



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
BIN C15700
Seattle, WA 98115-0070

Refer to:
OSB2002-0074-FEC

June 12, 2002

Penelope Dunn Woods
Acting District Manager
Bureau of Land Management
Vale District Office
100 Oregon Street
Vale, Oregon 97918

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Act
Essential Fish Habitat Consultation for the Cable Creek Sidewall Replacement Project,
Umatilla County, Oregon.

Dear Ms. Woods:

Enclosed is a biological opinion (Opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act (ESA) that addresses the Cable Creek Sidewall Replacement Project in Umatilla County, Oregon. NMFS concludes in this Opinion that the proposed action is not likely to jeopardize Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*), or destroy, or adversely modify, their critical habitat. This Opinion includes reasonable and prudent measures, with terms and conditions that are necessary and appropriate to minimize the potential for incidental take associated with this project.

In addition, this document also serves as consultation on essential fish habitat (EFH) for chinook salmon under Public Law 104-267, the Sustainable Fisheries Act of 1996, as it amended the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). An EFH analysis is required for chinook salmon.

The attached Opinion contains an analysis of the effects of the proposed action on designated critical habitat. Shortly before the issuance of this Opinion, however, a Federal court vacated the rule designating critical habitat for the evolutionary significant units considered in this Opinion. The analysis and conclusions regarding critical habitat remain informative for our application of the jeopardy standard, even though they no longer have independent legal significance. Also, if critical habitat is redesignated before this action is fully implemented, the analysis will be relevant when determining whether a reinitiation of consultation will be necessary at that time. For these reasons, and the need for timely issuance of this Opinion, our critical habitat analysis has not been removed from this Opinion.



Questions regarding this Opinion should be directed to Doug Baus, of my staff, in the Oregon Habitat Branch's La Grande Field Office at 541.975.1835 ext. 224.

Sincerely,

A handwritten signature in black ink that reads "Russell M. Strach for". The signature is written in a cursive style.

D. Robert Lohn
Acting Regional Administrator

cc: Jackie Dougan (BLM)
Tim Bailey (ODFW)
Greg Smith (USFWS)

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

BIOLOGICAL OPINION

Cable Creek Sidewall Replacement Project
Umatilla County, Oregon

Agency: Bureau of Land Management

Consultation
Conducted By: National Marine Fisheries Service,
Northwest Region

Date Issued: June 12, 2002

Issued by: 
D. Robert Lohn
Regional Administrator

Refer to: OSB2002-0074-FEC

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1. ENDANGERED SPECIES ACT

1.1 Background

On March 25, 2002, the National Marine Fisheries Service (NMFS) received from the Bureau of Land Management (BLM), a letter and biological assessment (BA) dated March 22, 2002, requesting informal consultation regarding the potential effects of the Cable Creek Sidewall Replacement Project on Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*) and their designated critical habitat. In a letter dated April 8, 2002, NMFS informed the BLM that NMFS did not concur with the BLM's effect determination of "not likely to adversely affect" (NLAA). NMFS has determined that The Cable Creek Sidewall Replacement Project is "likely to adversely affect" (LAA) MCR steelhead for the following reasons: (1) In-water work will mobilize minor amounts of sediment at the project site; and (2) construction activities will harass juvenile MCR steelhead rearing in the project area. The BLM initiated formal consultation with a letter to NMFS dated April 24, 2002.

The Cable Creek Sidewall Project is located in the Camas Creek watershed, within the North Fork John Day River (NFJDR) sub-basin. The NFJDR sub-basin is part of the John Day River (JDR) basin, a major tributary of the Columbia River. The BA described the project and its potential effects on MCR steelhead and their designated critical habitat.

The MCR steelhead were listed under the Endangered Species Act (ESA) on March 25, 1999 (64 FR 14517). The proposed action is within MCR steelhead critical habitat, which was designated February 16, 2000 (65 FR 7764), but later vacated (May 7, 2002). Protective regulations were issued for MCR steelhead under Section 4(d) of the ESA on July 10, 2000 (65 FR 42422).

The objective of this Opinion is to determine whether the Cable Creek Sidewall Replacement Project is likely to jeopardize the continued existence of the MCR steelhead, or destroy, or adversely modify, their critical habitat.

1.2 Proposed Actions

Purpose and Need

The BLM recently installed a culvert on Cable Creek. A concrete headwall was installed at the upstream opening of the culvert. The headwall was installed to minimize erosion that can occur during high flow events on the upstream end of culverts. The concrete headwall is currently eroding and needs to be repaired to prevent further erosion of the structure. The proposed repair will prevent future failure of the newly installed culvert and headwall. Failure of the culvert would change stream habitat by widening Cable Creek, and would create water quality problems by adding sediment into Cable Creek.

Project Description

The Cable Creek sub-watershed is located in the Camas Creek watershed, near the town of Ukiah, in northeast Oregon. Cable Creek is tributary to Camas Creek, and Camas Creek is a tributary to the NFJDR. The culvert is located at the crossing of Forest Service (FS) Road 5450 and Cable Creek (T. 6S., R.33E., Section 5, NE1/4 NE1/4). The culvert is a structural plate pipe arch measuring 62 feet in length, with a concrete headwall on the inlet. At the inlet of the culvert, the headwall is six inches thick, approximately five feet high, and extends three feet below the substrate.

The project will take approximately two weeks to complete. The BLM will repair the headwall during the Oregon Department of Fish and Wildlife (ODFW) in-water work window (ODFW 2000). The dates of the ODFW in-water work window on Camas Creek are July 15 - August 15, and the BLM estimates flows to be 2-3 cubic feet per second (cfs) during this period. On July 14, 2000, flow on the North Fork of Cable Creek was 3.3 cfs. On August 7, 2001, flow was 2.3 cfs. These flow data are annually collected and documented in the BLM Annual Monitoring Report (BLM 2000).

Isolation of the construction site will be accomplished utilizing sandbags and plastic sheeting. Sandbags will not block juvenile MCR steelhead passage. The sandbags will be placed in half circles on each bank. The BLM will begin sandbag placement approximately 10 feet upstream on both sides of the culvert inlet. From each bank the sandbags will extend into Cable Creek in order to isolate the work area. Downstream from the headwall, the sandbags will return to the same bank from which they originated. Plastic sheeting may be used in addition to the sandbags to isolate the construction site. The isolated work area will concentrate flows to the middle of the channel, allowing rearing juvenile MCR steelhead to pass through the construction site.

The sandbags will be machine-placed into the creek without digging into the substrate of the stream channel. Machinery will not operate in-water, but machinery will work from the streambank and gravel bars adjacent to the creek. Using a backhoe and shovel, the BLM will excavate and expose the left and right sides of the deteriorated culvert headwall. The amount of excavation will be determined once the damaged areas are uncovered and the magnitude of deterioration is discovered. The extent of deterioration may only include the surface layer, but if the BLM finds bad concrete they may need to remove 1/3 to 1/2 the thickness of the wall. Any concrete removed from the deteriorated concrete face will be disposed of off-site and outside of any Riparian Habitat Conservation Area (RHCA).

Water will be removed from the isolated work area by constructing a sump in the trench, and pumping water from the sump to an area outside of the floodplain. The water will be pumped into the vegetation above the floodplain and sediment will be removed. Pumped water will not cause erosion or form channels that return to the creek, because it will be sprayed to allow it to permeate into the soil.

The first step in the concrete repair process involves preparation of the concrete surface. All deteriorated concrete and dirt will be removed from the existing headwall. The concrete and dirt

will remain isolated in the work area. The removed material will be disposed of off-site and outside of the RHCA.

The second step of the project involves the application of Sonoprep (an epoxy/cement bonding agent) to the concrete headwall. All precautions and procedures for safety, storage, application, and clean-up will be adhered to from the Material Safety Data Sheets (MSDS) provided by the manufacturer (BLM 2002). Immediately after Sonoprep has been applied, the BLM will apply Sonocrete - Gel Patch, (a non-sag concrete repair mortar) which will be applied according to manufacturers recommendations (BLM 2002). After the concrete repair mortar has set and cured for three days, the work site will be restored to pre-project conditions. All mixing of materials used in the repair and cleanup of equipment will occur outside of the floodplain, away from the stream. Areas where the material spilled will be cleaned up according to the MSDS sheets. Material will not be cleaned or mixed in an area where there is the potential for any material to be carried into the stream channel.

Disturbed areas will be restored to the natural, pre-project contours. Bare soil will be seeded with native plant species approved by a BLM botanist. To ensure there is no erosion of streambanks, and that sediment does not enter into the channel, one or more of the following erosion control devices will be used: 1) Certified weed-free straw bales, 2) sediment blankets, 3) sand bags, and/or 4) silt fencing.

1.3 Biological Information and Critical Habitat

Biological information concerning the MCR steelhead can be found in Busby, et al. (1996). The current status of the MCR steelhead, based upon their risk of extinction, has not significantly improved since the species was listed. The MCR steelhead evolutionary significant unit (ESU) was listed as threatened under the ESA by the NMFS on March 25, 1999 (64 FR 14517).

Critical habitat for MCR steelhead (designated February 16, 2000, 65 FR 7764; and vacated May 7, 2002) encompasses the major Columbia River tributaries known to support this ESU, including the Deschutes, John Day, Klickitat, Umatilla, Walla Walla, and Yakima Rivers, as well as the Columbia River and estuary. Critical habitat consists of all waterways below long-standing (100 years or more), naturally-impassable barriers. The adjacent riparian area is also considered critical habitat. This riparian area is defined as the habitat that provides the following functions: Shade, sediment, nutrient/chemical regulation, streambank stability, and input of large woody debris or organic matter. Protective regulations for MCR steelhead were issued under section 4 (d) of the ESA on July 10, 2000 (65 FR 42423).

Adult MCR steelhead begin entering the Columbia River in the spring, and migrate upriver through the summer, fall, and winter, seeking their tributary of origin. By early the next spring the adults have reached their natal streams, and spawn in gravel redds/nests from March to early June. Deposited eggs usually hatch by July of the same year. The juveniles will spend from one to four years rearing to smolt size, at which time they will begin their migration to the ocean. MCR steelhead spawn and rear in Cable Creek.

Essential features of designated critical habitat for MCR steelhead adult spawning, juvenile rearing, and adult and juvenile migration are: Substrate, water quality, water quantity, water temperature, water velocity, cover/shelter, food (juvenile only), riparian vegetation, space, and safe passage conditions (50 CFR 226). The essential features that the proposed construction activities may affect are: Substrate, water quality, riparian vegetation, and safe passage conditions.

1.4 Evaluating the Proposed Action

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (i.e., 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 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. This evaluation must take into account measures for survival and recovery specific to the listed salmonid's life stages that occur beyond the action area. If NMFS finds that the action is likely to jeopardize MCR-listed steelhead, NMFS must identify reasonable and prudent alternatives for the action.

Furthermore, NMFS will evaluate if 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. NMFS then considers whether such impairment appreciably diminishes the habitat's value for the species' survival and recovery. If NMFS concludes that the action will destroy or adversely modify critical habitat, it must identify any reasonable and prudent alternatives available.

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

1.4.1 Biological Requirements

The first step in the methods the NMFS uses for applying the ESA section 7(a)(2) to listed MCR steelhead is to define the species' biological requirements that are most relevant to each

consultation. NMFS also considers the current status of the listed species taking into account population size, trends, distribution and genetic diversity. To assess the current status of the listed species, NMFS starts with the determinations made in its decision to list MCR steelhead for ESA protection, and also considers any new data that are relevant to the determination.

The relevant biological requirements are those necessary for MCR steelhead to survive and recover to naturally-reproducing population levels, at which point protection under the ESA will become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in their natural environment. For this consultation, the biological requirements are improved habitat characteristics which will function to support successful adult and juvenile migration, spawning and rearing.

Cable and Camas Creeks are listed in the Oregon Department of Environmental Quality's (DEQ) Final 1998 Water Quality Limited Streams 303(d) List. Cable and Camas Creeks are listed for temperature and habitat modification. Habitat modification refers to the loss of stream habitat within the Camas Creek watershed that is able to support chinook salmon. Pool habitat improvement, and the addition of large woody debris has been identified as a high priority in the watershed (BLM 2002).

In 2000 and 2001, BLM measured water quality in the North Fork and South Fork of Cable Creeks. In 2000, water quality parameters measured included: Turbidity, PH, dissolved oxygen, nitrite, nitrate, phosphorus, ammonia and flow. In 2001, turbidity, PH and dissolved oxygen were measured in both streams. In 2000, both streams exceeded the standard for phosphorus, and exceeded or nearly exceeded the standard for nitrates (BLM 2001). The water quality monitoring was not analyzed by a certified water laboratory, and must be considered as an indication of an existing water quality problem. All other parameters met DEQ Water Quality Standards.

MCR steelhead survival in the wild depends on the proper functioning of certain ecosystem processes, including habitat formation and maintenance. The restoration of improperly functioning habitat to a more properly functioning condition will likely lead to improved survival and recovery of MCR steelhead. In conducting analyses of habitat altering actions, NMFS defines the biological requirements in terms of a concept called Properly Functioning Condition (PFC), and applies a "habitat" approach to its analysis (NMFS 1999). The current status of MCR steelhead, based on their risk of extinction, has not improved much since the species was listed.

1.4.2 Environmental Baseline

The current range-wide status of the identified ESU is found in Busby et al. (1996). The identified action will occur within the range of MCR steelhead. The defined action area is the area that is directly and indirectly affected by the proposed action. The direct effects occur at the project site and may extend upstream or downstream, based on the potential for impairing fish

passage, and affecting stream hydraulics, sediment, pollutant discharge, and the extent of riparian habitat modifications. Indirect effects may occur throughout the watershed, where the proposed actions described in this Opinion lead to additional activities, or affect ecological functions, or contribute to stream degradation. As such, the action area for the proposed action includes the immediate portion of the watershed containing the project and those areas upstream and downstream that may reasonably be affected, temporarily or in the long term. The action area for this consultation extends 150 feet upstream and 1/4 mile downstream from the project site on Cable Creek.

The current population status and trends for MCR steelhead are described in Busby et al. (1996) and in NMFS (1997). Busby (1996), citing ODFW data, stated the total MCR steelhead run size for the John Day River basin has recently averaged about 5,000 fish. NMFS (1997), citing Chilcote (1997), states that recent MCR steelhead redd counts conducted in established index areas throughout the John Day River basin suggest universal decline in redd abundance ranging from -0.9 to -5.6% over the past several years.

Environmental baseline conditions within the action area were evaluated for the subject actions at the project level and watershed scales. The results of this evaluation, based on the “matrix of pathways and indicators” (MPI) described in *Making Endangered Species Act Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996), follow. This method assesses the current condition of instream, riparian, and watershed factors that collectively provide functioning aquatic habitat essential for the survival and recovery of the species.

As indicated in the BA, the MPI identified the following habitat indicators for the MCR steelhead as functioning “at risk” within the action area: 1) Temperature, 2) sediment, 3) refugia, 4) floodplain connectivity, 5) road density and location, 6) disturbance history, and 7) riparian reserves.

Based on the best available information on the current status of MCR steelhead range-wide, the population status, trends, genetics, and the poor environmental baseline condition within the action area (as described in the BA), NMFS concluded that the biological requirements of the identified ESU area are not currently being met within the action area. Numbers of MCR steelhead are substantially below historic numbers and long term trends are decreasing. Recent droughts and change in ocean productivity have probably reduced run sizes. The river basin displays degraded habitat conditions resulting from agricultural practices, water diversions, road building, mining, forest management activities, and flooding.

1.5 Analysis of Effects

1.5.1 Effects of Proposed Action

The effects determination in this Opinion was made using a method for evaluating current aquatic conditions, the environmental baseline, and predicting effects of actions on them. This

process is described in the document, *Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale* (NMFS 1996). The effects of proposed actions are expressed in terms of the expected effect (restore, maintain, or degrade) on aquatic habitat factors in the action area. For the proposed actions, all conditions for the Camas Creek watershed will be maintained.

Impacts of the proposed actions to stream habitat and fish populations can be separated into direct and indirect effects. Direct effects are those which contribute to the immediate loss or harm to individual fish or embryos (e.g., harassment, trampling a redd that results in the actual destruction of embryos, or dislodging the embryos from the protective nest and ultimately destroying eggs). Indirect effects are those impacts which occur at a later time, causing a change to specific habitat features (e.g., undercut banks, sedimentation of spawning beds), localized change in habitat quality (e.g. sedimentation, access to habitat, loss of riparian vegetation, changes in channel stability and structure), and ultimately, cause loss or reduction of entire populations of fish, or widespread change in habitat quantity and/or quality.

Direct effects to MCR steelhead will occur as sediment is introduced into Cable Creek resulting from the construction activity. Protective measures to keep sediment out of the stream have been incorporated into the project design, however, some amount of sediment is expected to enter into the streams. Sediment in the streams will harass MCR steelhead. In the short term, a temporary increase in sediment and turbidity could reduce light penetration and inhibit primary production, abrade and clog fish gills, prevent foraging of sight feeding juvenile steelhead, and cause fish to avoid disturbed areas of the stream. Studies have shown that sediment inputs resulting in substrate embeddedness of greater than one third can result in a decrease in benthic invertebrate abundance and thus a decrease in food available for juvenile salmonids (Waters 1995). However, the amount of sediment generated from this project will most likely not occur in amounts sufficient to cause the adverse effects to MCR steelhead and their critical habitat. By conducting the proposed actions during the ODFW in-water work window, and utilizing protective measures such as isolating the construction site, the amount of sediment mobilized in the water column will be minimal.

The construction activity will interrupt juvenile MCR steelhead activities such as rearing, feeding, and sheltering, at the construction site. Once these juvenile MCR steelhead are frightened from cover and swim to open water they become more susceptible to predation from larger fish and avian predators. However, without the repair of the culvert there is the potential for culvert failure. Culvert failure would change stream habitat by widening Cable Creek and would create water quality problems by adding sediment into Cable Creek.

The Cable Creek Sidewall Replacement Project is likely to adversely affect (LAA) MCR steelhead for the following reasons: (1) In-water work will mobilize minor amounts of sediment at the project site, and (2) construction activities will harass juvenile MCR steelhead rearing in the project area. All other habitat conditions in the MPI for Cable Creek will be maintained.

1.5.2 Cumulative Effects

“Cumulative effects” are defined in 50 CFR 402.02 as those 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.” The action area for this consultation includes the streambed and streambank of Cable Creek, approximately 150 feet upstream and 1/4 mile downstream from the project sites. Other activities within the Camas Creek watershed have the potential to adversely affect fish and habitat within the action area. Future Federal actions, including the ongoing operation of hydropower systems, hatcheries, fisheries, and land management activities will be reviewed through separate section 7 consultation processes. NMFS is not aware of any significant change in non-federal activities that are reasonably certain to occur. NMFS assumes that future private and state actions will continue at similar intensities as in recent years.

1.6 Conclusion

NMFS has determined that the effects of the Cable Creek Sidewall Replacement Project, added to the environmental baseline and the cumulative effects occurring in the action area, are not likely to jeopardize the continued existence of the MCR steelhead. Additionally, NMFS concludes the Cable Creek Sidewall Replacement Project would not cause adverse modification or destruction of designated critical habitat for MCR steelhead. NMFS believes the Cable Creek Sidewall Replacement Project will harass juvenile MCR steelhead rearing at the project site, and cause some minor, short-term increases in stream turbidity and sedimentation. Harassing juvenile MCR steelhead and increasing sedimentation in Cable Creek in the short term would be offset by the long-term effect of eliminating the possibility of culvert failure by repairing the culvert.

1.7 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. Conservation recommendations are discretionary measures suggested to minimize or avoid adverse effects of proposed actions on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information. The NMFS has no additional conservation recommendations regarding the action addressed in this Opinion.

1.8 Reinitiation of Consultation

Reinitiation of consultation is required if: 1) The action is modified in a way that causes an effect on the listed species that was not previously considered in the BA and this Opinion, 2) new information or project monitoring reveals effects of the action that may affect the listed species in a way not previously considered, 3) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR. 402.16), or 4) the proposed actions are not consistent with conservation measures developed through the pending consultation on land and resource management plans for Federal land management units in the Middle and Upper

Columbia River Basins. To reinitiate consultation, the BLM must contact the Habitat Conservation Division, Oregon Habitat Branch, of NMFS, and refer to OSB2002-0074-FEC.

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 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. If necessary, 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

NMFS anticipates that the subject actions covered by this Opinion are reasonably certain to result in incidental take of juvenile MCR steelhead. Some minimal level of incidental take is expected in the form of harassment to juvenile MCR steelhead during the Cable Creek Sidewall Replacement Project. The temporary increase of instream turbidity associated with this work could result in temporarily-reduced feeding efficiency for juvenile MCR steelhead downstream of the project area. Effects from turbidity are expected to be of short duration, because turbidity levels will quickly return to preconstruction levels once instream work is completed. Additionally, some minimal level of incidental take is expected in the form of harassment to rearing juvenile MCR steelhead as they are harassed at the project site during the construction activity.

Effects of actions such as those addressed in this Opinion are largely unquantifiable in the short term, and may not be measurable as long-term effects on the species' habitat or population levels. Therefore, although NMFS expects some 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 of listed fish at any life stage associated with the proposed construction activities.

2.2 Effect of Take

In this Opinion, NMFS has determined that the level of anticipated take is not likely to result in jeopardy to MCR steelhead when the reasonable and prudent measures are implemented.

2.3 Reasonable and Prudent Measures

NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimize the likelihood of take of MCR steelhead.

1. Minimize the likelihood of incidental take from activities involving temporary access roads, use of heavy equipment, earthwork, site restoration, or that may otherwise involve in-water work or affect fish passage by avoiding or minimizing disturbance to riparian and aquatic systems.
2. Ensure that project design measures are effective in minimizing incidental take by monitoring results of permitted activities.

2.4 Terms and Conditions

To be exempt from the prohibitions of section 9 of the ESA, the BLM must comply with the following terms and conditions, which carry out the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

1. To implement Reasonable and Prudent Measure #1 (construction), the BLM shall ensure that:
 - a. Minimum area. Construction impacts will be confined to the minimum area necessary to complete the project. In particular, disturbance to riparian vegetation will be minimized.
 - b. In-water work. All work within the active channel that could contribute sediment or toxicants downstream will be completed within the ODFW approved in-water work period for Cable Creek – July 15 through August 15.
 - c. 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.
 - d. Fish passage. Construction activities shall not block fish passage at the construction site. All culvert and road designs must comply with ODFW guidelines and criteria for stream-road crossings¹ with appropriate grade controls

¹ Appendix A, Oregon Department of Fish and Wildlife Guidelines and Criteria for Stream-Road Crossings, in: G.E. Robison, A. Mirati, and M. Allen, *Oregon Road/Stream Crossing Restoration Guide: Spring 1999* (rules, regulations and guidelines for fish passage through road/stream crossings under the Oregon Plan) (<http://www.nwr.noaa.gov/1salmon/salmesa/4ddocs/orfishps.htm>).

to prevent culvert failure due to changes in stream elevation. Channel modifications which could adversely affect fish passage, such as by increasing water velocities, are not authorized by this Opinion.

- e. Pollution and erosion control plan. A Pollution and Erosion Control Plan (PECP) will be developed to prevent point-source pollution related to construction operations. The PECP will contain the pertinent elements listed below and meet requirements of all applicable laws and regulations.
 - i. A description of methods that will be used to prevent erosion and sedimentation associated with access roads, stream crossings, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations and staging areas.
 - ii. A description of methods that will be used to confine, remove and dispose of excess concrete, cement and other mortars or bonding agents, including measures for washout facilities.
 - iii. A description of the hazardous products or materials that will be used, including inventory, storage, handling, and monitoring protocols.
 - iv. 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 that will be available on site, proposed methods for disposal of spilled materials, and employee training for spill containment.
 - v. Measures that will be taken to prevent construction 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.
- f. Cessation of work. All project operations, except efforts to minimize storm or high flow erosion, will cease under high flow conditions that may result in inundation of the project area.
- g. Pre-construction activities. Before significant alteration of the action area, the following actions will be accomplished.
 - i. Boundaries of the clearing limits associated with site access and construction are flagged to prevent ground disturbance of critical riparian vegetation, wetlands and other sensitive sites beyond the flagged boundary.
 - ii. The following erosion control materials are onsite.
 - (1) A supply of erosion control materials (e.g., silt fence and straw bales) is on hand to respond to sediment emergencies. Sterile straw or hay bales (weed free) will be used when available to prevent introduction of weeds.
 - (2) An oil absorbing, floating boom is available on-site during all phases of construction whenever surface water is present.
 - iii. All temporary erosion controls (e.g., straw bales, silt fences) are in place and appropriately installed downslope of project activities within the riparian area. Effective erosion control measures will be in place at all

- times during the contract, and will remain and be maintained until permanent erosion control measures are effective.
- h. Heavy Equipment. Heavy equipment use will be restricted as follows.
- i. When heavy equipment is required, the BLM will use equipment having the least impact (e.g., minimally sized, rubber tired).
 - ii. Excavators will have a properly guarded belly pan for pioneering type of work in rough terrain.
 - iii. Heavy equipment will be fueled, maintained and stored as follows.
 - (1) All equipment that is used for instream work will be cleaned before operations below the bankfull elevation. External oil and grease will be removed, along with dirt and mud. No untreated wash and rinse water will be discharged into streams and rivers without adequate treatment.
 - (2) Place vehicle staging, maintenance, refueling, and fuel storage areas a minimum of 300 feet horizontal distance from any stream.
 - (3) All vehicles operated within 300 feet of any stream or water body will be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected will be repaired before the vehicle resumes operation.
 - (4) When not in use, vehicles will be stored in the vehicle staging area.
- i. Site preparation. Site preparation is completed in the following manner, including removal of stream materials, topsoil, surface vegetation and major root systems.
- i. Any instream large wood or riparian vegetation moved or altered during construction will stay on the site or be replaced with a functional equivalent.
 - ii. Tree removal will be mitigated for onsite by a 2:1 replanting ratio.
 - iii. Whenever the project area is to be revegetated or restored, native channel material, topsoil and native vegetation removed for the project should be stockpiled for redistribution on the project area.
- j. Earthwork. Earthwork, including drilling, blasting, excavation, dredging, filling and compacting, is completed in the following manner:
- i. Boulders, rock, woody materials and other natural construction materials used for the project must be obtained from outside the riparian area.
 - ii. Material removed during excavation will only be placed in locations where it cannot enter streams or other water bodies.
 - iii. All exposed or disturbed areas will be stabilized to prevent erosion.
 - (1) Areas of bare soil within 150 feet of waterways, wetlands or other sensitive areas will be stabilized by native seeding,² mulching, and placement of erosion control blankets and mats, if applicable, as

² By Executive Order 13112 (February 3, 1999), Federal agencies are not authorized to permit, fund or carry out actions that are likely to cause, or promote, the introduction or spread of invasive species. Therefore, only native vegetation that is indigenous to the project vicinity, or the region of the state where the project is located, shall be used.

- quickly as reasonable after exposure, but within seven days of exposure.
- (2) All other areas will be stabilized as quickly as reasonable, but within 14 days of exposure.
 - (3) Seeding outside the growing season will not be considered adequate, nor permanent stabilization.
- iv. All erosion control devices will be inspected during construction to ensure that they are working adequately.
 - (1) Erosion control devices will be inspected daily during the rainy season, weekly during the dry season, monthly on inactive sites.
 - (2) If inspection shows that the erosion controls are ineffective, work crews will be mobilized immediately, during working and off-hours, to make repairs, install replacements, or install additional controls as necessary.
 - (3) Erosion control measures will be judged ineffective when turbidity plumes are evident in waters occupied by listed salmonids during any part of the year.
 - v. If soil erosion and sediment resulting from construction activities are not effectively controlled, the engineer will limit the amount of disturbed area to that which can be adequately controlled.
 - vi. Sediment will be removed from sediment controls once it has reached 1/3 of the exposed height of the control. Whenever straw bales are used, they will be staked and dug into the ground 5 inches (12 cm). Catch basins will be maintained so that no more than 6 inches (15 cm) of sediment depth accumulates within traps or sumps.
 - vii. Sediment-laden water created by construction activity will be filtered before it leaves the right-of-way or enters a stream or other water body. Silt fences or other detention methods will be installed as close as reasonable to culvert outlets to reduce the sediment entering aquatic systems.
- k. Site restoration. Site restoration and cleanup, including protection of bare earth by seeding, planting, mulching and fertilizing, is done in the following manner.
- i. All damaged areas will be restored to pre-work conditions including restoration of original streambank lines, and contours.
 - ii. All exposed soil surfaces, including construction access roads and associated staging areas, will be stabilized at finished grade with mulch, native herbaceous seeding, and native woody vegetation before October 1. On cut slopes steeper than 1:2, a tackified seed mulch will be used so that the seed does not wash away before germination and rooting occurs. In steep locations, a hydro-mulch will be applied at 1.5 times the normal rate.
 - iii. Disturbed areas will be planted with native vegetation specific to the project vicinity or the region of the state where the project occurs, and will comprise a diverse assemblage of woody and herbaceous species.
 - iv. Plantings will be arranged randomly within the revegetation area.

- v. All plantings will be completed before April 15, 2003.
 - vi. No herbicide application will occur within 300 feet of any stream channel as part of this permitted action. Mechanical removal of undesired vegetation and root nodes is permitted.
 - vii. No surface application of fertilizer will be used within 50 feet of any stream channel as part of this permitted action.
 - viii. Fencing will be installed if necessary to prevent access to revegetated sites by livestock or unauthorized persons.
 - ix. Plantings will achieve an 80 percent survival success after three years.
 - (1) If success standard has not been achieved after three years, the BLM will develop an alternative plan that addresses temporal loss of function.
 - (2) Plant establishment monitoring will continue by the BLM until site restoration success has been achieved.
1. BLM Personnel. BLM personnel will be on-site for all construction and monitoring activities to ensure that these terms and conditions are met.
2. To implement Reasonable and Prudent Measure #2 (monitoring and reporting), above, the BLM shall submit a report to the NMFS within one year of completing the project. This report will consist of the following information.
- a. Project identification.
 - i. Permit number;
 - ii. contractor's name;
 - iii. project name;
 - iv. project location by 5th field hydrological unit code (HUC) and latilong;
 - v. starting and ending dates for work completed;
 - vi. the BLM contact person; and
 - vii. description of how conservation measures were implemented and a measurement of their success.
 - b. Pollution and erosion control. A summary of all pollution and erosion control inspection reports, including descriptions of any failures experienced with erosion control measures, efforts made to correct them and a description of any accidental spills of hazardous materials.
 - c. Site restoration. Documentation of the following conditions:
 - i. Finished grade slopes and elevations.
 - ii. Log and rock structure elevations, orientation, and anchoring, if any.
 - iii. Planting composition and density.
 - iv. A plan to inspect and, if necessary, replace failed plantings and structures for five years.
 - v. A narrative assessment of the project's effects on natural stream function.
 - d. Photographic documentation. Document the environmental conditions at the project sites before, during and after project completion.

- i. Photographs will include general project location views and close-ups showing details of the project area and project, including pre and post construction.
 - ii. 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.
 - iii. 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.
- e. Annual Report. The annual report will be submitted by December 1, 2002 to:

National Marine Fisheries Service
Oregon Habitat Branch, Habitat Division
Attn: OSB2002-0074
525 NE Oregon Street, Suite 500
Portland, OR 97232

- f. NOTICE. If a dead, injured, or sick endangered or threatened species specimen is found, initial notification must be made to the National Marine Fishery Service Law Enforcement Office, at Vancouver Field Office, 600 Maritime, Suite 130, Vancouver, Washington 98661; phone: 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. Besides 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 with the specimen is not unnecessarily disturbed.

3. MAGNUSON-STEVENSON ACT

3.1 Background

The objective of 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 104-267), 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 (50 CFR 600.110).

Section 305(b) of the MSA [6 USC 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 reason 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 three species of Pacific salmon: Chinook (*O. tshawytscha*); coho (*O. kisutch*); and Puget Sound pink salmon (*O. gorbuscha*) (PFMC 1999). 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). 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 potential adverse effects to these species' EFH from the proposed action is based on this information.

3.4 Proposed Action

The proposed action is detailed above in Section 1.2 of the ESA portion of this Opinion. The action area for the proposed Cable Creek Sidewall Replacement Project has been designated as EFH for various life stages of chinook salmon.

3.5 Effects of Proposed Action

As described in detail in the ESA portion of this consultation, the proposed activities may result in detrimental, short term, adverse effects to a variety of habitat parameters.

3.6 Conclusion

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

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. In addition to conservation measures proposed for the project by the BLM, all of the Reasonable and Prudent Measures and the Terms and Conditions contained in Section 2.4 of the ESA portion of this Opinion are applicable to salmon 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 BLM to provide a written response to NMFS' EFH conservation recommendations within 30 days of its receipt of this letter. The response must include a description of measures proposed to avoid, mitigate, or offset the adverse impacts of the activity on EFH. If the response is inconsistent with NMFS' conservation recommendations, the reasons for not implementing the BLM shall explain its reasons for not following the recommendations.

3.9 Supplemental Consultation

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

4. LITERATURE CITED

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the data used in developing this Opinion.

BLM (Bureau of Land Management). 2000. Annual Monitoring Report for Threatened and Endangered Species. Vale District, Baker Resource Area. Baker City, Oregon.

BLM. 2002. Cable Creek Subwatershed, Amended Multi-Species Biological Assessment. April 2002. Vale District. Baker City, Oregon.

Busby, P., T. Wainwright, G.J. Bryant, L.J. Lierheimer, R.S. Waples, and I.V. Lagomarsino. 1996. Status review of west coast steelhead from Washington, Idaho, Oregon, and California.

Chilcote, M. 1997. Conservation Status of Steelhead in Oregon. Oregon Department of Fish and Wildlife. Draft Report, dated September 9, 1997. 109p.

Chilcote, M. 1998. Conservation Status of Steelhead in Oregon. Oregon Department of Fish and Wildlife. Information Report No. 98-3.

NMFS (National Marine Fisheries Service). 1996. Making Endangered Species Act determinations of effect for individual and grouped actions at the watershed scale. Habitat Conservation Program, Portland, Oregon. September 4, 1996.

NMFS. 1997. Status Review Update for Endangered and Candidate ESUs of West Coast Steelhead December. 62 p. (Available @ www.nwr.noaa.gov under Protected Resources Division, Status Reviews).

NMFS. 1999. The Habitat Approach: Implementation of Section 7 of the Endangered Species Act fo Actions Affecting the Habitat of Pacific Anadromous Salmonids. Guidance memorandum from Assistant Regional Administrators for Habitat Conservation and Protected Resources to staff. 3 pages. August. (Available @ www.nwr.noaa.gov , under Habitat Conservation Division, Habitat Guidance Documents).

ODFW (Oregon Department of Fish and Wildlife). 2000. Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources. 12 p. (Available @ www.dfw.state.or.us/ODFWhtml/InfoCntrHbt/0600_inwtrguide.pdf).

PFMC (Pacific Fishery Management Council). 1999. Amendment 14 to the Pacific Coast Salmon Plan. Appendix A: Description and Identification of Essential Fish Habitat, Adverse Impacts and Recommended Conservation Measures for Salmon. Portland, Oregon.

Waters, T. 1995. Sediment in streams: sources, biological effects and control. American Fisheries Society Monograph 7.