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**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Northwest Region  
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Refer to:  
2003/00609

June 18, 2003

Roger Williams  
Forest Supervisor  
Malheur National Forest  
P.O. Box 909  
John Day, OR 97845

Re: Endangered Species Act Formal Section 7 Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Emergency Fire Suppression and Burned Area Emergency Rehabilitation Activities and for High-Roberts and Easy Wildland Fires, Malheur National Forest, Grant County, Oregon

Dear Mr. Williams:

Enclosed is a document prepared by NOAA's National Marine Fisheries Service (NOAA Fisheries) pursuant to section 7 of the Endangered Species Act (ESA) which addresses the emergency fire suppression and Burned Area Emergency Rehabilitation (BAER) activities for the High-Roberts and Easy fires completed during 2002, on the Malheur National Forest, Grant County, Oregon. NOAA Fisheries concludes in this biological opinion (Opinion) that the emergency action did not jeopardize Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*). 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.

This document also serves as consultation on essential fish habitat (EFH) pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act and its implementing regulations at 50 CFR Part 600. The Middle Fork John Day River and Upper John Day River subbasins have been designated as EFH for chinook salmon (*O. tshawytscha*).

If you have any questions regarding this consultation please contact Mike Bianchi of my staff in the Oregon Habitat Branch, at 541.975.1835, ext. 227.

Sincerely,

*Michael R. Couse*  
f.1  
D. Robert Lohn  
Regional Administrator



cc: Larry Bright, MNF  
Tim Unterwegner, ODFW  
Marisa Meyer, USFWS  
John Morris, BLM

# Endangered Species Act - Section 7 Consultation Biological Opinion

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## Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation

Emergency Fire Suppression and Burned Area Rehabilitation Activities  
for the Easy and High-Roberts Wildland Fires,  
Middle Fork John Day and Upper John Day Subbasins,  
John Day River Basin, Grant County, Oregon

Agency: USDA Forest Service

Consultation  
Conducted By: NOAA's National Marine Fisheries Service,  
Northwest Region

Date Issued: June 18, 2003

Issued by: *for*   
D. Robert Lohn  
Regional Administrator

Refer to: 2003/00609

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# 1. INTRODUCTION

## 1.1 Consultation History

NOAA's National Marine Fisheries Service (NOAA Fisheries) received a request for emergency consultation by phone and email on July 14, 2002. The request was made by Larry Bright, the Malheur National Forest (MNF) Endangered Species Act (ESA) Consultation Program Leader, because of possible adverse effects to Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*) from the fire suppression activities. The MNF ESA Section 7 Streamlining Level One Team (Level One Team) convened on July 16, 2002, and MNF personnel briefed the Level One Team on the types of activities and methods being used to suppress the fires. Actions taken included fire line construction using hand tools, tractors, and explosives; water drafting; and culvert installation and replacement. The fire suppression activities were being carried out in the Middle Fork John Day River (MFJDR) and Upper John Day River (UJDR) subbasins, in Grant County, Oregon. This area is also designated as essential fish habitat (EFH) for chinook salmon (*O. tshawytscha*).

Emergency consultation was requested for MCR steelhead because of a severe lightning storm that lasted for several days, and ignited several fires. Three of these fires grew to a size and scale where adverse effects to MCR steelhead were expected. The Easy Fire was ignited by a lightning strike at approximately 2:30 pm on Friday, July 12, 2002, near Easy Creek, a headwater stream in the MFJDR subbasin about 10 miles east of Prairie City, Oregon. These lands are administered by the Prairie City Ranger District (PCRD) of the MNF. The fire was contained on August 2, 2002, at a perimeter of 5,949 acres.

The Roberts Fire began with a lightning strike at about 2:30 pm on July 12, 2002. It started near Roberts Creek, a headwater stream in the UJDR subbasin about 12 miles southeast of Prairie City, Oregon. The fire began on lands administered by the PCRD of the MNF. The High Lakes Fire began on July 17, 2002, in the Strawberry Wilderness 12 miles south of Prairie City, Oregon, on lands administered by PCRD, MNF. On July 21, 2002, the Roberts Fire and High Lakes Fire burned together and became the High-Roberts Fire. The fire was contained on August 8, 2002, and had a perimeter of 13,418 acres.

NOAA Fisheries received a letter dated May 16, 2003, requesting formal consultation for the suppression and BAER activities associated with the Easy and High-Roberts Fires which occurred on the MNF during the summer of 2002. Emergency consultation is required under the ESA section 7 regulations (50 CFR 402.05) for actions that may affect a listed species and involve a situation where an act of God requires an agency to take action to prevent the imminent loss of human life or property. The documentation of the action and the effects of that action are secondary in nature. This, combined with non-local participants, creates a situation where accounting for the specifics of the actions is very difficult. There was a series of informal communications between NOAA Fisheries and the MNF, in which improvements in the information in the Biological Assessment (BA) were requested. The MNF has had a difficult

time accumulating specific information to describe events on the ground during and after the fires.

The objective of the biological opinion contained in this document is to determine whether implementing the fire suppression activities undertaken to contain the Easy and High-Roberts wildland fires was likely to jeopardize the continued existence of MCR steelhead.

The objective of the EFH consultation is to determine whether the emergency 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 emergency action.

## **1.2 Emergency Action**

### **1.2.1 Fire Suppression**

Fire suppression strategies and operational guidelines were the same for the Easy and High-Roberts fires. Contained in Appendix B of the MNF Fire Management Plan, *Guidelines for Fire Suppression in Listed Aquatic Species Watershed* (Appendix A) was implemented on both the Easy and High-Roberts fires. The MNF resource advisors reported approximately 90% compliance with the operational guidelines and when non-compliance was noted, immediate action was taken to correct the non-compliance. The guidelines describe measures that should be used to minimize the potential adverse effects of the fire suppression activities on salmonids. These guidelines speak to fire line construction, use of retardants and surfactants, fuel and pump use and screening, locating fire camps, and use of resource advisors.

Fire suppression activities on the fires included the construction of fire line using hand tools, mechanized equipment (Table 1), and burn outs. Burn outs are intentionally ignited fires that create a fire line by consuming the fuel that would be consumed by the larger wildfire. Mechanical and hand fire lines are created by removing vegetation and debris down to exposed bare mineral soil to prevent the fire from proceeding beyond that point. Many of the mechanical and hand fire lines constructed were rehabilitated after completion of the suppression activities. Staging areas were created for helicopters, and safety zones created for fire fighters by felling and removing trees and other vegetation. Aerial water and retardant drops were used to extinguish fire and prevent fire from consuming areas. There were no incidents of retardant entering active water courses containing MCR steelhead, primarily because these drops were made using helicopters, which are more accurate than the heavier, fixed-wing air tankers.

**Table 1.** Length of fire lines, in chains (one chain = 66 feet), constructed on the 2002 Easy and High-Roberts Fires on the Malheur National Forest, Grant County, Oregon.

Fire line type	Fires			
	Easy		High-Roberts	
	Constructed	Rehabilitated	Constructed	Rehabilitated
Mechanical	1469	374	906	510
Hand	434	151	450	174
<b>Total</b>	<b>1903</b>	<b>525</b>	<b>1356</b>	<b>684</b>

## 1.2.2 BAER Activities

### 1.2.2.1 Easy Fire

#### Land Treatments.

The Easy Fire burned in a mosaic pattern that, on the whole, minimized the severity of the burn. The pattern of the burn reduced the long burned slope lengths that are often associated with severe burning conditions. The result was a sufficient amount of down wood left after the burn and a low soil hydrophobicity. The result was such that there were no land treatments, beyond fire line rehabilitation, carried out.

#### Road Treatments.

The drainage on the MNF 2635 and 036 roads in the Clear Creek watershed were restored. This action included instream work and culvert replacement activities.

#### Monitoring.

Monitoring will be done to assess weed expansion inside of the fire perimeter. It is likely that there will be noxious weed invasions because of the previously existing weed populations and lack of weed-free certification of vehicles used on the fire.

### 1.2.2.2 High-Roberts Fire

#### Land Treatments.

The High-Roberts fires burned in a mosaic pattern that minimized large blocks of severe burning. This pattern provided buffers that reduced the negative impacts of the fire on the landscape. Therefore, no additional land treatments beyond the rehabilitation of fire lines, were carried out.

### Roads and Trail Treatments.

On Road 778, a flood overflow structure was installed at the culvert stream crossing of Roberts Creek. This treatment may have included instream work. On Road 033, a rolling dip was created to prevent the stream flow from being diverted down the road and into Roberts Creek.

Temporary gates were installed on Wilderness access roads into the Strawberry Mountain Wilderness. The gates will deter people from using the burned area and prevent the degradation caused by further use of existing trails and roads.

### Monitoring.

Invasive weed monitoring is being done to determine the occurrence of weeds on approximately 60 miles of fire line, safety zone, drop point, and staging areas, that were created with bulldozers.

## **2. ENDANGERED SPECIES ACT**

### **2.1 Biological Opinion**

#### **2.1.1 Biological Information**

The MCR steelhead evolutionarily significant unit (ESU) was listed as threatened under the ESA by NOAA Fisheries on March 25, 1999 (64 FR 14517). Protective regulations for MCR steelhead were issued under section 4(d) of the ESA on July 10, 2000 (65 FR 42422). Biological information concerning the MCR steelhead is found in Busby *et al.* (1996). The major drainages in the MCR steelhead ESU are the Deschutes, John Day, Klickitat, Umatilla, Walla Walla, and Yakima river systems. NOAA Fisheries (2003) indicates that the five-year average (geometric mean) abundance of natural MCR steelhead was up from the previous year's basin estimates within the ESU. The Klickitat, Yakima, Touchet, and Umatilla systems are all well below their interim abundance targets. The John Day and Deschutes are at or above their interim targets for abundance, however there is significant concern regarding the straying of fish into the Deschutes system from other ESUs. The productivity estimate ( $\lambda$ ) of the MCR ESU is approximately 0.98, indicating that the productivity of MCR steelhead is slightly below its target of 1.0. The NOAA Fisheries biological review team (BRT) has determined that the MCR ESU is likely to become endangered because of stock abundance and long-term productivity being depressed within the ESU (NOAA 2003).

The John Day River (JDR) is the largest river system in the range of MCR steelhead that is free of dams. There is currently no artificial propagation of steelhead in the system, and runs are driven almost exclusively by native stocks, making the JDR system unique within the ESU. However, there is some straying of hatchery fish into the JDR system from the Columbia River (Unterwegner and Gray 1997). The Oregon Department of Fish and Wildlife (ODFW) estimates yearly returns of adult steelhead to the JDR basin from 3,900 to 36,400, with estimated escapement averaging 13,988 adults since 1987. NOAA Fisheries (2003) states that while the

JDR system has met or exceeded interim abundance targets for the last five years, the long-term trend for abundance is still downward.

The JDR and its tributaries, including the Middle Fork John Day River (MFJDR) and Upper John Day River (UJDR) subbasin streams, provide spawning, rearing, and migratory habitat for both adult and juvenile life stages of MCR steelhead. Adult MCR steelhead enter the Columbia River beginning in the spring and migrate upriver through the summer, fall, and winter, seeking their tributary of origin. By early the following spring, the adults have reached their natal streams and spawn in gravel redds/nests from March to early June. Deposited eggs usually hatch by the July of the same year. The resulting juveniles will spend from one to four years rearing to smolt size, at which time they will begin their migration to the ocean. Juvenile steelhead were expected to be present in the fire area and areas used for staging.

Essential features of the adult spawning, juvenile rearing, and adult and migratory habitat for this species are: Substrate, water quality, water quantity, water temperature, water velocity, cover/shelter, food (juvenile only), riparian vegetation, space, and safe passage conditions. (Bjornn and Reiser, 1991; NOAA Fisheries, 1996b; Spence *et al.*, 1996). The essential features that the emergency action may have affected are: Substrate, water quality, quantity, water temperature, water velocity, cover/shelter, food, and riparian vegetation.

### **2.1.2 Evaluating Emergency Action**

The standards for determining jeopardy and destruction or adverse modification of critical habitat are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). In conducting analyses of habitat-altering actions under section 7 of the ESA, NOAA Fisheries uses the following steps of the consultation regulations combined with the Habitat Approach (NMFS 1999): (1) Consider the status and biological requirements of the species; (2) evaluate the relevance of the environmental baseline in the action area to the species' current status; (3) determine the effects of the proposed or continuing action on the species and whether the action is consistent with the available recovery strategy; (4) consider cumulative effects; and (5) determine whether the emergency action, in light of the above factors, is likely to appreciably reduce the likelihood of species survival in the wild or destroy or adversely modify critical habitats. In completing this step of the analysis, NOAA Fisheries determines whether the action under consultation, together with the cumulative effects when added to the environmental baseline, is likely to jeopardize the ESA-listed species or result in the destruction or adverse modification of critical habitat. If either or both are found, NOAA Fisheries will identify reasonable and prudent alternatives for the action that avoid jeopardy or destruction or adverse modification of critical habitat. For the emergency action, NOAA Fisheries' jeopardy analysis considers direct or indirect mortality of fish attributable to the action.

### **2.1.3 Biological Requirements**

The first step in the methods NOAA Fisheries 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. NOAA Fisheries 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, NOAA Fisheries starts with the determinations made in its decision to list MCR steelhead for ESA protection and also considers new data available that is 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 time protection under the ESA would 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 the natural environment.

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, NOAA Fisheries defines the biological requirements in terms of a concept called Properly Functioning Condition (PFC) and applies a "habitat" approach to its analysis (NOAA Fisheries 1999). The current status of MCR steelhead, based on their risk of extinction, has not improved since the species was listed

### **2.1.4 Environmental Baseline**

The current range-wide status of the MCR steelhead is found in Busby *et al.* (1995, 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 emergency action. The direct effects occur at the project site and may extend upstream or downstream based on the potential for impairing fish passage, stream hydraulics, sediment and pollutant discharge, and the extent of riparian habitat modifications. Indirect effects may occur throughout the watershed, where actions described in this Opinion lead to additional activities, or affect ecological functions, contributing to stream degradation. As such, the action area for the proposed activities include the immediate portions of the watershed containing the project and those areas upstream and downstream that may reasonably be affected, temporarily or in the long term, by the proposed project. For this project, the action area would be the subwatersheds that contain listed anadromous salmonids: Clear Creek subwatershed in the MFJDR subbasin, and the North Fork Reynolds Creek, the Upper Mainstem John Day and Roberts Creek subwatersheds in the UJDR subbasin.

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* (NOAA Fisheries 1996a), follow. This method assesses the current condition of instream, riparian, and watershed factors that collectively provide properly functioning aquatic habitat essential for the survival and recovery of the species. For the emergency action, the MPI evaluation was based on habitat conditions of the MFJDR and UJDR subbasins. More specific information on environmental baseline is provided for the Clear Creek, North Fork Reynolds Creek, Upper Mainstem John Day, and Roberts Creek subwatersheds.

For the MFJDR subbasin, no habitat indicators were rated as “properly functioning.” Twelve habitat indicators were rated as “at risk”, and include: Sediment, chemical contaminants/nutrients, large woody debris, off-channel habitat, refugia, width/ depth ratio, streambank condition, flood plain connectivity, change in peak/base flow, drainage network increase, disturbance history, and riparian conservation areas. Six habitat indicators were rated as “not properly functioning” and include: Temperature, physical barriers, substrate embeddedness, pool frequency/quality, and road density and location.

The MFJDR is listed under Clean Water Act (CWA) section 303(d) for water quality concerns, with temperature and flow modification being the parameters of concern. The ODFW conducted habitat surveys in 1992 and 1996 on accessible portions of the MFJDR. Much of the river is on private land and was not surveyed. Stream temperatures ranged from 52-72° F in August and September. Pool frequency ranged from 1.72 to 5.80 pools per mile, and pool spacing ranged from 9 to 28.5 channel widths. Pools greater than three feet deep were scarce, and ranged from 0.13 to 2.28 per mile. Bank damage was evident in many areas, with unstable banks occurring in 10 to 32% of bank totals. Many of the riparian areas in the middle reaches of the MFJDR were cleared for agriculture purposes and subsequently, shade and large woody debris are lacking. ODFW habitat surveys indicated shade to be 18 to 42%. Large woody debris ranged from 3.2 to 9.6 pieces per mile (/m).

#### Clear Creek Subwatershed.

Historically, the Clear Creek subwatershed was intensively managed. It has a total road density of 6.23 mi/mi<sup>2</sup> which exceeds the matrix standard making it “not properly functioning” for road density at a watershed scale. The average pool depth for Clear Creek is 1.46 feet, resulting in a “not properly functioning” rating at a subwatershed scale. The channel of Clear Creek has an average width of 15 feet and has seven pools/m resulting in a “not properly functioning” rating at a subwatershed scale. The number of pieces of large woody material (LWM) are an average of 36 LWM/m rating Clear Creek as “properly functioning” for this parameter at the subwatershed scale.

The fires in the watershed burned in a mosaic pattern that lessened the impacts of the fire on the landscape. The mosaic pattern limited the fire’s ability to burn long slope lengths and increase in intensity. Approximately 25% of the Clear Creek subwatershed (3,000 acres) burned during the Easy Fire. Over 1,200 acres (40% of the area) burned at a low intensity; 976 acres (32.5% of the area), burned at moderate intensity, and 800 acres (26% of the area), burned at a high intensity. Six hundred and five acres did not burn. The Clear Creek subwatershed contained

about 80% of the high and moderate intensity burn areas within the Easy Fire. Approximately 0.75 miles of the areas adjacent to perennial fish-bearing streams burned, and 0.6 miles of areas adjacent to perennial non-fish-bearing streams burned, only 0.1 miles of which burned at high intensity. The majority of the high intensity burning along streams in the Clear Creek area occurred in the intermittent headwaters, where over five miles of stream area burned of which approximately 2.5 miles burned at a moderate to high intensity.

#### North Fork Reynolds Creek.

The fire also burned 11% of the North Fork Reynolds Creek subwatershed where 864 acres burned, 702 acres of which burned at a low intensity. A little over one mile of stream vegetation burned in this area, and none of the area burned at a high intensity.

#### Roberts Creek.

There is no specific matrix information for Roberts Creek because it is in an area of mixed land ownership. It is reasonably certain that the area is similar to other areas within the UJDR subbasin. In the UJDR subbasin, 13 of the 19 habitat indicators in the MPI were rated as “at risk.” These are: Nutrients, large woody debris, large pools, off-channel habitat, refugia, width/depth ratio, streambank condition, flood plain connectivity, change in peak/base flow, drainage network increase, disturbance history, riparian habitat conservation areas, and disturbance regime. Six of the 18 were rated as “not properly functioning.” These are: Temperature, sediment, physical barriers, substrate embeddedness, pool frequency and quality, and road density and location. None of the habitat indicators were rated by the MNF as properly functioning.

The High-Roberts fire burned 2764 acres, or approximately 48% of the Roberts Creek subwatershed. Of the burned area, 45% burned at a low intensity, 20% burned at a moderate intensity, and 35% burned at a high intensity. This was mostly due to the fire burning in a mosaic pattern which prevented intense fire behavior. Approximately 21% of the high intensity areas in the High-Roberts fire burned in the Roberts Creek subwatershed. Approximately 0.75 miles of stream burned at a high intensity and approximately four miles of stream burned at a moderate to low intensity in intermittent streams. Less than one mile of perennial stream burned, and that area burned at a moderate to low intensity. Only a small portion of the Upper Mainstem John Day subwatershed burned in the High-Roberts Fire.

### **2.1.5 Effects of Emergency Action**

The effects determination for the suppression and BAER activities for the Easy and High-Roberts Fires in this Opinion were made using a method for evaluating current aquatic conditions, the environmental baseline, and predicting effects of actions on them. This process is described in *Making Endangered Species Act determinations of effect for individual and grouped actions at the watershed scale* (NOAA Fisheries 1996a). The effects of actions are expressed in terms of the expected effect (restore, maintain, or degrade) on aquatic habitat factors in the action area.

### Road Treatments.

Potential short-term negative effects to MCR steelhead will result from these projects. Increased sediment levels and turbidity due to soil exposure can be expected to occur due to the near or instream work in the Roberts and Clear Creek subwatersheds. Short-term increases in turbidity could result in temporary reduction in feeding efficiency for juvenile steelhead within the action areas. The construction activities could have resulted in harassment, crushing, or entrainment of juvenile steelhead, as well as interruptions of daily activities such as sheltering. Once these juvenile fish are frightened from cover and swim into open water, they become more susceptible to predation from larger fish and avian predators. Increased sedimentation may have led to increased embeddedness of spawning substrates downstream of the project.

### Fire Suppression Activities.

The disturbance of riparian vegetation through burn outs and fire line construction could lead to decreased shade, increased water temperatures, increased sediment and turbidity, increased chemical inputs, and decreased streambank stability until riparian vegetation is re-established. There was also the potential for fuel or other contaminant spills and decreased water volumes associated with use of heavy equipment and water pumps in or near the stream. These substances are highly toxic to aquatic life, and can cause death or injury to fish, as well as adverse sublethal effects to salmonids (Arkoosh *et al.* 1991). These activities were carried out in the Upper Mainstem John Day, Roberts Creek, North Fork Reynolds Creek, and Clear Creek subwatersheds.

Due to the incorporation of the conservation measures in Appendix A, and the utilization of several resource advisors to ensure the implementation of the measures, the effects of the suppression and BAER activities associated with these fires were likely to be and are likely to continue to be minimal.

### **2.1.6 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.” The “action area” is defined as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action” (50 CFR 402.02). The “action area” for this consultation is the Clear Creek subwatershed in the MFJDR subbasin and North Fork Reynolds Creek, Upper Mainstem John Day and Roberts Creek subwatersheds in the UJDR subbasin.

There are several actions occurring on private land in these subbasins that are reasonably certain to continue in the future. These include ranching, timber harvest, and withdrawal of water for irrigation. Significant improvement in MCR steelhead reproductive success outside of Federally- administered land is unlikely without changes in grazing, agricultural, and other practices occurring within these non-Federal riparian areas in the JDR basin. Improvements to irrigation diversions to improve fish passage is occurring at several locations on private land

within the JDR basin. NOAA Fisheries is not aware of any other specific future actions which are reasonably certain to occur on non-Federal lands.

### **2.1.7 Conclusion**

NOAA Fisheries has determined that, when the effects of the subject actions addressed in this Opinion are added to the environmental baseline and cumulative effects occurring in the action area, they did not jeopardize the continued existence of MCR steelhead. NOAA Fisheries believes that the emergency actions caused some short-term increases instream turbidity and sedimentation rates in the subwatersheds in the action area. It is also possible that some direct mortality and harassment of juvenile steelhead may have resulted from the instream work and crossing of streams by vehicles. Because of the conservation measures incorporated into the suppression and BAER activities, the amount of take associated with these activities was expected to be minimal. These conclusions were reached primarily because the emergency actions: (1) Are expected to reduce chronic sediment inputs in the long term; (2) will maintain the current condition of all other relevant habitat indicators; (3) are planned in accordance with all relevant MNF Fire Management Plan standards and guidelines; (4) are consistent with PACFISH (USFS 1995) standards and guidelines; and (5) likely reduced the impacts the fire had on the landscape. Thus, the emergency suppression and BAER actions are not expected to impair currently properly functioning habitats, appreciably reduce the functioning of already impaired habitats, or retard the long-term progress of impaired habitats toward proper functioning condition essential to the long-term survival and recovery at the population or ESU scale.

### **2.1.8 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 emergency actions on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information. NOAA Fisheries believes that the following conservation recommendations regarding emergency fire suppression activities should be implemented:

1. Due to the chaotic nature of suppression activities on large fires and increased demands on resource advisors when listed species are present, the MNF should establish a process to specifically document the effects of the fire suppression activities on listed species. This will facilitate an expedited completion of the consultation document and improve the quality of the information available for the ESA emergency consultation process.
2. When using retardant and water drops in areas that “may effect” listed species, the use of heavy helicopters instead of heavy, fixed-wing air tankers is recommended.
3. The MNF should undergo ESA section 7 consultation on their Fire Management Plan.

For NOAA Fisheries to be kept informed of actions minimizing or avoiding adverse effects, or those that benefit listed salmon and steelhead or their habitats, we request notification of the achievement of any conservation recommendations when the MNF submits its annual report describing achievements of the fish monitoring program during the previous year.

### **2.1.9 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; or (4) if the amount or extent of take specified in the incidental take statement is exceeded or expected to be exceeded. (50 CFR. 402.16). The MNF may also be required to reinitiate consultation if the emergency 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.

## **2.2 Incidental Take Statement**

Section 9 and rules promulgated under section 4(d) 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. “Harass” is defined as actions that create the likelihood of injuring listed species by annoying it 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 the incidental take statement.

### **2.2.1 Amount or Extent of the Take**

NOAA Fisheries anticipates that the emergency actions were reasonably certain to result in incidental take of MCR steelhead because of detrimental effects from increased sediment levels (non-lethal), increased pollutant levels (potentially lethal), and limited riparian habitat disturbance (non-lethal). It is also likely that some incidental take may have resulted from the instream work and vehicles or machinery crossing streams (lethal), although this is expected to be minimal.

Effects of actions such as minor sedimentation and minor riparian disturbance are unquantifiable in the short term and are not expected to be measurable as long-term harm to habitat features or

by long-term harm to salmonid behavior or population levels. Therefore, even though NOAA Fisheries expects some low level incidental take to have occurred due to the emergency actions covered by this Opinion, best scientific and commercial data available are not sufficient to enable NOAA Fisheries to estimate the specific amount of incidental take to the species itself. In instances such as these, NOAA Fisheries designates the expected level of take as “unquantifiable.” Based on the information in the biological assessment, NOAA Fisheries anticipates that an unquantifiable amount of incidental take occurred as a result of the habitat altering actions covered by the Opinion. The extent of the take includes the aquatic and associated riparian habitats affected by the fire suppression and BAER activities within the High-Roberts and Easy fire perimeters.

### **2.2.2 Effect of Take**

In this Opinion, NOAA Fisheries determines that this level of anticipated take did not result in jeopardy to MCR steelhead.

### **2.2.3 Recommendations Provided to Minimize Take**

On July 15, 2002, the MNF convened a Level 1 meeting to discuss the ongoing fires and associated suppression activities. At that time the team reviewed the MNF Fire Management Plan (FMP) (Appendix A) and agreed that the implementation of the FMP would be effective in minimizing the adverse effects to listed MCR steelhead and its habitat.

### **2.2.4 Success in Implementing Recommendations**

The Resource Advisors for the fires reported 90% compliance with the FMP and when non-compliance was found immediate corrective action was taken. Therefore NOAA Fisheries believes that the MNF was successful in avoiding and minimizing the adverse effects to MCR steelhead during the implementation of the fire suppression and BAER activities for the High-Roberts and Easy wildland fires.

### 3. MAGNUSON-STEVENSON ACT

#### 3.1 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 NOAA Fisheries 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 EFH: “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 NOAA Fisheries on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH;
- NOAA Fisheries 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 NOAA Fisheries provide a detailed response in writing to NOAA Fisheries 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 NOAA Fisheries, 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 up-slope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NOAA Fisheries is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

### **3.2 Identification of EFH**

The Pacific Fisheries Management Council (PFMC) has designated EFH for three species of Pacific salmon: Chinook (*Oncorhynchus 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 emergency action is based on this information.

### **3.3 Emergency Actions**

The emergency actions are detailed above in section 1.2 of this document. The action area includes the UJDR and MFJDR subbasins. This area has been designated as EFH for various life stages of chinook salmon.

### **3.4 Effects of Emergency Action**

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

### **3.5 Conclusion**

NOAA Fisheries believes that the emergency action did adversely affect the EFH for chinook salmon.

### **3.6 EFH Conservation Recommendations**

Pursuant to section 305(b)(4)(A) of the MSA, NOAA Fisheries 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 MNF, all of the reasonable and prudent measures and the terms and conditions contained in section 2.2.4 of the ESA portion of this Opinion are applicable to salmon EFH. Therefore, NOAA Fisheries incorporates each of those measures here as EFH conservation recommendations.

### **3.7 Statutory Response Requirement**

The MSA (section 305(b)) and 50 CFR 600.920(j) requires the MNF to provide a written response to NOAA Fisheries' 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 NOAA

Fisheries' conservation recommendations, the reasons for not implementing the MNF shall explain its reasons for not following the recommendations.

### **3.8 Supplemental Consultation**

The MNF must reinitiate EFH consultation with NOAA Fisheries if either the action is substantially revised or new information becomes available that affects the basis for NOAA Fisheries' 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 in addition to the BA and additional information requested by NOAA Fisheries and provided by the MNF.

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