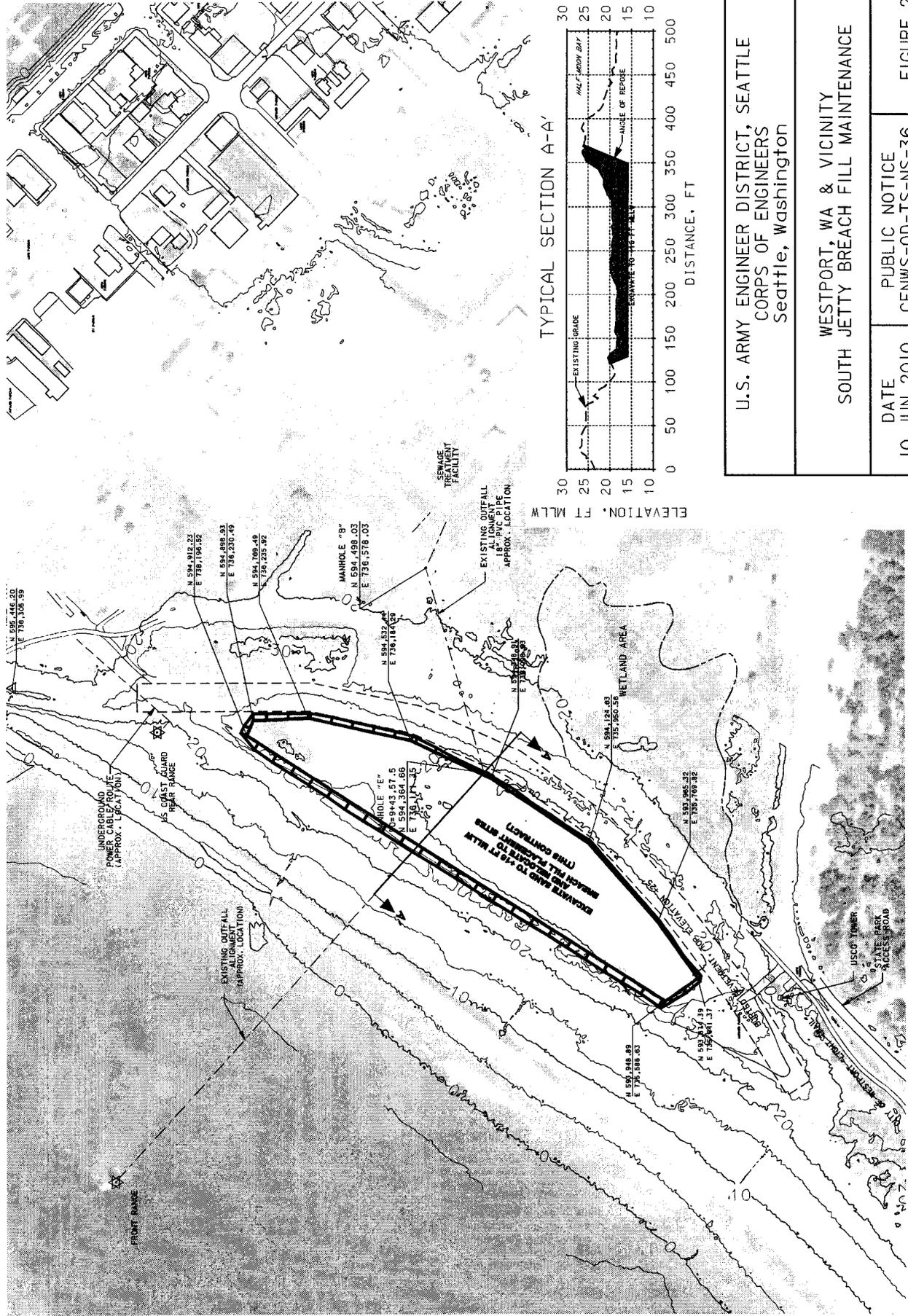
TYPICAL SECTION C-C'



TYPICAL SECTION B-B'



U.S. ARMY ENGINEER DISTRICT, SEATTLE		
CORPS OF ENGINEERS		
Seattle, Washington		
WESTPORT, WA & VICINITY		
SOUTH JETTY BREACH FILL MAINTENANCE		
DATE	PUBLIC NOTICE	FIGURE 3
10 JUN 2010	CENWS-0D-TS-NS-36	



U.S. ARMY ENGINEER DISTRICT, SEATTLE
 CORPS OF ENGINEERS
 Seattle, Washington

WESTPORT, WA & VICINITY
 SOUTH JETTY BREACH FILL MAINTENANCE

DATE PUBLIC NOTICE
 10 JUN 2010 CENWS-0D-TS-NS-36

FIGURE 2

Appendix B
Finding of No Significant Impact



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

CENWS-PM-PL-ER

**SOUTH JETTY BREACH FILL MAINTENANCE
WESTPORT, GRAYS HARBOR COUNTY, WASHINGTON**

FINDING OF NO SIGNIFICANT IMPACT

1. Background. The accompanying environmental assessment (EA) is a supplement to, and incorporates by reference, the *South Jetty Breach Fill Maintenance Final Environmental Assessment*, prepared in February 2004 by the Corps of Engineers, as well as the December 2004 and November 2005 supplements to that document. The February 2004 document evaluated the impacts of placement of approximately 25,000 cubic yards of sand on the south jetty breach fill, as well as expected additional placements of sand over the subsequent three to five years. The Supplemental Environmental Assessments (SEA) evaluated impacts on Half Moon Bay resources that would be expected if the Corps of Engineers were to take interim breach fill maintenance action to preserve the status quo by protecting against the risk of breach recurrence in the vicinity of the South Jetty, pending the development of a long term management strategy.

2. Purpose and Need. The purpose of the proposed work is to extend the life of the breach fill area adjacent to the south jetty. This will protect the south jetty and navigation channel from damage which could be caused in the event of another breach. Preventative maintenance of the breach fill is required to protect and preserve the Federal navigation project's features, including the south jetty and entrance channel, until a long-term strategy for the south jetty and Grays Harbor entrance is implemented. This action is a more cost-effective strategy than after-the-fact emergency repairs, and requires a relatively small quantity of material to restore the height and width of the fill area. The proposed project will also partially nourish with sand the area which has been eroded adjacent to previous gravel placements.

3. Proposed Action. The 2010 preferred alternative consists of the placement of up to 30,000 cubic yards of sand split between two vulnerable areas on the breach fill; both of these areas are located well above the mean higher high water depth contour and in the same areas as previous sand placement actions. The fill placement is planned for late summer, early fall 2010. Approximately 20,000 cubic yards would be placed on the south beach erosion scarp and 10,000 cubic yards along the south west erosion scarp of Half Moon Bay. The sand will be excavated from the existing Half Moon Bay direct beach nourishment dredged material disposal site, which is an upland stockpile situated above the Point Chehalis revetment extension constructed in 1999.

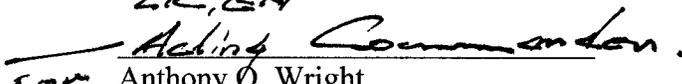
3. Summary of Impacts. The 2010 preferred alternative would result in no effect to any Federally-listed threatened or endangered species or their habitat. The proposed action would result in no impacts to any properties listed, proposed for listing, eligible for listing, or potentially eligible for listing in the National Register of Historic Places. Areas near the

proposed project site will be temporarily disturbed by proposed construction activities. The impacts associated with the proposed action are extremely short term, minor in nature. The impacts on the quality of the human environment will not appreciably add to the insignificant impacts disclosed and evaluated in the December 2004 and subsequent environmental analyses. The temporary and geographically narrow restriction on pedestrian access to the excavation, access route, and re-placement areas would be minimal. The composition and grain size of the sand excavated and re-placed, the footprint within which re-placement will occur, and the manner of placement will all be nearly identical to those respective features of the contingent interim action project evaluated in the earlier analyses. As was the case with the sand placement in December 2004 / January 2005, little, if any, native dune grass vegetation will be disturbed by the transportation and re-placement activities, and the Corps will make every effort to avoid such impacts. Following the re-placement activities, public access to the Pacific Ocean and Half Moon Bay beaches will be essentially identical to access under present conditions, and views of the ocean from parking areas and the vicinity will not be substantially affected. This project was coordinated with appropriate agencies and the public as documented in the EA.

4. Finding. Based on the evaluation provided in the attached SEA, and summarized here, Seattle District has determined that this project is not a major Federal action significantly affecting the quality of the human or natural environment, and therefore does not require preparation of an environmental impact statement.



William C. Adleson
LTJ, BN



Anthony O. Wright
Colonel, Corps of Engineers
District Commander

8-16-2010

Date

Appendix C
Comments Received and Corps Responses

OFFICE OF
COUNTY COMMISSIONERS

TERRY L. WILLIS
FIRST DISTRICT
MIKE WILSON
SECOND DISTRICT
ALBERT A. CARTER
THIRD DISTRICT
DONNA CATON
ADMINISTRATIVE ASSISTANT/
CLERK OF THE BOARD



1854
STATE OF WASHINGTON

100 West Broadway, Suite #1
MONTESANO, WASHINGTON 98563
PHONE (360) 249-3731
FAX (360) 249-3783

June 28, 2010

Hiram Arden
Navigation Section
Seattle District
Army Corps of Engineers
United States of America
P.O. Box 3755
Seattle, Washington 98124-3755

RE: *CENWS-OD-TS-NS-36*

Mr. Arden:

Thank you for the opportunity to comment on the United States Army Corps of Engineer project for the placement of approximately 30,000-cubic-yards of dredged sand material at the rapidly-eroding South Jetty area of Grays Harbor located in the City of Westport, Grays Harbor County, Washington.

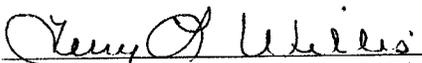
Grays Harbor County has reviewed the proposal and concurs with the Corps' determination that the South Jetty breach triggering criteria parameters have been met, and that the placement of the dredged sand material is an interim action necessary to reduce the risk of a breach between the South Jetty and the City's South Beach area.

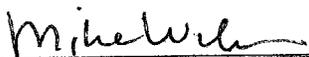
Thank you again.

Sincerely,

BOARD OF COMMISSIONERS
GRAYS HARBOR COUNTY


ALBERT A. CARTER, Chairman, District 3


TERRY L. WILLIS, Commissioner, District 1


MIKE WILSON, Commissioner, District 2

cc: City of Westport Mayor Michael Bruce
Port of Grays Harbor Commissioners
File



City of Westport

740 N Montesano St.

P O Box 505

Westport, WA 98595

Phone: 360-268-0131 Fax: 360-268-0921

July 8, 2010

District Engineer,
ATTN: CENWS-OD-TS-NS
P.O. Box 3755
Seattle, WA 98124

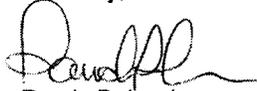
RE: CENWS-OD-TS-NS-36

The City of Westport thanks you for the opportunity to comment on the proposed Placement of Sand, South Jetty Breach Fill Maintenance in Westport, Washington project. The project involves the placement of approximately 30,000 cubic yards of sand materials at the South Jetty breach fill area. The area has seen increasing erosion of the sand that was placed in 2005. In 2004, the District established trigger criteria to plan for additional placements to prevent a breach from occurring in this area. The City agrees with the District's determination the trigger criteria has been met which necessitates this interim action.

The City has reviewed and concurs with the District's determination the project is an appropriate response to the trigger criteria being met, is necessary as an interim step until a long term management strategy is implemented, is within its authority and that a proper environmental review has been completed.

The City supports the District's proposed action as necessary and appropriate.

Sincerely,



Randy D. Lewis
City Administrator

www.ci.westport.wa.us

city_administrator@ci.westport.wa.us

clerk_treasurer@ci.westport.wa.us

building@ci.westport.wa.us

The City of Westport is an equal opportunity provider and employer

Rec'd 23 JUL 10 *AK*



LUMMI INDIAN BUSINESS COUNCIL

2616 KWINA ROAD • BELLINGHAM, WA 98226 • (360) 384-1489

DEPARTMENT _____

DIRECT NO. _____

June 29, 2010

US Army Corps of Engineers
Seattle District
Hiram Arden
Project Manager
Navigation Section
Attn: CENWS-OD-TS-NS
P.O. Box 3755
Seattle, WA 98142-3755

RE: CENWS-OD-NS-36

Dear Hiram Arden:

The Lummi Nation has received notice of the above-referenced permit and is responding as an affected Tribe.

The Lummi Nation Tribal Historic Preservation Office (LNTHPO) has coordinated an internal review using records on file with the Lummi Nation's Cultural Resource Management Program. Based on the review, LNTHPO has identified the area of potential effect for the above reference project to be an extended territory of the Lummi Tribe. LNTHPO is recommending that consultation with remaining affected tribe(s) to provide necessary consultation.

These comments are based on the information available at the time of the review. The LNTHPO should review any changes related to the proposed project activities. Should you have any questions or concerns, please do not hesitate to call me at 360.384.2298.

Sincerely,

Kelly Easter
Deputy Tribal Historic Preservation Officer
Tribal Historic Preservation Office
Lummi Nation, Culture Department

cc: James Hillaire, Director, Culture Department, Lummi Nation
Stephenie Kramer, Assistant State Archaeologist, DAHP

Corps response to comment from Lummi Nation Tribal Historic Preservation Office (LNTHPO):

After further clarifying the LNTHPO comments via phone conversation with Ms. Lena Pso, the conclusion that the project is out of the LNTHPO area was reached and no further consultation is desired. The LNTHPO did recommend consultation with the other affected tribe(s). To this end, the Corps has coordinated this project specifically with The Quinault Nation as well as all of the 29 recognized tribes in Washington State. Seattle District routinely notifies the 42 tribes within the Seattle District footprint of pending projects via mailings and emails.

Appendix D

2004 EA, with 2005 supplement and BE

Documents can be accessed at:

http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=ERS&pagename=ERS_Documents

Final Environmental Assessment

South Jetty Breach Fill Maintenance

**Westport, Grays Harbor County, Washington
February 2004**

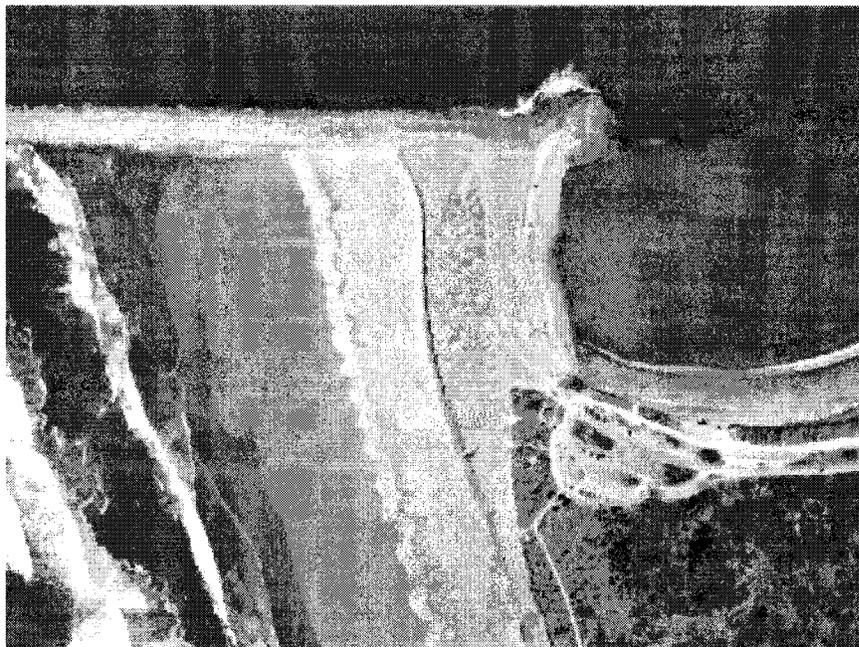


Photo dated September 2003



**US Army Corps
of Engineers®**
Seattle District