Finding of No Significant Impact
For the Parson's Slough Project

In August 2010, NOAA's National Marine Fisheries Service (NMFS) Office of Habitat Conservation prepared a Targeted Supplemental Environmental Assessment (TSEA) for a restoration activity funded by the American Recovery and Reinvestment Act of 2009. The purpose of this project is to increase Coastal Pelagic and Pacific Coast Groundfish species survival by reducing tidal scour of essential fish habitat in Parson's slough, a portion of Elkhorn Slough which drains into Monterey Bay on the Pacific Ocean in coastal central California. The TSEA assesses the potential adverse environmental impacts of this project specific to the Southern Sea Otter, a species listed as threatened pursuant to the Endangered Species Act. NOAA completed formal Section 7 consultation under the Endangered Species Act and received from the USFWS a Biological Opinion (BiOp) for the Southern Sea Otter (Enyhydra lutra nereis). The BiOp concluded that the restoration project is not likely to jeopardize the continued existence of the Southern Sea Otter and, since no critical habitat has been designated by the USFWS for Southern Sea Otters, no critical habitat will be affected.

The TSEA also assessed the potential adverse impacts of this project on the Southern Sea Otter and Harbor Seal (Phoca vitulina), which are protected under the Marine Mammal Protection Act (MMPA). Both the USFWS and NMFS are in the process of issuing an Incidental Harassment Authorization for construction-related impacts defined as take under the MMPA. The additional potential impacts to other elements of the human environment for this type of project are analyzed in the February 6, 2002 Programmatic Environmental Assessment (PEA) for the Community-based Restoration Program's Implementation Plan and the June 23, 2006 Supplement (SPEA); the PEA and SPEA and BiOp are incorporated by reference into the TSEA. The TSEA is expressly incorporated by reference in this FONSI.

National Oceanic and Atmospheric Administration Administrative Order 216-6 (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 C.F.R. §1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant in making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs?

Response: No. Implementation of this project, as all projects funded through the CRP, is designed to enhance or restore coastal habitats, and/or fish habitats that are essential to federally managed fish as defined under the Magnuson-Stevens Act or identified in FMPs. Although the EFH consultation determined that proposed action would adversely affect EFH for various

federally managed fish species within the Pacific Groundfish, Coastal Pelagic, and Pacific Salmonid Fisheries Management Plans (FMP's), the proposed action contains adequate measures to avoid, minimize and mitigate or otherwise offset the adverse effects to EFH. Based on this determination, NMFS did not provide any conservation recommendations.

The proposed action would entail the placement of approximately 2000 cubic yards (1529 cubic meters) of rock and sheetpile and would result in the loss of approximately 0.75 acres (4047 square meters) of subtidal habitat within the project footprint. Operation of the sill is expected to result in the conversion of 11 acres (0.045 square miles) of intertidal mudflat habitat to subtidal habitat. The increase in soft sediments within the Parson's Slough Complex resulting from reduced tidal scour would likely result in a beneficial effect on sea otters by increasing the availability of soft sediment habitat for burrowing prey. Operation of the sill may result in a slight increase in hypoxic conditions which may decrease habitat suitability for benthic (bottom-dwelling) invertebrates. However, both Parson's Slough and Elkhorn Slough contain an excess of intertidal mudflat habitat and a scarcity of subtidal and wetland habitat. Overall, the action will result in a net increase of subtidal and wetland habitats within the action area and will not cause substantial damage to ocean and coastal habitats or EFH.

2) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

Response: There will be no significant impacts on biodiversity and/or ecosystem function. As concluded by the USFWS BiOp for the Southern Sea Otter, the proposed action will impact an extremely small percentage of the Southern Sea Otter within the Elkhorn Slough estuary project area based on the following: (1) the relatively small number of Southern Sea Otters that could be potentially harassed (up to 40 individuals harassed with none lethally taken) by this project relative to the overall distribution and abundance throughout their range (approximately 2500 individuals throughout central and southern California (2) a minimal amount of subtidal habitat for the Southern Sea Otter would be permanently affected (0.75 acre) by the proposed action, with an additional 11 acres benefitted by the operation of the sill; (3) a number of conservation measures would be implemented to avoid or minimize potential adverse effects to individual Southern Sea Otter's and their habitat during implementation of the proposed action. This project would potentially decrease the abundance of mudflat species and increase the abundance of wetland species. Despite these changes in the relative abundance of species, the overall diversity of species in Elkhorn slough would most likely remain the same after implementation of this project. Ultimately, the action is expected to have long-term beneficial impacts on ecosystem function through restoration of natural estuarine habitat.

3) Can the proposed action reasonably be expected to have a substantial adverse impact on public health or safety?

Response: This criterion was adequately considered in the SPEA, which analyzed a broad range of restoration activities. The response included in the SPEA's associated FONSI states: "No. Implementation of the CRP is designed to enhance habitat and be beneficial to the environment, as well as public health and safety. Projects that would alter floodplains or modify

storm water management structures to prevent erosion or improve water quality, and projects that would remove contaminated sediments to restore habitat would beneficially affect public health and safety. No adverse impacts on public health and safety are expected."

4) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species?

Response: Yes. NOAA RC, with technical assistance from NMFS Protected Resources, and the USFWS have reviewed any potential effects to species listed as threatened or endangered under the ESA. USFWS has issued a Biological Opinion that concludes that the project is not likely to jeopardize the continued existence of the Southern Sea Otter. USFWS has proposed issuing an Incidental Harassment Authorization (IHA) for non-lethal take under the MMPA. NMFS has also proposed issuing an IHA for non lethal take of Harbor Seals under the MMPA. The impacts to Southern Sea Otters and Harbor Seals will be minimal and will mostly be in the form of short-term, minor constructed related impacts. The impacts to Southern Sea Otters and Harbor Seals in the long run will be beneficial in that the project will enhance wetland habitat used by species that Southern Sea Otters and Harbor Seals prey on. This will increase the quality of foraging habitat in Parson's Slough for Southern Sea Otters and Harbor Seals.

5) Are significant social or economic impacts interrelated with natural or physical environmental effects?

Response: This criterion was adequately considered in the SPEA, which analyzed a broad range of restoration activities. The response included in the SPEA's associated FONSI states: "No significant social or economic impacts are expected. CRP-implemented habitat restoration projects, especially those having an education component, may have a substantial beneficial effect to habitats supporting coastal or marine resources; the projects would likely have a directly related economic and/or social benefit as well. Beneficial impacts would result because education of local citizens and youth about environmental issues in the community and beyond, especially habitat restoration and conservation, would promote environmental understanding of living coastal and marine resources, stewardship, and sustainability of the resources. The sustainability of these resources contributes positively to the long-term economic stability of the affected community."

6) Are the effects on the quality of the human environment likely to be highly controversial?

Response: It is not likely that the effects of this project on the quality of the human environment would be highly controversial. Professional engineers and project planners have designed the habitat structures. The project will be monitored for both its effectiveness at restoring habitat, and for increased fish use of the site. Reports on the project outcome will be required by the NOAA Restoration Center and shared with NMFS Protected Resources and USFWS personnel.

7) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, essential fish habitat, or ecologically critical areas?

Response: No. The impacts of the proposed work will include enhancement of the greater Elkhorn Slough estuary to improve in-stream habitat and fish survival. Impacts will only affect a small proportion of the project area which is in protected lands within the National Estuarine Research Reserve. The site is also adjacent to another Marine Protected Area, the Monterey Bay National Marine Sanctuary. Due to this project being part of the National Estuarine Research Reserve system, a Marine Protected Area, this project will comply with and support provisions found within Executive Order 13158 of May 26, 2000-Marine Protected Areas. Because of the proximity of this project to a Marine Sanctuary, this project will not engage in any prohibited actions defined in Section 306 of the National Marine Sanctuaries Act of 2000. The site was surveyed for cultural and archaeological resources and no cultural or archaeological resources were found at the site.

8) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?
Response: No. Any uncertainty or associated risk will not be significant and will be minimized by sound design, implementation techniques and adaptive project management to address any concerns, should they arise. As noted in the criterion 4 response, the individual BiOp concluded that the project is not likely to jeopardize the continued existence of Southern Sea Otters.

9) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response: This criterion was adequately considered in the SPEA, which analyzed a broad range of restoration activities. The response included in the SPEA's associated FONSI states:
"The proposed action, when combined with related past, present, or reasonably foreseeable future actions will not cause cumulative significant impacts to the human environment. Any impacts caused by the proposed action would generally be temporary, minor to moderate impacts due to ground disturbance or other construction-related activities from implementing specific projects, which then result in net long-term or permanent, moderate to substantial beneficial impacts on the affected communities, resources, and ecosystems of the United States. Due to the CRP's national scope and infrequency of projects occurring within the same geographic areas, the temporary negative impacts related to implementation would only be moderate, and isolated to project locations. Also, these negative impacts can be avoided, minimized or mitigated by best management practices and other measures, as described in the SPEA.

Many other federal, state, and local government agencies and private organizations implement similar beneficial projects across the United States to help restore and maintain natural ecosystems. Consequently, if and when other unrelated projects are planned or identified in a project area with spatially or temporally cumulative adverse impacts, the CRP staff can work with grantees to implement best management practices, and/or require project timing that will avoid cumulative adverse impacts, by using special award conditions as described in the SPEA. The net beneficial impacts resulting from past projects, the proposed actions, and foreseeable future projects would be long-term and beneficial impacts. Overall, the sustainability of resources, especially living coastal and marine resources, would be enhanced."

In addition, there have been and will be other wetland and seagrass restoration projects in the Elkhorn Slough complex. All of these projects, when taken together, will increase the complexity and diversity of habitats found within the Elkhorn Slough Complex. Restoration projects include wetland habitat restoration, seagrass restoration, and protection of habitat by installing livestock exclusion fencing. These projects, when taken together, are spread out geographically in the Elkhorn Slough Complex as well as temporally, as to not constitute a significant cumulative impact when analyzed as a whole.

This action involves issuance of an IHA from NMFS Protected Resources with a separate analysis of significance. This analysis will likely result in a separate Finding of No Significant Impact and when taken together with this FONSI, would not involve impacts that would actually be significant. If the NMFS Protected Resource analysis reveals unique and/or potentially significant aspects of this project as it relates to Harbor Seals, then this FONSI would be re-evaluated.

10) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

Response: No. During a site survey and document review there was no evidence of cultural resources present in the action area or adjacent to it, within the Elkhorn Slough Complex. Therefore, NOAA RC determined that this specific action did not have the potential for adverse impacts to historic or cultural resources and the project did not require consultation with a State Historic Preservation Officer and/or a Tribal Historic Preservation Officer.

11) Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

Response: This criterion was adequately considered in the SPEA, which analyzed a broad range of restoration activities. The response included in the SPEA's associated FONSI states: "No. Implementation of the CRP should not cause or promote the introduction or spread of non-indigenous species, and as described in section 2.2 and 4.1 of the SPEA, some project-specific actions may intentionally be conducted to prevent or avoid the introduction or spread of invasive species, and protect habitat for native species."

12) Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

Response: Commitment of funds for this action does not obligate NOAA's involvement in future similar actions. In addition, any future proposed action requires compliance with section 7 of the ESA and additional NEPA analysis as necessary. Consultation with NMFS Protected Resources on this project and any others that may impact species listed under the Endangered Species Act or protected under the MMPA provides an opportunity to ensure that this action and future actions have no significant adverse effects.

13) Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

Response: This criterion was adequately considered in the SPEA, which analyzed a broad range of restoration activities. The response included in the SPEA's associated FONSI states: "No. As described in Section 6.0 of the SPEA, implementation of the CRP will comply with all federal regulatory requirements, and to the extent possible with and state and local laws, and is expected to enhance or restore habitats and the environment that support coastal and marine living resources." In addition, NOAA RC will ensure that all reasonable and prudent measures and terms and conditions in the USFWS-ITS will be followed as well as any requirements associated with the IHA's.

14) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response: This criterion was adequately considered in the SPEA, which analyzed a broad range of restoration activities. The response included in the SPEA's associated FONSI states: "No. As explained in the above response to criterion 9, the proposed action can reasonably be expected to result in cumulative beneficial effects on target species (i.e., federally protected or managed species or fisheries). The net cumulative effect could have a positive impact on the target species. The net additive effects resulting from past projects, the proposed action, and reasonably foreseeable future projects that would affect target species would constitute a long-term beneficial impact to those species." All of the restoration projects that have occurred or are proposed for the Elkhorn Slough Complex, will not, when taken together, have any cumulative adverse effects. There will not be any substantial effects to Southern Sea Otters because the disturbance will be limited in duration to construction activities and the project is expected to have long term beneficial effects on Southern Sea Otter habitat.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting TSEA prepared for the Parson's Slough Project, and the USFWS BiOp; it is hereby determined that this project will not significantly impact the quality of the human environment as described above and in the TSEA. Moreover, there are not unresolved conflicts concerning alternative uses of available resources at the project site. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an EIS for this action is not necessary.

Date 9/21/10

Patricia A. Montanio
Director, Office of Habitat Conservation
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Targeted Supplemental Environmental Assessment
For the Parson's Slough Project

The National Oceanic and Atmospheric Administration's Community-based Restoration Program (CRP) is administered within the National Marine Fisheries Service's Office of Habitat Conservation, under the authority of the Fish and Wildlife Coordination Act, 16 U.S.C. 661, as amended by the Reorganization Plan No. 4 of 1970 and the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006. The CRP proposes to provide financial assistance to a habitat restoration activity entitled "Parson's Slough Project" through the American Recovery and Reinvestment Act of 2009 (ARRA).

The ARRA provides that "[a]dequate resources within this bill must be devoted to ensuring that applicable environmental reviews under the National Environmental Policy Act are *completed on an expeditious basis and that the shortest existing applicable process under the National Environmental Policy Act shall be utilized*." Pub. L. 111-5, § 1609(b) (emphasis added). In accordance with CEQ guidance, as clarified, concise EAs may be used by federal agencies when there is consensus that there are not unresolved conflicts concerning alternative uses of available resources. In these cases, NOAA may consider the proposed action and proceed without consideration of additional alternatives. Accordingly, the analysis in this TSEA analyzes the potential impacts of the preferred alternative and the no action alternative.

Purpose and Need for Action

This targeted supplemental environmental assessment (TSEA) has been developed in accordance with the NEPA process related to the proposed Parson's Slough Project. The purpose of this project is to increase Coastal Pelagic and Pacific Coast Groundfish species survival by reducing tidal scour of essential fish habitat in Parson's slough.

After reviewing the proposed project, NOAA RC determined that the action described below falls within the scope and effects of activities analyzed in the February 6, 2002 Programmatic Environmental Assessment (PEA) for the Community-based Restoration Program Implementation Plan and the June 23, 2006 Supplement (SPEA), except for impacts related to species listed under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). The PEA and the SPEA are incorporated by reference into this TSEA.[1]

Pursuant to the ESA, a formal section 7 consultation was initiated by the NOAA RC with the U.S. Fish and Wildlife Service (USFWS), Ventura Office on April 27th, 2010 due to potential adverse impacts to the Southern Sea Otter (*Enyhydra lutra nereis*). A Biological Opinion (BiOp) was issued by the USFWS on August 3rd, 2010. The BiOp concluded that the Parson's Slough Project is not likely to jeopardize the continued existence of the federally threatened Southern Sea Otter. No critical habitat has been designated by the USFWS for this species, therefore none will be affected. The NOAA Restoration Center (NOAA RC) determined that this project would have no effect on North American Green Sturgeon and Central California

[1] Copies of the PEA and SPEA can be found at http://www.habitat.noaa.gov/partners/granteeresources.html

Coast Steelhead or their critical habitat. The no-effect determination was based on the Sturgeon and Steelhead not being present anywhere in Elkhorn Slough and the fact that Elkhorn Slough is not designated critical habitat for these species.

The NOAA RC conducted an Essential Fish Habitat (EFH) consultation with the NMFS Regional Habitat Conservation Office in Santa Rosa under provisions of the Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended (MSA). The EFH consultation determined that the proposed action would adversely affect EFH for various federally managed fish species within the Pacific Groundfish, Coastal Pelagic and Pacific Salmonid Fisheries Management Plans (FMP's). However, the proposed action contains adequate measures to avoid, minimize and mitigate or otherwise offset the adverse effects to EFH so NMFS did not offer additional conservation recommendations.

This TSEA tiers to and incorporates by reference the above referenced PEA and SPEA in accordance with 50 C.F.R. §1502.20 and NAO 216-6, subsection 5.09a. This TSEA level of review is conducted in accordance with the implementation procedures described in the SPEA and appropriately focuses on consideration of effects to species listed under the ESA and protected under the MMPA . Beyond consideration of site-specific effects to these species, our review of the proposed action has not revealed any substantial changes in the proposed action or new potentially significant adverse effects to other elements of the human environment which would require additional review in the TSEA or supplementation of the pre-existing NEPA documents.

Alternatives Considered

I. No Action Alternative
Under the no-action alternative, the NOAA RC would not fund the proposed project to increase and enhance habitat, and the estuary's habitat conditions would continue to decline resulting in a less favorable environment for most species that use this estuary.

II. Preferred Alternative
Under the proposed action, NOAA RC would fund a habitat restoration project involving the construction of a partially submerged tidal barrier (sill) across the mouth of the Parson's Slough channel. The sill structure would help restore eroding tidal wetlands by protecting Parsons Slough from head cutting originating in the Elkhorn Slough channel and help retain sediment by reducing the tidal prism which has been scouring tidal wetlands throughout Parson's Slough and converting these tidal wetlands to mudflats. Materials for the sill would be transported to the construction site via barges which are accessed at the Kirby Park staging area on Elkhorn Road. Elkhorn Road runs south off of Salinas road, which is an exit on State Route 1. Construction of the sill would occur at the project site.

A span of 100 feet (30 meters) at the center of the sill structure would remain submerged more than 99 percent of the time, allowing for the exchange of water between Parson's Slough and Elkhorn Slough. Within this span, a notch 25 feet (7.6 meters) wide would permit the passage of water at all tide levels and allow for the movement of fish and wildlife between Parson's Slough and Elkhorn Slough. The top elevation of the notch would be -5 feet (-1.5 meters) North

American Vertical Datum (NAVD), whereas the remainder of the central span would have a top elevation of -2 feet (-0.6 meters) NAVD. Construction of the sill would commence as early as September 1st, 2010, and continue approximately 12-17 weeks. The sill is a series of sheet-piles and it would extend 270 feet across the mouth of the channel. The sheet-pile wall would be supported on two rows of seven end bearing piles, as well as a single row of sheetpile between the outer piles. All pile driving and construction-related equipment would be on barges and no equipment would enter the channel. The end bearing piles would be driven through soft soils to penetrate 10 feet beneath the surface. A submerged rockfill buttress would be placed on both sides of the sheet pile wall. In addition, up to 45 temporary end-bearing piles may be installed near the Kirby park staging area to facilitate the loading and unloading of equipment barges. All sheet pile and end-bearing piles would be driven starting with a vibratory hammer to set the sheets, but may require an impact hammer to complete driving. If an impact hammer is required, then cushioning blocks would be used to dampen the sound.

Affected Environment

The Parson's Slough Project is a tidal wetlands restoration project on the Elkhorn Slough National Estuarine Research Reserve in northern Monterey County, California. The Parson's Slough Channel leads to the Parson's Slough study area, which consists of the 254-acre (1-square-kilomter) Parson's Slough Complex and the 161-acre (0.7-square-kilomter) South Marsh Area. The goal of the Parson's Slough Project is to reduce the tidal prism throughout much of the Elkhorn Slough system. As such, the affected environment consists of the entire Elkhorn Slough Complex with the exception of North Marsh, Azevedo Marsh and Porter Marsh, which are tidally muted and isolated from the effects of the proposed action.

The site of construction is the mouth of Parson's Slough Channel, in the vicinity of the Union Pacific Railroad bridge (railroad bridge). Parson's Slough is located on the southeast side of the Elkhorn Slough Estuary, which is situated 90 miles (145 kilometers) south of San Francisco and 20 miles (32 kilometers) north of Monterey, in Monterey County, California.

Elkhorn Slough is a mosaic of tidally influenced wetlands and mudflats which provide habitat to a variety of species. Much of the wetland habitat has been converted to mudflats from tidal scour. This project would aid in converting some of the mudflat habitat back into wetland habitat. Currently, the Southern Sea Otters use the Elkhorn Slough Complex for foraging and to haul out of the water. Southern Sea Otters feed on fish species found in both wetland and mudflat habitats.[2] Harbor seals also use the Elkhorn Slough Complex for foraging and to haul out of the water. Harbor seals feed on fish species in both wetland and mudflat environments.

Environmental Effects

I. No Action Alternative

[2] A more detailed description of the affected environment can be found in U.S. Department of Commerce. 1979. Elkhorn Slough National Estuarine Sanctuary. Final Environmental Impact Statement.

Under the no-action alternative, NOAA CRP would not fund the proposed grant. Other agencies would still have the option to fund this project; however, the need for coastal habitat restoration is great, and fewer important projects would be funded if NOAA did not fund the project type outlined in the preferred alternative. Under the no action alternative, the Southern Sea Otters would not be impacted by construction activities but the habitat that their prey species depend on would continue to degrade. Under the no action alternatives, Harbor Seals would not be impacted by constructioin activities but the habitat that their prey species depend on would continue to degrade.

II. Preferred Alternative

Under the proposed action, NOAA RC would fund a habitat restoration project involving the construction of a partially submerged tidal barrier (sill) across the mouth of the Parson's Slough channel. As described in the USFWS BiOp, the proposed action has the potential to disturb resting, foraging and other activities of up to 40 sea otters known to utilize habitat in the vicinity of construction activities. The incidental take is expected to be in the form increased energetic demands and stress caused by displacement from routinely used areas, particularly those utilized for hauling out. Disturbance would be due primarily to construction noise and activity. The proposed action includes the following measures to minimize and avoid disturbance to sea otters:

Construction activities will be timed to avoid peak pupping periods for marine mammals. A birth peak generally occurs in California from late February to early April, although sea otters may reproduce at any time of year, and the birth peak may not be synchronous in all parts of California. In Elkhorn Slough, the birth peak appears to occur in March and April. Construction activities will begin as early as September 1st, 2010, and cease on or before March 1st, 2011. Before the onset of construction activities, a qualified biologist will conduct an education program for all construction personnel. At a minimum the training will include a description of southern sea otters and their habitat, the occurrence of the species within the project action area, an explanation of the status of the species and its protection under the ESA and MMPA, the measures that are being implemented to minimize disturbance to sea otters and their habitat as they relate to the construction, and the authority given to the biological monitor to stop construction at any point. A fact sheet conveying this information will be prepared for distribution to the construction personnel and other project personnel who may enter the project area. Upon completion of the program, personnel will sign a form stating that they attended the program and understand all the avoidance and minimization measures and requirements of the ESA and MMPA.

The occurrence of hauled-out sea otters near the proposed construction site is lowest at high tide. Construction activities causing noise-related disturbance, such as pile-driving, will be conducted at high tide to the maximum extent practicable.

In order to avoid startling animals with sudden loud noises, noise-producing construction activities will begin gradually. Biological monitors will be present 30 minutes before construction begins and will have the authority to halt operations if animals appear to be severely stressed or in danger of injury.

Fuel storage and all fueling and equipment maintenance activities will be conducted at least 100 feet (30 meters) from subtidal and intertidal habitat. Implementation of the proposed action will

require approval and implementation of a site-specific Storm Water Pollution Prevention Plan, which will include a hazardous spill prevention plan.

As indicated in the USFWS BiOp, the proposed action will impact an extremely small percentage of Southern Sea Otters compared to their overall distribution and abundance throughout their range (approximately 2500 individuals throughout central and southern California) and is not likely to jeopardize the continued existence of Southern Sea Otters.

The project will also result in a net increase of subtidal and wetland habitats. The project would entail the placement of approximately 2000 cubic yards (1529 cubic meters) of rock and sheetpile and would result in the loss of approximately 0.75 acres (4047 square meters) of subtidal habitat within the project footprint. Operation of the sill is expected to result in the conversion of 11 acres (0.045 square miles) of intertidal mudflat habitat to subtidal habitat. The increase in soft sediments within the Parson's Slough Complex resulting from reduced tidal scour would likely result in a beneficial effect on sea otters by increasing the availability of soft sediment habitat for burrowing prey. Operation of the sill may result in a slight increase in hypoxic conditions which may decrease habitat suitability for benthic (bottom-dwelling) invertebrates. However, both Parson's Slough and Elkhorn Slough contain an excess of intertidal mudflat habitat and a scarcity of subtidal and wetland habitat. Overall, a minimal amount of subtidal habitat for the Southern Sea Otter would be permanently affected (0.75 acre) by the proposed action, with an additional 11 acres benefitted by the operation of the sill. The action is expected to have long-term beneficial impacts on biodiversity and/or ecosystem function through restoration of natural estuarine habitat. This project will have short-term, minor construction related impacts to Southern Sea Otters due to noise related impacts from pile driving hammers.

In addition to protection as an ESA-listed species, Southern Sea Otters also are protected under the Marine Mammal Protection Act (MMPA), and an application for issuance of an Incidental Harassment Authorization under the MMPA implementing regulations was submitted to USFWS on July 9th, 2010. The proposed IHA for the Southern Sea Otter requires a noise monitoring plan and the halting of construction if noise levels are high enough to potentially cause harm or mortality to individual Southern Sea Otters.

The overall effect of the project will be beneficial to Southern Sea Otters in the long run by increasing the abundance of wetland based prey species of Southern Sea Otters. Effects of the proposed sill on levels of pathogens and contaminants in Parson's Slough or Elkhorn Slough are unclear because their sources and transport are not well understood. If pathogens or contaminants are entering the Elkhorn Slough system by means of Parson's Slough then the sill would tend to concentrate them by means of decreased flushing in the upper slough. However, if they are entering Elkhorn Slough by means of the Gabilan-Tembladero watershed or the Old Salinas River channel, then construction of the sill would lead to lower concentrations of pathogens and contaminants within the Parson's Slough Complex because flows into the complex from these other areas would be reduced. Levels of exposure of sea otters to pathogens and contaminants may not be appreciably different under either scenario, because animals using the Parson's Slough Complex also regularly enter and utilize Elkhorn Slough proper. Pathogens and contaminants associated with agricultural use of the uplands surrounding Elkhorn Slough

constitute the greatest potential threat to sea otters in the slough. Efforts to mitigate these inputs are currently underway and may result in an improvement in habitat quality in Elkhorn Slough. These efforts include riparian fencing to exclude livestock as well as wetland restoration to promote the bioremediation of these pathogens and contaminants generated from agricultural practices by newly restored wetland vegetation.

In addition to Southern Sea Otters, the proposed action has the potential to disturb resting, foraging and other activities of up to 100 harbor seals known to utilize habitat in the vicinity of construction activities. Request for issuance of an IHA under the MMPA was submitted to NMFS Office of Protected Resources on August 6th, 2010. The incidental take is expected to be in the form increased energetic demands and stress caused by displacement from routinely used areas, particularly those utilized for hauling out. Disturbance would be due primarily to construction noise and activity. Based on the assessment in the proposed IHA, the previous measures to minimize and avoid disturbance to sea otters will serve to minimize and avoid disturbance to harbor seals as they address the needs of marine mammals in general and both species in particular.

This project will have short-term, minor construction related impacts to harbor seals due to noise related impacts from pile driving hammers. The proposed IHA for harbor seals will require a noise monitoring plan and the halting of construction if noise levels are high enough to potentially cause harm or mortality to individual harbor seals. The overall effect of the project will be beneficial to harbor seals in the long run by increasing the abundance of wetland based prey species of harbor seals.

Agencies or Persons Consulted

National Marine Fisheries Service, Brian Hopper, Harbor Seals, MMPA
National Marine Fisheries Service, Jennifer Kunzelman, EFH, MSA
United States Fish and Wildlife Service, Lillian Carswell, Southern Sea Otter, ESA

Attachment – USFWS' August 3rd, 2010 Biological Opinion