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**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Northwest Region  
7600 Sand Point Way N.E., Bldg. 1  
Seattle, Washington 98115

NMFS Tracking No.:  
2011/03310

October 11, 2011

Evan Lewis  
Environmental Resources Division  
Corps of Engineers, Seattle District  
Post Office Box 3755  
Seattle, Washington 98124-3755

Re: Endangered Species Act Section 7 Informal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Snohomish River Navigation Channel Dredging project in Everett, Snohomish County, Washington (Lower Snohomish River HUC 171100110202).

Dear Mr. Lewis:

This correspondence is in response to your request for consultation under the Endangered Species Act (ESA). Additionally, this letter serves to meet the requirements for consultation under the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

### **Endangered Species Act**

The Army Corps of Engineers (COE) submitted a Memorandum for the Services and a Biological Evaluation (BE) to the National Marine Fisheries Service (NMFS), which were received on July 25, 2011. Additional information was received on August 18, 2011 and September 21, 2011. The COE requested NMFS' concurrence with the following determinations: (1) "may affect, not likely to adversely affect" Puget Sound (PS) Chinook (*Oncorhynchus tshawytscha*) salmon, (2) "may affect, not likely to adversely affect" critical habitat for PS Chinook salmon, (3) "may affect, not likely to adversely affect" Puget Sound steelhead (*O. mykiss*) (PS steelhead).

The NMFS listed PS Chinook salmon as threatened under the ESA on March 24, 1999 (64 FR 14308). Following listing, NMFS designated critical habitat for PS Chinook salmon under the ESA on September 2, 2005 (70 FR 52662). On June 11, 2007, NMFS listed the PS steelhead Distinct Population Segment (DPS) as threatened under the ESA (72 FR 26722). The NMFS conducts consultations with the COE under section 7(a)(2) of the ESA, and its implementing regulations found at 50 CFR 402.



The COE has a Congressional mandate to maintain the Snohomish Channel, a federal navigation channel creating the northern and eastern border of the City of Everett in Snohomish County, Washington. The COE is proposing to dredge the lower 6.6 miles of the Snohomish River channel including the downstream settling basin, upstream settling basin, and adjacent portions of the navigation channel over the next five to seven years (FY2012 to FY 2019). The downstream settling basin and adjacent channel are scheduled to be dredged in FY 2012 by clamshell dredge to a required depth of -20 to -22 feet mean low low water (MLLW) depth in the downstream settling basin and to a depth of -15 to -17 feet MLLW depth in the navigation portion of the channel. An estimated 400,000 cubic yards (cy) of sediment are expected to be dredged. The dredge spoils will be placed on a bottom-dump barge for transport and disposal at the Washington Department of Natural Resources managed Puget Sound Dredged Disposal Analysis (PSDDA) open water disposal site in Port Gardner Bay.

The upstream settling basin and adjacent channels are proposed to be dredged in FY 2013 by hydraulic pipeline dredge. The upstream basin will be dredged to a depth of -40 to -42 feet MLLW and the adjacent channel, upstream of the settling basin, would be dredged to a required depth of -8 to -10 feet MLLW. Total estimated volume of dredged sediments would be 200,000 cy from the upper settling basin and 50,000 cy from the upstream navigation channel. Preferential disposal will be at two proposed upland disposal sites, rather than open water disposal. Previously used upland rehandling sites include the Port of Everett's Riverside Business Park site and the Parcel O property, located along the lower Snohomish River. If the hydraulic pipeline dredge is not possible due to inappropriate size and quality of the sediment, then clamshell dredge will be used and the dredged materials will be transported to the PSDDA open water site in Port Gardner Bay for disposal.

The applicant proposes to minimize disturbance of listed fish and their habitat by limiting dredging to time periods between October 16 and February 14. The applicant will use a barge-based clamshell bucket and a hydraulic pipeline to dredge the sediments and adhere to best management practices and PSDDA management standards to minimize turbidity to surrounding nearshore marine and fresh waters.

The COE proposes to use clean dredge spoils from this multi-year operation for beach nourishment projects along the City of Everett and Snohomish County shorelines. Nearshore habitat has been identified as a limiting factor for salmon recovery in this basin. Snohomish County is currently conducting a nearshore sediment nourishment feasibility study for the four miles south of the Port of Everett to the Mt. Baker Terminal Restoration Site. Snohomish County Marine Resources Committee has tentatively identified several recipient sites that are located in the: (1) Howarth Park area, (2) east of the Mount Baker Terminal, and (3) the west sides of Glenwood, Narbeck, and Powder Mill Gulch Creeks.

The COE will be working with the City of Everett and Snohomish County on the construction details and costs associated with fuel and time costs for diverting a barge farther south to these sites. These entities will also be working together on the implementation of Best Management Practices (BMPs) that reduce the impact of turbidity from in-water work and the transfer and off-loading of acceptable dredge spoils to future nourishment sites. The BMPs that have been discussed into the project design to avoid or minimize potential effects to listed species include:

- Operating on the beach when feasible.
- Not allowing the barge to ground.
- Locating the barge away from eelgrass habitat.
- Using a conveyor belt to off-load sediments from the barge.

Potential adverse effects of dredging, dredge disposal and beach nourishment include reduction in water quality, noise and disturbance from dredging and dredge spoil placement. Increases in turbidity, noise or disturbance may cause salmon to leave or avoid the action area. The long term change in depth by dredging can have effects on the community structure of the benthos in the action area.

### **Species Determination**

Puget Sound Chinook Salmon  
Puget Sound Steelhead

The NMFS analyzed the potential effects of the project on PS Chinook salmon and PS steelhead and determined that the effects will be discountable or insignificant.

The effects of the action will be discountable to PS Chinook salmon. Juvenile PS Chinook salmon are not expected to be present during construction because all in-water work will take place from October 16 through February 14 when the PS Chinook salmon young-of-the-year have not yet entered the action area. Adult PS Chinook salmon enter the system between July and October and spawn in September and October. Therefore, they are expected to pass through the action area prior to the commencement of dredging operations.

If any adult or juvenile PS Chinook salmon do occur in the action area, effects of the action are expected to be discountable. Because of the noise and disturbance around the dredge, adult and juvenile PS Chinook salmon are likely to avoid the dredging activity and not be exposed to elevated turbidity levels. Turbidity and noise will be localized and temporary, returning to pre-dredging conditions shortly following the cessation of activity. The exposure of listed species to suspended sediment and noise will remain below the level that causes harm. If a few PS Chinook salmon do occur in the action area, they will occur in shallow areas along the shore and are unlikely to be in the middle of the channel where dredging will occur. Consequently they will not be exposed to adverse turbidity effects.

Puget Sound steelhead are present in the Snohomish River year round and may occur in the vicinity of the action area during dredging. However, the noise and disturbance around the dredge will cause PS steelhead to avoid the dredge operation and limit exposure to effects of the project. The adult PS steelhead upstream migration occurs from November through April, with peak occurrences later in the season. Migrating PS adult steelhead may avoid the downstream dredging operations by using one of the northern sloughs (i.e. Ebey or Steamboat Slough) which reconnect to the Snohomish River farther upstream. The upstream dredging operations will occur in the middle of the channel and adult salmonids are expected to swim around and avoid it. Downstream migration of juvenile PS steelhead occurs between April and July and will not be affected by the dredging.

If a few juvenile PS steelhead do occur in the action area, the effects will be insignificant. Juvenile PS steelhead will use the shallower, nearshore areas and avoid the middle of the channel where dredging, will occur. Elevated levels of turbidity and noise will be localized and temporary, returning to pre-dredging conditions shortly following the cessation of activity. However, the concentration of suspended sediments and noise intensity will be too low to cause harm to PS Steelhead if any are present

The long-term effects of maintenance dredging on benthic communities in the channel are likely to be insignificant to PS Chinook salmon and PS steelhead because these species do not forage in mid-channel. There are ample gently sloped, shallow edges near the banks throughout the Snohomish Channel and existing intertidal areas where juveniles are rearing are not expected to be disturbed. Therefore prey availability and foraging opportunity for PS Chinook Salmon and PS steelhead is not expected to decline because of the project. In addition prey availability will be quickly restored as benthic invertebrates recolonize from upstream and short-lived insects reproduce in the fresh sediments.

The proposed project also includes placement of dredge spoils for beach nourishment. The principal effect of beach nourishment is to improve the quality of nearshore marine habitats. In-water work, including the placement of these materials or off-loading from a barge, will result in short-term and localized increased turbidity, sedimentation, and degradation of water quality. The magnitude of these effects will not exceed those evaluated for dredging and disposal. Therefore, they are insignificant and are not likely to adversely affect PS Chinook salmon and PS steelhead.

Because all potential adverse effects of this project are expected to be discountable or insignificant, NMFS concurs with the COE determination of “may affect, not likely to adversely affect” for PS Chinook salmon and PS steelhead.

## Critical Habitat Determination

### Puget Sound Chinook Salmon

Critical habitat consists of six Primary Constituent Elements (PCEs) for PS Chinook evolutionary significant unit, of which four have been determined to be in the action area. The proposed project includes areas within the upper and lower Snohomish River which includes rearing, migratory, estuarine, and nearshore marine areas.

- PCE 2 includes freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juveniles growth and mobility; water quality and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks.
- PCE 3 includes freshwater migration corridors free of obstruction with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival.
- PCE 4 includes estuarine areas free of obstruction with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels; and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.
- PCE 5 - Nearshore marine areas free of obstruction and excessive predation with water quality and quantity conditions and forage, including aquatic invertebrates and fishes, supporting growth and maturation; and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, and side channels.

NMFS analyzed the potential impacts of the project on these PCEs and determined that the potential effects will be insignificant or discountable because:

1. The project will not result in a barrier to migration through the marine area or the Snohomish River as the proposed project does not create any structures that would impede migration. In addition, the applicant is only proposing one barge trip per day through the lower Snohomish River a small increase in existing boat/barge traffic. Effects to migration are insignificant.
2. The long-term effects of maintenance dredging on benthic communities in the channel are likely to be insignificant because prey availability will not be

diminished over the longterm. There are gently sloped, shallow edges near the banks throughout Snohomish Channel for rearing and existing intertidal areas where juveniles are rearing are not expected to be disturbed. Therefore, the effects to rearing will be insignificant.

3. Although the proposed dredging will temporarily alter the food base within the project area, macro-invertebrate production and fish prey species will continue to be available from the surrounding freshwater and shallow sub-tidal area. Because the abundance of prey species will not be measurably reduced, effects of the project will be insignificant.
4. The proposed project will remobilize sediment during dredging, and placement of sediments for beach nourishment. The effects are expected to be local and temporary and will slightly alter water quality for several hours per day within 300 feet of the activity. However, there will not be any long term effect to water quality in the action area. Because water quality of the PCEs will not be degraded, the effects are insignificant.

Because all potential adverse effects are discountable or insignificant, the conservation values of PCEs in the action area will not be reduced. Therefore, NMFS concurs with the COE effect determination of “may affect, not likely to adversely affect” for the critical habitat of PS Chinook.

### **Conservation Recommendations**

Section 7 (a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Peak upstream migration for adult PS steelhead coincides with the proposed timing of dredging operations in the Snohomish River. To minimize the potential for unanticipated, and non-exempt, take of PS steelhead, NMFS encourages the following conservation recommendation:

- NMFS recommends that the COE conduct the dredging operation in the upstream areas (FY 2013) early in the work window (October through December). This will reduce the potential of exposing PS steelhead adults during upstream migration.

Please notify NMFS if the COE carries out any of these recommendations so that we will be kept informed of actions that minimize or avoid adverse effects, and those that benefit species or their habitats.

This concludes informal consultation pursuant to the regulations implementing the ESA, 50 CFR 402.10. The COE must re-analyze this ESA consultation if new information, including unanticipated take, reveals effects of the action that may affect listed species in a way not previously considered, the action is modified in a manner that causes an effect to the listed species or critical habitat that was not previously considered, or a new

species is listed, or critical habitat designated, that may be affected by the identified action.

### **Magnuson-Stevens Fishery Conservation and Management Act**

Federal agencies are required, under section 305(b)(2) of the MSA and its implementing regulations (50 CFR 600 Subpart K), to consult with NMFS regarding actions that are authorized, funded, or undertaken by that agency that may adversely affect Essential Fish Habitat (EFH). The MSA section 3 defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” If an action would adversely affect EFH, NMFS is required to provide the Federal action agency with EFH conservation recommendations (section 305(b)(4)(A)). This consultation is based, in part, on information provided by the Federal agency and descriptions of EFH for Pacific coast groundfish, coastal pelagic species, and Pacific salmon contained in the Fishery Management Plans developed by the Pacific Fishery Management Council and approved by the Secretary of Commerce.

The proposed action is described in the BE. The project area includes habitat which has been designated as EFH for various life stages of 46 species of groundfish, four species of coastal pelagics, and three species of Pacific salmon.

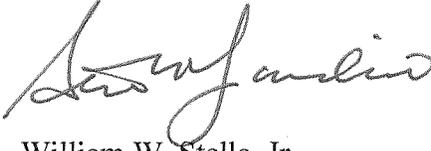
*EFH Conservation Recommendations:* Because the habitat requirements (*i.e.*, EFH) for the MSA-managed species in the action area are similar to that of the ESA-listed species, the fact that the COE and Snohomish County will be using acceptable dredge spoils for nourishment sites along the City of Everett and Snohomish County shoreline, and the conservation measures that the COE included as part of the proposed action to address ESA concerns are also adequate to avoid, minimize, or otherwise offset potential adverse effects to designated EFH, conservation recommendations pursuant to MSA [section 305(b)(4)(A)] are not necessary. Since NMFS is not providing conservation recommendations at this time, no 30-day response from the COE is required [MSA section 305(b)(4)(B)].

This concludes consultation under the MSA. If the proposed action is modified in a manner that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations, the COE will need to reinstate consultation in accordance with the implementing regulations for EFH at 50 CFR 600.920(l).

If you have questions regarding either the ESA or consultation, please contact Sean Callahan of the Washington State Habitat Office at (206) 526-4744, or by electronic mail at [Sean.Callahan@noaa.gov](mailto:Sean.Callahan@noaa.gov).

NMFS appreciates your coordination efforts to address compliance with requirements under the ESA and the MSA.

Sincerely,



William W. Stelle, Jr.  
Regional Administrator

cc: Ken Brunner, COE  
Kathleen Herrmann, Snohomish County