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National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
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Seattle, WA 98115-0070

Refer to:
OSB2002-0001-FEC

February 11, 2002

Robert Willis
U.S. Army Corps of Engineers
Environmental Resources Branch
P.O. Box 2946
Portland, OR 97208-2946

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Act
Essential Fish Habitat Consultation for Removal of Contaminated Electrical Equipment,
Bradford Island, Columbia River, Multnomah County, Oregon

Dear Mr. Willis:

Enclosed is a biological opinion (Opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act (ESA) on the effects of the Corps of Engineers' proposed removal of contaminated electrical equipment from Bradford Island in the Columbia River at Bonneville. In this Opinion, NMFS concluded that the proposed action is not likely to jeopardize the continued existence of ESA-listed Snake River sockeye salmon (*Oncorhynchus nerka*), Snake River fall chinook salmon (*O. tshawytscha*), Snake River spring/summer chinook salmon, Upper Columbia River spring-run chinook salmon, Lower Columbia River chinook salmon, Columbia River chum salmon (*O. keta*), Snake River steelhead (*O. mykiss*), Upper Columbia River steelhead, Middle Columbia River steelhead, and Lower Columbia River steelhead, or destroy or adversely modify designated critical habitat(s). As required by section 7 of the ESA, NMFS included reasonable and prudent measures with non-discretionary terms and conditions that NMFS believes are necessary to minimize the impact of incidental take associated with this action.

This Opinion also serves as consultation on Essential Fish Habitat pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and implementing regulations at 50 CFR Part 600.



If you have any questions regarding this consultation, please contact Christy Fellas of my staff in the Oregon Habitat Branch at 503.231.2307.

Sincerely,

Michael R. Crouse

D. Robert Lohn
Regional Administrator

Endangered Species Act - Section 7
Consultation
&
Magnuson-Stevens Act
Essential Fish Habitat Consultation

BIOLOGICAL OPINION

Removal of Contaminated Electrical Equipment,
Bradford Island, Columbia River,
Multnomah County, Oregon

Agency: Army Corps of Engineers, Portland District

Consultation Conducted By: National Marine Fisheries Service,
Northwest Region

Date Issued: February 11, 2002

Issued by: *f.s. Michael R. Couse*

D. Robert Lohn
Regional Administrator

Refer to: OSB2002 - 0001- FEC

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1. ENDANGERED SPECIES ACT

1.1 Background

On December 28, 2001, the National Marine Fisheries Service (NMFS) received a letter from the Corps of Engineers (COE) requesting formal consultation on the issuance of a permit to remove contaminated electrical equipment from the Columbia River at Bradford Island near Bonneville Dam, Oregon. Based on information received from the COE, the NMFS prepared this biological opinion (Opinion). In the December 28, 2001 letter, the COE determined that Snake River sockeye salmon (*Oncorhynchus nerka*), Snake River spring/summer chinook salmon (*O. tshawytscha*), Snake River fall chinook salmon (*O. tshawytscha*), Lower Columbia River steelhead (*O. mykiss*), Upper Columbia River steelhead (*O. mykiss*), Snake River steelhead (*O. mykiss*), Middle Columbia River steelhead (*O. mykiss*), Columbia River chum salmon (*O. keta*), Lower Columbia River chinook salmon (*O. tshawytscha*), Upper Columbia River spring run chinook salmon (*O. tshawytscha*), may occur within the project area and that the proposed project is “likely to adversely affect” (LAA) the subject listed species or their designated critical habitat. References and dates listing status, critical habitat designations and ESA section 4(d) take prohibitions are listed in Table 1.

The NMFS has prepared this Opinion to address impacts to these species as a result of the proposed project. The objective of this Opinion is to determine whether the actions included in the mitigation plan are likely to jeopardize the continued existence of the above listed species or destroy or adversely modify critical habitat.

1.2 Proposed Action

The proposed action is described briefly below, highlighting the major activities in the proposed project. Detailed descriptions of in-water work plans, sampling and analysis and quality assurance plans can be found in the work plans prepared for the COE by URS (URS January 2002).

The proposed action includes removing contaminated equipment from the submerged bankline of the Columbia River including interteer capacitors, coupling capacitors, lighting ballasts and lightening arrestors (felt). The equipment is contaminated with polychlorinated biphenyls (PCBs). A diver will attach a recovery line to each item and an A-frame hoist mounted on a boat or barge will raise items to the surface. If an item contains liquids, it will be placed into a reinforced 8-mil plastic bag and sealed before raising to the surface. All recovered items will be placed into a containment area on the barge.

If an item is suspected to contain liquid, the underlying footprint will be suctioned to remove any loose product and the top layer of newly exposed sediment. A small pump will be used to keep the volume of water to manageable levels. The water and sediment will be pumped directly into 50 gallon drums for sampling and removal.

During recovery operations engineering controls will be used to reduce risk of further contamination. The COE proposes to use a full-depth turbidity screen made of non-woven, permeable fabric, ballasted to maintain contact with the river bottom. The turbidity screen will remain in place following removal activities until the sediment entrained in the water column settles as indicated by turbidity monitoring. Additionally, an oil containment boom with an 8-inch float curtain, lined with absorbent material, will be installed around the work zone. The boom will be installed and removed each day.

Real-time turbidity monitoring will be implemented before, during and after equipment removal. Turbidity will be monitored from the work barges, typically within 50 feet of the silt screens. Measurements will be taken every hour at three locations: the river surface, mid-depth and near the river bottom. Visual observations will be conducted for surface sheens or plumes. The action level is defined as 5 NTUs above the measured background. If the action level is exceeded twice within two hours, removal work will stop until the level decreases below the action level. Water column samples will also be taken inside the turbidity screen to provide baseline information during actual equipment removal. All sampling and monitoring reports will be formatted and then submitted to all involved agencies.

1.3 Biological Information and Critical Habitat

The action area is defined by NMFS regulations (50 CFR 402) as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” The action area for the proposed projects extends from the equipment removal site to the farthest downstream end of Bradford Island, including the surrounding water column and substrate.

The Columbia River serves as a migration area for all listed species under consideration in this Opinion. It may also serve as a feeding and rearing area for juvenile chum and sub-yearling chinook salmon. Essential features of the area for the species are: (1) Substrate; (2) water quality; (3) water quantity; (4) water temperature; (5) water velocity; (6) cover/shelter; (7) food (juvenile only); (8) riparian vegetation; (9) space; and (10) safe passage conditions (50 CFR 226). The proposed action may affect the essential habitat features of water quality, substrate, food and safe passage conditions.

References for further background on listing status, biological information and critical habitat elements can be found in Table 1.

1.4 Evaluating Proposed Actions

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). NMFS must determine whether the action is likely to jeopardize the listed species and/or whether the action is likely to destroy or adversely modify designated critical habitat. This analysis involves the initial steps of: (1) Defining the biological requirements and current status of the listed species, and (2) evaluating the relevance

of the environmental baseline to the species' current status.

Subsequently, NMFS evaluates whether the action is likely to jeopardize the listed species by determining if the species can be expected to survive with an adequate potential for recovery. In making this determination, NMFS must consider the estimated level of mortality attributable to: (1) Collective effects of the proposed or continuing action, (2) the environmental baseline, and (3) any cumulative effects. If NMFS finds that the action is likely to jeopardize the listed species, NMFS must identify reasonable and prudent alternatives for the action.

Furthermore, NMFS evaluates whether the action, directly or indirectly, is likely to destroy or adversely modify the listed species' designated critical habitat. NMFS must determine whether habitat modifications appreciably diminish the value of critical habitat for both survival and recovery of the listed species. NMFS identifies those effects of the action that impair the function of any essential element of critical habitat. If NMFS concludes that the action will destroy or adversely modify critical habitat, it must identify any reasonable and prudent measures available.

For the proposed action, a jeopardy analysis by NMFS considers direct or indirect mortality of fish attributable to the action. A critical habitat analysis by NMFS considers the extent to which the proposed action impairs the function of essential elements necessary for migration, spawning, and rearing salmon under the existing environmental baseline.

1.4.1 Biological Requirements

The first step in the methods NMFS uses for applying the ESA section 7(a)(2) to listed salmonids is to define the species' biological requirements that are most relevant to each consultation. The NMFS also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess to the current status of the listed species, NMFS starts with the determinations made in its decision to list the species for ESA protection and also considers new data available that is relevant to the determination.

The relevant biological requirements are those necessary for the listed species to survive and recover to a naturally reproducing population level at which protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance its capacity to adapt to various environmental conditions, and allow it to become self-sustaining in the natural environment.

For this consultation, the biological requirements are improved habitat characteristics that function to support successful rearing and migration. The current status of the listed species, based upon their risk of extinction, has not significantly improved since the species were listed.

Table 1. References for additional background on listing status, biological information, and critical habitat elements for the listed and proposed species addressed in this biological opinion.

Species	Listing Status	Critical Habitat	Protective Regulations	Biological Information, Historical Population Trends
Columbia River chum salmon	March 25, 1999; 64 FR 14508, Threatened	February 16, 2000; 65 FR 7764	July 10, 2000; 65 FR 42422	Johnson <i>et al.</i> 1997; Salo 1991
Lower Columbia River steelhead	March 19, 1998; 63 FR 13347, Threatened	February 16, 2000; 65 FR 7764	July 10, 2000; 65 FR 42422	Busby <i>et al.</i> 1995; 1996
Middle Columbia River steelhead	March 25, 1999; 64 FR 14517, Threatened	February 16, 2000; 65 FR 7764	July 10, 2000; 65 FR 42422	Busby <i>et al.</i> 1995; 1996
Upper Columbia River steelhead	August 18, 1997; 62 FR 43937, Endangered	February 16, 2000; 65 FR 7764	July 10, 2000; 65 FR 42422	Busby <i>et al.</i> 1995; 1996
Snake River Basin steelhead	August 18, 1997; 62 FR 43937, Threatened	February 16, 2000; 65 FR 7764	July 10, 2000; 65 FR 42422	Busby <i>et al.</i> 1995; 1996
Snake River sockeye salmon	November 20, 1991; 56 FR 58619, Endangered	December 28, 1993; 58 FR 68543	November 20, 1991; 56 FR 58619	Waples <i>et al.</i> 1991a; Burgner 1991
Lower Columbia River chinook salmon	March 24, 1999; 64 FR 14308, Threatened	February 16, 2000; 65 FR 7764	July 10, 2000; 65 FR 42422	Myers <i>et al.</i> 1998; Healey 1991
Upper Columbia River spring-run chinook salmon	March 24, 1999; 64 FR 14308, Endangered	February 16, 2000; 65 FR 7764	July 10, 2000; 65 FR 42422	Myers <i>et al.</i> 1998; Healey 1991
Snake River spring/summer-run chinook salmon	April 22, 1992; 57 FR 14653, Threatened	December 28, 1993; 58 FR 68543	April 22, 1992; 57 FR 14653	Matthews and Waples 1991; Healey 1991
Snake River fall chinook salmon	April 22, 1992; 57 FR 14653, Threatened	December 28, 1993; 58 FR 68543	April 22, 1992; 57 FR 14653	Waples <i>et al.</i> 1991b; Healey 1991

1.4.2 Environmental Baseline

The most recent evaluation of the environmental baseline for the Columbia River is part of the NMFS's Opinion for the Federal Columbia River Power System (FCRPS) issued in December 2000. This Opinion assessed the entire Columbia River system below Chief Joseph Dam and downstream to the farthest point (the Columbia River estuary and nearshore ocean environment) at which listed salmonids are influenced. A detailed evaluation of the environmental baseline of the Columbia River basin can be found in the FCRPS Opinion (NMFS 2000).

The quality and quantity of freshwater habitats in much of the Columbia River basin have declined dramatically in the last 150 years. Forestry, farming, grazing, road construction, hydrosystem development, mining, and urbanization have radically changed the historical habitat conditions of the basin. Depending on the species, they spend from a few days to one or two years in the Columbia River and its estuary before migrating out to the ocean and another one to four years in the ocean before returning as adults to spawn in their natal streams.

Water quality in streams throughout the Columbia River basin has been degraded by human activities such as dams and diversion structures, water withdrawals, farming and grazing, road construction, timber harvest activities, mining activities, and urbanization. Tributary water quality problems contribute to poor water quality where sediment and contaminants from the tributaries settle in mainstem reaches and the estuary. Temperature alterations also affect salmonid metabolism, growth rate, and disease resistance, as well as the timing of adult migrations, fry emergence, and smoltification. Many factors can cause high stream temperatures, but they are primarily related to land-use practices rather than point-source discharges. Loss of wetlands and increases in groundwater withdrawals have contributed to lower base-stream flows, which in turn contribute to temperature increases. Channel widening and land uses that create shallower streams also cause temperature increases.

Pollutants also degrade water quality. Salmon require clean gravel for successful spawning, egg incubation, and emergence of fry. Fine sediments clog the spaces between gravel and restrict the flow of oxygen-rich water to the incubating eggs. Excess nutrients, low levels of dissolved oxygen, heavy metals, and changes in pH also directly affect the water quality for salmon and steelhead.

Water quantity problems are also a significant cause of habitat degradation and reduced fish production. Withdrawing water for irrigation, urban, and other uses can increase temperatures, smolt travel time, and sedimentation. Return water from irrigated fields can introduce nutrients and pesticides into streams and rivers. On a larger landscape scale, human activities have affected the timing and amount of peak water runoff from rain and snowmelt. Many riparian areas, flood plains, and wetlands that once stored water during periods of high runoff have been developed. Urbanization paves over or compacts soil and increases the amount and pattern of runoff reaching rivers and streams.

The Columbia River estuary has also been changed by human activities. Historically, the downstream half of the estuary was a dynamic environment with multiple channels, extensive wetlands, sandbars, and shallow areas. The mouth of the Columbia River was about four miles wide. Today, navigation channels have been dredged, deepened and maintained, jetties and pile-dike fields have been constructed to stabilize and concentrate flow in navigation channels, marsh and riparian habitats have been filled and diked, and causeways have been constructed across waterways. These actions have decreased the width of the mouth of the Columbia River to two miles and increased the depth of the Columbia River channel at the bar from less than 20 to more than 55 feet.

In the action area for the proposed project, off Bradford Island, the environmental baseline has been further degraded by human activity and operation of the hydropower system.

1.5 Analysis of Effects

1.5.1 Effects of Proposed Action

The sediments around the debris piles are known to contain elevated levels of PCBs. NMFS generally believes that it is best to remove sources of contamination from the environment when possible (Tracy Collier, NMFS, Northwest Fisheries Science Center, personal communication). Exposure of salmon to PCBs can cause continuing sub-lethal effects, including immunosuppression, increased susceptibility to disease and prey contamination.

Brief exposure of salmon to contaminants may contribute to immune altering events and a consequent increase in disease susceptibility (Arkoosh *et al.* 1998). Over time, immunosuppression from contaminant exposure may lead to an increase in disease and mortality (Arkoosh *et al.* 1998). Immunosuppressed fish may allocate greater energy and resources to defending themselves against disease, therefore reducing energy available for vital functions such as growth and reproduction (Arkoosh *et al.* 1998). At very low levels, contaminants may have no effect on growth but bone development may still be affected (Mauck *et al.* 1978).

Sediments in oceans, estuaries, rivers and lakes concentrate PCBs and contaminated sediments are a major source of PCBs in aquatic environments (Eisler 1996). Organisms accumulate PCBs through the water column, from interstitial sediment waters and from consumption of contaminated prey (Eisler 1996). In the Puget Sound, salmonids that ate invertebrates from highly contaminated areas had higher levels of PCB in their tissues resulting from biomagnification of contaminants in the food web (O'Neill *et al.*). Removing the contaminated equipment at Bradford Island will improve water quality over time for salmonids and invertebrates in the vicinity.

1.5.2 Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as those effects of "future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." Future Federal actions, including the ongoing operation of hydropower systems, hatcheries, fisheries, and land management activities are being (or have been) reviewed through separate section 7 consultation processes. Therefore, these actions are not considered cumulative to the proposed action.

The NMFS is not aware of any specific future non-federal activities within the action area that would cause greater impacts to listed species than presently occurs. The NMFS assumes that future private and state actions will continue at similar intensities as in recent years.

1.6 Conclusion

NMFS has determined, based on the available information, that the proposed action covered in this Opinion is not likely to jeopardize the continued existence of listed salmonids or adversely modify critical habitat. NMFS used the best available scientific and commercial data to apply its jeopardy analysis, when analyzing the effects of the proposed action on the biological requirements of the species relative to the environmental baseline, together with cumulative effects. NMFS believes that the proposed action would cause a minor, short-term degradation of anadromous salmonid habitat due to turbidity caused by removal of electrical equipment. Direct mortality is not expected. The completed project will reduce exposure of salmonids to toxic PCBs producing long term benefits for salmonids of all life stages.

1.7 Conservation Recommendations

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Conservation recommendations are *discretionary* measures suggested to minimize or avoid adverse effects of a proposed action on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information. The NMFS believes the following conservation recommendations are consistent with these obligations, and therefore should be carried out by the Corps:

1. The COE should develop an assessment plan for the Bradford Island site to include tissue sampling and sediment sampling to be taken within 6 months of the equipment removal and continue monitoring in the future to collect sufficient information to assess the baseline and improvements to the baseline as a result of the removal of contaminated equipment. The assessment should also include a complete investigation of the project area to determine equipment and sediment that may require future removal.

1.8 Reinitiation of Consultation

This concludes formal consultation on these actions in accordance with 50 CFR 402.14(b)(1). Reinitiation of consultation is required: (1) If the amount or extent of incidental take is exceeded; (2) if the action is modified in a way that causes an effect on the listed species that was not previously considered in the biological assessment and this biological opinion; (3) new information or project monitoring reveals effects of the action that may affect the listed species in a way not previously considered; or (4) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR 402.16).

2. INCIDENTAL TAKE STATEMENT

Section 4 (d) and Section 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, and sheltering (64 FR 60727; November 8, 1999). Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement. An incidental take statement specifies the impact of any incidental taking of threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

2.1 Amount or Extent of the Take

The NMFS anticipates that the action covered by this Opinion is reasonably certain to result in incidental take of listed salmonids because of detrimental effects from increased turbidity levels and in-water work. Effects of actions such as the one covered by this Opinion are largely unquantifiable in the short term, and are not expected to be measurable as long-term effects on habitat or population levels. Therefore, even though NMFS expects some low level incidental take to occur due to the action covered by this Opinion, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species itself. In instances such as these, the NMFS designates the expected level of take as "unquantifiable."

Based on the information provided by the COE and other available information, NMFS anticipates that an unquantifiable amount of incidental take could occur as a result of the action covered by this Opinion. The extent of the take is limited to the action area.

2.2 Reasonable and Prudent Measures

The NMFS believes that the following reasonable and prudent measures are necessary and appropriate to avoid or minimize take of listed salmonid species resulting from the action covered by this Opinion. The COE shall include measures that will:

1. Minimize the likelihood of incidental take from equipment removal and in-water work by applying permit conditions to avoid or minimize disturbance to riparian and aquatic systems.
2. Complete a comprehensive monitoring and reporting program to ensure measures provided in this Opinion are effective in minimizing the likelihood of take from permitted activities.

2.3 Terms and Conditions

To be exempt from the prohibitions of section 9 of the ESA, the COE and/or their contractors must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. To implement reasonable and prudent measure #1, the COE shall ensure that:
 - a. In-water work. All work within the active channel of all anadromous fish-bearing streams, or in systems which could potentially contribute sediment or toxicants to downstream fish-bearing systems, will be completed within the ODFW approved in-water work period of November 15 to March 15.
 - i. Work period extensions. Extensions of the in-water work period, including those for work outside the wetted perimeter of the stream but below the ordinary high water mark, must be approved by biologists from NMFS.
 - b. Pollution control plan. A Pollution Control Plan (PCP) will be developed for each authorized project to prevent point-source pollution related to construction operations. The PCP will contain the pertinent elements listed below and meet requirements of all applicable laws and regulations:
 - i. Methods that will be used to prevent erosion and sedimentation associated with equipment and the removal action.
 - ii. A description of the hazardous products or materials that will be used, including inventory, storage, handling, and monitoring.
 - iii. A spill containment and control plan with notification procedures, specific clean up and disposal instructions for different products, quick response containment and clean up measures will be available on site, proposed

- methods for disposal of spilled materials, and employee training for spill containment.
 - iv. Measures that will be taken to prevent debris from falling into any aquatic habitat. Any material that falls into a stream during construction operations will be removed in a manner that has a minimum impact on the streambed and water quality.
 - c. Waste management. All contaminated waste generated will be disposed of off-site at the appropriate facility.
- 2. To implement reasonable and prudent measure #2, the COE shall ensure that:
 - a. Monitoring. Within 30 days of completing the project, the COE will submit a monitoring report to NMFS describing the COE's success meeting these terms and conditions. This report will consist of the following information.
 - i. Project identification.
 - (1) Project name;
 - (2) starting and ending dates of work completed for this project; and
 - (3) the name and address of the supervisor(s).
 - ii. A narrative assessment of the project's effects on natural stream function.
 - iii. Photographic documentation of environmental conditions at the project site before, during and after project completion.
 - (1) Photographs will include general project location views and close-ups showing details of the project area and project, including pre and post construction.
 - (2) Each photograph will be labeled with the date, time, photo point, project name, the name of the photographer, and a comment describing the photograph's subject.
 - (3) Relevant habitat conditions include characteristics of channels, streambanks, riparian vegetation, flows, water quality, and other visually discernable environmental conditions at the project area, and upstream and downstream of the project.
 - iv. All proposed monitoring reports and any resulting memorandums of this removal action will be submitted to NMFS.
 - b. If a dead, injured, or sick endangered or threatened species specimen is located, initial notification must be made to the National Marine Fishery Service Law Enforcement Office, located at Vancouver Field Office, 600 Maritime, Suite 130, Vancouver, Washington 98661; telephone: 360/418-4246. Care should be taken in handling sick or injured specimens to ensure effective treatment and care or the handling of dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered and threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is

- not unnecessarily disturbed.
- c. Monitoring reports will be submitted to:

National Marine Fisheries Service
Oregon Habitat Branch
Attn: OSB2002-0001-FEC
525 NE Oregon Street
Portland, OR 97232

3. MAGNUSON-STEVENSON ACT

3.1 Background

The objective of the essential fish habitat (EFH) consultation is to determine whether the proposed action may adversely affect designated EFH for relevant species, and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH resulting from the proposed action.

3.2 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297), requires the inclusion of EFH descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NMFS on activities that may adversely affect EFH.

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of essential fish habitat: Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities; necessary means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species' full life cycle (50CFR600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

- Federal agencies must consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH;
- NMFS shall provide conservation recommendations for any Federal or State activity that may adversely affect EFH;
- Federal agencies shall within 30 days after receiving conservation recommendations from NMFS provide a detailed response in writing to NMFS regarding the conservation

recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating, or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NMFS, the Federal agency shall explain its reasons for not following the recommendations.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NMFS is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

3.3 Identification of EFH

The Pacific Fisheries Management Council (PFMC) has designated EFH for federally-managed fisheries within the waters of Washington, Oregon, and California. The designated EFH for groundfish and coastal pelagic species encompasses all waters from the mean high water line, and upriver extent of saltwater intrusion in river mouths, along the coasts of Washington, Oregon and California, seaward to the boundary of the U.S. exclusive economic zone (370.4 km)(PFMC 1998a, 1998b). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other water bodies currently, or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream of certain impassable man-made barriers (as identified by the PFMC), and longstanding, naturally-impassable barriers (i.e., natural waterfalls in existence for several hundred years)(PFMC 1999). In estuarine and marine areas, designated salmon EFH extends from the nearshore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (370.4 km) offshore of Washington, Oregon, and California north of Point Conception to the Canadian border.

Detailed descriptions and identifications of EFH for the groundfish species are found in the Final Environmental Assessment/Regulatory Impact Review for Amendment 11 to The Pacific Coast Groundfish Management Plan (PFMC 1998a) and the NMFS Essential Fish Habitat for West Coast Groundfish Appendix (Casillas *et al.* 1998). Detailed descriptions and identifications of EFH for the coastal pelagic species are found in Amendment 8 to the Coastal Pelagic Species Fishery Management Plan (PFMC 1998b). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the Pacific Coast Salmon Plan (PFMC 1999). Assessment of the potential adverse effects to these species' EFH from the proposed action is based on this information.

3.4 Proposed Actions

The proposed action is detailed above in section 1.2. This area has been designated as EFH for various life stages of chinook and coho salmon.

3.5 Effects of Proposed Action

As described in detail in section 1.5, the proposed activities may result in detrimental short-term adverse effects to certain habitat parameters. Removal of submerged electrical equipment could result in a temporary increase in turbidity.

3.6 Conclusion

NMFS believes that the proposed action may adversely affect the EFH for Pacific salmon species.

3.7 EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the Magnuson-Stevens Act, NMFS is required to provide EFH conservation recommendations for any Federal or State agency action that would adversely affect EFH. The conservation measures proposed for the project by the Corps and all of the Reasonable and Prudent Measures and the Terms and Conditions contained in Sections 2.2 and 2.3 are applicable to EFH. Therefore, NMFS incorporates each of those measures here as EFH conservation recommendations.

3.8 Statutory Response Requirement

Please note that the Magnuson-Stevens Act (section 305(b)) and 50 CFR 600.920(j) requires the Federal agency to provide a written response to NMFS after receiving EFH conservation recommendations within 30 days of its receipt of this letter. This response must include a description of measures proposed by the agency to avoid, minimize, mitigate or offset the adverse impacts of the activity on EFH. If the response is inconsistent with a conservation recommendation from NMFS, the agency must explain its reasons for not following the recommendation.

3.9 Consultation Renewal

The Corps must reinitiate EFH consultation with NMFS if the action is substantially revised or new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600.920).

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