



**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

July 18, 2002

Peter F. Poolman  
Department of the Army  
Walla Walla District, Corps of Engineers  
201 North Third Avenue  
Walla Walla, Washington 99362-1876

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Coppei Creek Setback Levee and Bridge Replacement Project, Walla Walla County, Washington (NMFS No. WSB-01-242).

Dear Mr. Poolman:

The attached document transmits the National Marine Fisheries Service (NOAA (National Oceanic and Atmospheric Administration) Fisheries) Biological Opinion (BO) on the proposed Coppei Creek Setback Levee and Bridge Replacement Project in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531). The US Army Corps of Engineers (COE) has determined that the proposed actions are likely to adversely affect the Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*) Evolutionarily Significant Unit (ESU). Formal consultation was initiated for this project on May 29, 2001.

This BO reflects formal consultation and an analysis of effects covering the MCR steelhead in Coppei Creek near Waitsburg, Washington. The BO is based on information provided in the biological assessment sent to NOAA Fisheries by the COE on May 25, 2001, subsequent information transmitted by telephone conversations and electronic mail, and a site visit to the project area on November 7, 2001. A complete administrative record of this consultation is on file at the Washington State Habitat Branch Office.

NOAA Fisheries concludes that the implementation of the proposed project is not likely to jeopardize the continued existence of MCR steelhead. Please note that the incidental take statement, which includes reasonable and prudent measures and terms and conditions, was designed to minimize take. If you have any questions, please contact Justin Yeager of the Washington State Habitat Branch Office at (509) 925-2618.

Sincerely,

*Michael R. Crouse*  
for

D. Robert Lohn  
Regional Administrator



**Endangered Species Act - Section 7 Consultation**

**Biological Opinion**

**And**

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

**Coppei Creek Setback Levee and Bridge Replacement Project  
Walla Walla County, Washington  
WSB-01-242**

Agency: US Army Corps of Engineers

Consultation Conducted By: NOAA Fisheries,  
Northwest Region

Issued by: *for* *Michael R Course*  
D. Robert Lohn  
Regional Administrator

Date: July 18, 2002

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## 1.0 INTRODUCTION

### 1.1 Background and Consultation History

On May 29, 2001, National Marine Fisheries Service (NOAA (National Oceanic and Atmospheric Administration ) Fisheries) received a Biological Assessment (BA) and a request for Endangered Species Act (ESA) section 7 formal consultation from the United States Army Corps of Engineers (COE) for the Coppei Creek Setback Levee and Bridge Replacement Project. The BA described a proposal to replace the existing bridge with a new, higher capacity bridge that is designed to pass the 100-year flood event. The BA also described the construction of a setback levee and retaining wall that is designed to protect the city of Waitsburg, Washington from flood damage.

This Biological Opinion (BO) is based on the information presented in the BA, phone conversations, electronic mail correspondence, and a site visit on November 7, 2001.

The proposed project area occurs within the Middle Columbia River (MCR) Evolutionarily Significant Unit (ESU). Coppei Creek drains into the Touchet River in the city of Waitsburg. The Touchet River is a tributary to the Walla Walla River. The COE has determined that the project “may affect, and is likely to adversely affect” MCR steelhead (*Oncorhynchus mykiss*). The objective of this BO is to determine whether the proposed project is likely to jeopardize the continued existence of MCR steelhead. The standards for determining jeopardy are described in section 7(a)(2) of the ESA and further defined in 50 C.F.R. Part 402.14. This document also presents NOAA Fisheries’ consultation covering Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

### 1.2 Description of the Proposed Action

The COE proposes to permit a series of activities in and around Coppei Creek to reduce the risk of flood damage to the city of Waitsburg. The proposed project includes the construction of a setback levee and a flood retaining wall on the right bank of Coppei Creek. The project also includes the replacement of the existing State Route (SR) 12 bridge over Coppei Creek in order to provide adequate capacity to pass the 100-year flood event. The new bridge would be elevated about one meter above the existing bridge deck level. The proposed project is scheduled to begin in early summer of 2003. All in-water work will be completed between July 15, 2003 and September 30, 2003.

Earthen Sections of the Levee: The earthen levee would be set back 20 to 120 meters from Coppei Creek. It would be three meters wide at the top with a side slope of one unit vertical to three units horizontal and a layer of riprap protection at the toe on the creek side. The required levee height is estimated to vary from about one to two meters, making the base of the levee about 14 meters at its widest point. The levee would be constructed with 23,000 cubic yards of material including 510 cubic yards of riprap. The levee would be covered with geotextile fabric and topsoil, then fertilized and planted with grass to match the surrounding vegetation. Trees

larger than four inches in diameter would not be permitted to establish on the levee for structural integrity reasons. Current land use practices of cultivated agriculture and grazing would continue between the levee and the riparian zone.

**Retaining Wall Sections of the Levee:** Two concrete retaining walls are proposed for the right bank immediately upstream and downstream of SR 12. The first retaining wall would tie into the setback levee about 125 meters upstream of SR 12. The second retaining wall would tie into high ground about 125 meters downstream of SR 12. Both walls would be at least 7.6 meters from the ordinary high water mark (OHWM) and 1.2 to 2.3 meters tall. Prior to wall construction, the berm immediately upstream of SR 12 bridge would be leveled using heavy equipment. The berm has been pushed up around several large trees, which would be left in place and the riprap pulled out from around them. Any riprap below the OHWM would be left in place to minimize stream disturbance.

**Temporary Bridge:** A temporary detour road and bridge would be placed immediately upstream of the existing bridge to accommodate traffic during removal of the existing bridge and construction of the new bridge. No in-water work would be required for the construction or removal of the temporary bridge as the footings for the temporary bridge would be placed on the existing ground surface.

**Existing Bridge Removal:** Removal of the existing bridge would require the removal of its concrete footing material from below the OHWM and would take approximately two weeks. Stream flow would need to be rerouted through the construction area in order to separate excavation from flowing water. This could be accomplished in two ways. First, the stream could be routed through a culvert for the duration of construction. Alternatively, geotextile fabric could be secured to the ground below and around the bridge to contain any debris. If this method were employed, the fabric would be placed in the streambed and the stream would flow over the top of the fabric except during excavation or material placement in the streambed. Rerouting the stream with sandbags would be required during these activities to isolate construction activities from streamflow.

**New Bridge Construction:** The new bridge would be 50 feet long and 48 feet wide. It would be a single arch spanning the entire creek. The new bridge abutments would be constructed of reinforced concrete. The new footings would be below the OHWM, 10 feet landward of the current footings. The new bridge would be designed to accommodate connection with the new retaining walls on the right streambank.

**Riparian Vegetation Removal:** The riparian vegetation within the footprint of the proposed retaining wall would be removed. This amounts to about 82.5 square meters, most of which is non-native and/or ornamental shrubbery and grass. Existing vegetation between the creek and the wall would be left intact. All vegetation within the footprint of the temporary bridge would be removed.

Vegetation Planting: The earthen sections of the levee would be fertilized and planted with grass to match the existing vegetation. Trees larger than four inches in diameter would not be allowed to establish due to structural integrity reasons. After construction of the new bridge, the disturbed ground (including the footprint of the temporary bridge) would be revegetated with native trees and grasses.

Riprap Placement: Five-hundred and ten cubic feet of riprap would be used in the construction of the setback levees. Riprap placement would also be required at the toe of the retaining walls and at the new bridge abutments to prevent erosional undermining in the event of a flood.

Equipment Staging: Equipment fueling and maintenance would occur in designated areas at least 50 meters from the stream channel. At least two staging areas will be used for the levee construction; one near the upstream end and one near the downstream end. All equipment maintenance and refueling would take place in the staging areas. All disturbed surfaces will be reseeded upon project completion.

Best Management Practices (BMPs) related to the project included in the BA.

#### General BMPs

- The activities must comply with all water quality protection related conditions contained in the Washington State Department of Fish and Wildlife (WDFW) Hydraulic Approval (HPA) including time limitations.
- When removing and repairing existing structures, all demolition and construction material shall be removed from the water and disposed of properly in an upland site. Requirements contained in the HPA for dealing with large concrete pieces will be followed. If the method of taking the bridge apart is to saw-cut portions off, tarping is required to control and contain all saw-cut water. The saw-cut water shall be disposed of on land with no possibility of entry to surface waters. Under no circumstances shall free fall dumping of fill material occur in or next to any water body unless control structures are in place to prevent sediment from directly entering the waterbody.
- The natural flow of any affected water body shall be diverted around the construction site unless written approval to work in the flowing water is obtained from WDFW. Diversion may entail tight lining, coffer dams, or equivalent structures. The stream diversion system shall be designed and operated so as to not cause erosion or scour in the stream channel or banks of the water body.
- Material used to construct road approaches to access the project site shall be of clean composition and placed in a manner to prevent erosion and siltation that might result from high water and/or heavy rains. The approach areas shall be stabilized and planted to meet WDFW and local requirements upon completion of the project.
- Riprap shall be clean and durable, free from dirt, sand, clay, and rock fines.

- Unless authorized by WDFW, heavy equipment shall not enter the water and will be operated as far from the waters edge as possible. Impacts to bank and shoreline vegetation shall be limited to the maximum extent possible. Areas damaged by equipment or by placing of approach materials shall be stabilized or replanted where destroyed or damaged by equipment.
- Bank vegetation shall be protected during removal and storage of debris material. If vegetation is destroyed, the bank shall be immediately replanted upon completion of debris removal.

#### Water Quality BMPs

- The project will be designed to avoid or minimize impacts to waters of the State. There shall be no visible sheen from petroleum products in the receiving water as a result of project activities. Work in or near the waterway shall be done so as to minimize turbidity, erosion, other water quality impacts, and stream bed deformation. All construction debris and excess sediment shall be properly managed and disposed of so as to prevent it from entering the waterway or cause water quality degradation of State waters.
- All work in or near the water and water discharged from the site shall meet the State's Water Quality Standards, WAC 173-201A.

#### Concrete Handling BMPs

- All concrete shall be poured in the dry, or within confined waters not being dewatered to surface waters, and shall be allowed to cure for a minimum of seven days before contact with water. The waters of the State shall not come in contact with the concrete structure site while the concrete is curing. Any dewatering required from a contained area with curing concrete shall be discharged to land with no possible entry to surface waters. A separate area shall be set aside, that does not have any possibility of draining to surface water, for the wash out of concrete delivery trucks, pumping equipment, and tools.

#### Erosion Control BMPs

- All areas disturbed or newly created by the projects construction shall be stabilized as soon as possible to prevent erosion and shall comply with the Temporary Erosion and Sediment Control Plan. Periodic inspection and maintenance of all erosion control structures shall be conducted no less than every seven days. Additional inspections shall be conducted prior to and after expected rainfall events to ensure erosion control measures are in working condition. Any damaged structure will be immediately repaired. If it is determined that additional measures are needed to control storm water and erosion they shall be implemented immediately.

#### Hazardous Spill Prevention and Control BMPs

- No petroleum products, fresh cement or concrete, chemicals, or other toxic or deleterious materials shall be allowed to enter waters of the State. The discharge of oil, fuel, or

chemicals to waters of the State or onto land with potential for entry into State waters, is prohibited. No cleaning solvents or chemicals utilized for tool or equipment cleaning may be discharged to the ground or to waters of the State. All oil, fuel, or chemical storage tanks or containers shall be diked and located on impervious surfaces so as to prevent spills from escaping to surface waters or ground waters of the State. Waste liquids shall be stored under cover. Fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc. shall be checked regularly for drips or leaks, and shall be maintained and stored properly to prevent spills into State waters.

### **1.3 Description of the Action Area**

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 C.F.R. 402.02). The action area includes Coppei Creek and the surrounding riparian vegetation starting at the footprint of the farthest upstream setback levee, downstream through the footprint of the retaining walls, the bridge over SR 12, the temporary bridge, and the downstream setback levee. The precise downstream limit of the action area cannot be easily determined because the extent of the effects of the proposed action would vary according to flow stage.

## **2.0 ENDANGERED SPECIES ACT**

### **2.1 Biological Opinion**

#### **2.1.1 Status of Species**

##### **2.1.1.1 MCR Steelhead**

MCR steelhead were listed as a threatened species on March 25, 1999 (63 Fed. Reg. 14517). The MCR steelhead ESU includes streams and tributaries to the Columbia River above the Wind River in Washington and the Hood River in Oregon upstream to and including the Yakima River. It encompasses all naturally spawned populations of steelhead and their progeny. Excluded are the steelhead of the Snake River Basin.

All steelhead in the Columbia River Basin upstream of the Dalles Dam are summer-run (stream maturing), inland steelhead (Chapman et al. 1994). The sexually immature summer-run steelhead enter fresh water between May and October. Their pre-spawning migration can last up to one year. Steelhead adults in Washington typically spawn between February and June (Busby et al. 1996). Depending on water temperature, steelhead eggs may incubate in redds for 1.5 to 4 months before hatching as alevins (63 Fed. Reg. 13347; March 25, 1999). Most MCR steelhead smolt at two years and spend one to two years in saltwater before re-entering freshwater.

Steelhead require different habitat types during their life history. Spawning generally occurs in the gravel substrates of smaller streams and the side channels of larger rivers (Busby et al. 1996).

Rearing juvenile steelhead utilize a variety of instream cover, including riffles, mid-channel pools, pocket water, overhanging vegetation and large woody debris (LWD). Juveniles will generally occupy riffle areas during the summer, and pools in spring, fall, and winter (Wydoski and Whitney 1979). Further life history information can be found in the Notices of Proposed Rulemaking (61 Fed. Reg. 41541; August 9, 1996 and 63 Fed. Reg. 13347; March 25, 1999).

Estimates of historical (pre-1960's) abundance specific to this ESU are available for the Yakima River only, with an estimated run size of 100,000 (WDF et al. 1993). Assuming comparable run sizes for drainage area, the total historical run size for this ESU may have exceeded 300,000 (Busby et al. 1996). Total run sizes for the major stocks in the Columbia River above Bonneville Dam, including the Upper Columbia River, Lower Columbia River, and Snake River ESUs, were estimated as 4,000 winter steelhead and 210,000 summer steelhead in the early 1980's by Light (1987). Light estimated that 80 percent of this run was of hatchery origin.

High summer and low winter temperatures are limiting factors in many streams in this ESU (Bottom et al. 1985). There is little or no late summer flow in sections of the Umatilla and Walla Walla Rivers. Riparian vegetation is heavily impacted by overgrazing, other agricultural practices, timber harvest, road building, and channelization. Riparian restoration is needed for between 37 percent and 84 percent of river banks within this ESU (Busby et al. 1996). Instream habitat is also degraded by these factors, as well as by past gold dredging and severe sedimentation due to poor land management practices (Kuttel 2001).

Busby et al. (1996) computed population trends for 14 stocks in this ESU. Eight of these trends were significantly different than zero, with seven negative and one positive. However, estimates of total run size (based on dam counts) for this ESU show an overall increase in steelhead abundance, with a relatively stable naturally produced component. The John Day River represents the largest native, natural spawning stock in the region. Past and present hatchery practices pose a major threat to genetic integrity of MCR steelhead.

For the MCR steelhead ESU as a whole, NOAA Fisheries estimates that the median population growth rate ( $\lambda$ ) over the base period ranges from 0.88 to 0.75, decreasing as the effectiveness of hatchery fish spawning in the wild increases compared to that of fish of wild origin (Tables B-2a and B-2b in McClure et al. 2000). NOAA Fisheries has also estimated the risk of absolute extinction for four of the spawning aggregations, using the same range of assumptions about the relative effectiveness of hatchery fish. At the low end, assuming that hatchery fish spawning in the wild have not reproduced (i.e., hatchery effectiveness = 0), the risk of absolute extinction within 100 years ranges from zero for the Yakima River summer run to 100 percent for the Umatilla River and Deschutes River summer runs (Table B-5 in McClure et al. 2000). Assuming that the hatchery fish spawning in the wild have been as productive as wild-origin fish (hatchery effectiveness = 100 percent), the risk of absolute extinction within 100 years ranges from zero for the Yakima River summer run to 100 percent for the Deschutes River summer run (Table B-6 in McClure et al. 2000).

## 2.1.2 Evaluating the Proposed Actions

The standards for determining jeopardy are set forth in Section 7(a)(2) of the ESA as defined by 50 C.F.R. 402, et. seq. NOAA Fisheries must determine whether the action is likely to jeopardize the listed species. This analysis involves the initial steps of (1) defining the biological requirements of the listed species, and (2) evaluating the relevance of the environmental baseline to the species' current status.

Subsequently, NOAA Fisheries 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, NOAA Fisheries considers estimated level of mortality attributed to: (1) collective effects of the proposed or continuing action, (2) the environmental baseline, and (3) any cumulative effects. As a surrogate for estimating fish mortality for this BO, NOAA Fisheries has considered the extent of project effects on habitat listed salmon need to express certain essential behavior patterns. This evaluation must take into account measures for survival and recovery specific to the listed salmon's life stages that occur beyond the action area. NOAA Fisheries must identify any reasonable and prudent alternatives available for the action if it is determined that the action will jeopardize the listed species.

#### 2.1.2.1 Biological Requirements

The first step in the methods NOAA Fisheries uses for applying the ESA section 7(a)(2) to listed salmon 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 original decision to list the species for protection under the ESA. Additionally, the assessment will consider any new information or data that are relevant to the determination.

The relevant biological requirements are those necessary for the listed species to survive and recover to naturally reproducing population levels at which time protection under the ESA would be unnecessary. Species or ESUs not requiring ESA protection have the following attributes: population sizes large enough to maintain genetic diversity and heterogeneity, the ability to adapt to and survive environmental variation, and are self-sustaining in the natural environment.

The biological requirements for MCR steelhead include food (energy) source, flow regime, water quality, habitat structure, passage conditions (migratory access to and from potential spawning and rearing areas), and biotic interactions (Spence et al. 1996).

NOAA Fisheries has related the biological requirements for listed salmonids to a number of habitat attributes, or pathways, in the Matrix of Pathways and Indicators (MPI). These pathways (Water Quality, Habitat Access, Habitat Elements, Channel Condition and Dynamics, Flow/Hydrology, Watershed Conditions, Disturbance History, and Riparian Reserves) indirectly measure the baseline biological health of listed salmon populations through the health of their habitat. Specifically, each pathway is made up of a series of individual indicators (e.g. indicators

for Water Quality include Temperature, Sediment, and Chemical Contamination) that are measured or described directly (see NMFS 1996). Based on measurement or description, each indicator is classified within a category of the properly functioning condition (PFC) framework: (1) properly functioning, (2) at risk, or (3) not properly functioning. PFC condition is defined as “the sustained presence of natural habitat forming processes in a watershed that are necessary for the long-term survival of the species through the full range of environmental variation.”

Based on the best available information, NOAA Fisheries concludes that not all of the biological requirements of MCR steelhead are being met under the environmental baseline in this watershed including water quality and quantity, shoreline stability, and riparian vegetation. The status of the species is such that there must be substantial improvements in the environmental conditions to meet the requirements for long term survival and recovery of the species. Further degradation of these conditions could substantially reduce the likelihood of survival and recovery of the species due to the amount of risk they already face under the current environmental baseline.

#### 2.1.2.2 Environmental Baseline

The environmental baseline represents the current basal set of conditions to which the effects of the proposed action would be added. The term “environmental baseline” means “the past and present impacts of all Federal, state, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of state or private actions which are contemporaneous with the consultation in process” (50 C.F.R. 402.02).

Coppei Creek originates on the western slope of the Blue Mountains in southeast Washington, at an elevation of 1220 meters. The proposed project location is at about 400 meters in elevation. The North and South forks of Coppei Creek flow for a combined total of 29 kilometers before reaching the Touchet River near the city of Waitsburg.

The climate of the Coppei Creek area is predominantly dry and is characterized by wide seasonal variations in temperature, as well as geographical differences in precipitation. The average afternoon temperature in the summer is near 32° C, with nighttime temperatures between 15° and 20° C. In winter, average afternoon temperatures are around 1.5° C. Extremes of -27° to 45° have been recorded in the area. Annual precipitations in the area ranges from about 47 centimeters near Dayton to more than 100 centimeters in the Blue Mountains.

Flows in Coppei Creek are generally low in July through October and moderate to high in the late winter and early spring months. Intensive rainstorms, excessive snowmelt, or rain-on-snow events can cause high flows. Mendel et al. (2000) monitored stream flow conditions during the summer of 1999. Flows dropped below three cubic feet per second from mid-June through September.

The environmental baseline in the proposed project area has clearly been compromised due to channel straightening, urbanization, upstream agricultural practices, and upstream forest practices. Although the COE concluded that Coppei Creek is suitable for rainbow/steelhead trout, most environmental baseline indicators are either functioning at risk or not properly functioning. Of particular concern is the exceedance of maximum water temperature tolerances for steelhead. Portions of the action area have been identified on the State 303(d) list (Clean Water Act) for degraded temperature and fecal coliform parameters (WSDOE 1998).

### 2.1.3 Effect of the Proposed Action

The proposed construction of setback levees and retaining walls, bridge replacement, temporary bridge construction and removal, and all related construction activities are likely to adversely affect MCR steelhead. NOAA Fisheries' ESA implementing regulations define "effects of the action" as "the direct and indirect effects of an action on the species together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline" (50 C.F.R. 402.02). "Indirect effects" are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

#### 2.1.3.1 Direct Effects

Direct effects are the immediate effects of the project on the species or its habitat. Direct effects result from the agency action and include the effects of interrelated and interdependent actions. Future Federal actions that are not a direct effect of the action under consideration (and not included in the environmental baseline or treated as indirect effects) are not evaluated (USFWS and NMFS 1998).

##### 2.1.3.1.1 Turbidity

Removal of the existing bridge footings, installation of new footings, and other activities associated with this project would mobilize sediments and temporarily increase downstream turbidity levels. In the immediate vicinity of the construction activities (several hundred feet), the level of turbidity would likely exceed ambient levels by a substantial margin and potentially affect MCR steelhead.

For salmonids, turbidity has been linked to a number of behavioral and physiological responses (e.g., gill flaring, coughing, avoidance, increase in blood sugar levels) which indicate some level of stress (Bisson and Bilby 1982, Sigler et al. 1984, Berg and Northcote 1985, Servizi and Martens 1987). The magnitude of the stress responses is generally higher when turbidity is increased and particle size is decreased (Bisson and Bilby 1982, Servizi and Martens 1987, Gregory and Northcote 1993). Although turbidity may cause stress, Gregory and Northcote (1993) have shown that moderate levels of turbidity accelerate foraging rates among juvenile chinook salmon, likely because of reduced vulnerability to predators due to camouflaging.

When the particles causing turbidity settle out of the water column, they contribute to sediment on the riverbed (sedimentation). When sedimentation occurs, salmonids may be negatively impacted in the following ways: (1) salmonid eggs may be buried and suffocated, (2) prey habitat may be displaced, and (3) future spawning habitat may be displaced (Spence et al. 1996).

The proposed bridge replacement project would cause elevated turbidity levels during the instream construction period and for several days afterwards. However, the effects of this turbidity on MCR steelhead would be minimized by isolating the work area from the stream as described in section 1.2 above. Additionally, the BMPs in section 1.2 and the Terms and Conditions in section 2.2.3 of this BO should minimize the deleterious effects of sedimentation and turbidity. It is also expected that MCR steelhead present during the initial phases of construction would temporarily move to refuges where turbidity can be avoided, thus preventing injury or death. Additionally, the project work window will capitalize on a time of year when neither spawning fish nor redds are present.

NOAA Fisheries expects that turbidity and sedimentation caused by this action would be short lived, returning to baseline levels soon after construction is over. Furthermore, NOAA Fisheries expects that long term impacts would not occur. Other than the short term impacts mentioned above, this project would not change or add to existing baseline turbidity or sedimentation levels within Coppei Creek.

#### 2.1.3.1.2 Streambed and Bank Disturbance

The replacement of the SR 12 bridge over Coppei Creek would disturb the existing substrate present in the river and require a small amount of bank disturbance. The primary mechanism of disturbance would be the removal of the existing concrete footings from below the OHWM. The direct effect to MCR steelhead is expected to be minor. Because of the project work window, juvenile and young-of-the year MCR steelhead present in the action area should be capable of evacuating the action area while any residual effects are manifested.

#### 2.1.3.2 Indirect Effects

Indirect effects are caused by or result from the proposed action, are later in time, and are reasonably certain to occur. Indirect effects may occur outside of the area directly affected by the action. Indirect effects may include other Federal actions that have not undergone section 7 consultation but will result from the action under consideration. These actions must be reasonably certain to occur, or they are a logical extension of the proposed action.

#### 2.1.3.2.1 Floodplain Alteration

The proposed retaining walls and setback levees proposed for this project are intended to protect the City of Waitsburg from flood events. As such, the proposed project would probably decrease the floodplain capacity on the right bank of Coppei Creek. However, the left side of the floodplain in the action area is unconfined and should continue to serve as a hydraulically

functional floodplain as will the area between the channel and the setback levee on the right side of the Coppei Creek. Additionally, the current land use of the right side of the floodplain (beyond the proposed retaining walls) is residential housing, limiting the creeks natural floodplain. Therefore, the amount of functional floodplain lost as a result of this project is discountable.

#### 2.1.3.2.2 Riparian and Fisheries Habitat

The bridge replacement and retaining wall call for removal of primarily non-native and/or ornamental vegetation. This vegetation presently provides a lower level of riparian habitat functions such as shading and organic matter inputs to the stream. Therefore, the loss of riparian function in the action area should be minimal. Furthermore, few large trees will need to be removed for either the bridge replacement or the retaining wall construction. In addition, the proposed action calls for the affected areas to be seeded with native plant stock and riparian plantings, which should improve riparian function over time. The effects of these activities on MCR steelhead and aquatic habitat indicators will be minimized by these measures.

#### 2.1.3.3 Population Level Effects

Construction activities will result in short term effects on listed salmonids. Conservation measures and BMP's are expected to reduce the potential for harm to listed fish that would result from increased turbidity, streambed and bank disturbance, and riparian habitat removal. The action will adversely affect listed salmonids in the Action Area, but effects are not likely to adversely influence existing population trends or risks.

#### 2.1.4 Cumulative Effects

Cumulative effects are defined 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" (50 C.F.R. 402.2). Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

Land uses in the Touchet River basin are mostly agricultural. Intensive agriculture with its associated adverse impacts on salmonid habitat will continue. Cumulative effects from upland land use on conditions for MCR steelhead in Coppei Creek will continue to result directly from the manner in which agricultural practices are carried out in the basin. Therefore, cumulative effects on MCR steelhead would be expected to perpetuate existing trends.

#### 2.1.5 Conclusion

NOAA Fisheries has reviewed the direct, indirect, and cumulative effects of the proposed action on MCR steelhead and its habitat. NOAA Fisheries evaluated these effects in the light of existing conditions in the action area and the measures included in the action to minimize the

risk of effects. The proposed action is likely to cause short-term adverse effects on MCR steelhead by temporarily modifying habitat during in-water work and through riparian vegetation removal. These effects are reasonably certain to result in incidental take, but the extent of harm is likely to be minimized by specific measures included in the action. As a result, the effects of the action are unlikely to adversely influence the existing population trends or risks for MCR steelhead. Consequently, the proposed action is not likely to jeopardize the continued existence of MCR steelhead.

#### 2.1.6 Reinitiation of Consultation

This concludes formal consultation for the Coppei Creek Setback Levee and Bridge Replacement Project. Consultation must be reinitiated if: (1) the amount or extent of taking specified in the Incidental Take Statement is exceeded, or is expected to be exceeded; (2) new information reveals effects of the action may affect listed species in a way not previously considered; (3) the action is modified in a way that causes an effect on listed species that was not previously considered; or (4) a new species is designated that may be affected by the action (50 C.F.R. 402.16). To reinitiate consultation, the COE should contact the Habitat Conservation Division (Washington Branch Office) of NOAA Fisheries.

## 2.2 Incidental Take Statement

Section 9 of the ESA and Federal regulation pursuant to section 4 (d) of the Act prohibit the take of endangered and threatened species without special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Harm is further defined as significant habitat modification or degradation that results in death or injury to listed species by “significantly impairing behavioral patterns such as breeding, spawning, rearing, migrating, feeding, and sheltering” (50 C.F.R. 222.102). 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 takings is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the effects of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize take and sets forth terms and conditions with which the action agency must comply to implement the reasonable and prudent measures.

#### 2.2.1 Amount or Extent of the Take

NOAA Fisheries anticipates that the proposed action is reasonably certain to cause incidental take of MCR steelhead. Despite the use of the best scientific and commercial data available, NOAA Fisheries cannot estimate a specific amount of incidental take of individual fish. However, NOAA Fisheries believes that there are several mechanisms through which take of

MCR steelhead may occur. Harm could result during installation and construction activities (e.g., sediment mobilization, juvenile stranding). In the long term, harm through habitat modification could occur if the impact minimizing criteria (i.e., BMP's) are disregarded. The extent which these mechanisms could harm MCR steelhead have been discussed in the effects analysis in the BO.

### 2.2.2 Reasonable and Prudent Measures

The following reasonable and prudent measures (RPM's) are necessary and appropriate to minimize take of MCR steelhead. These RPM's are partially integrated into the BA and proposed project. NOAA Fisheries has included them here to provide further detail as to their implementation.

1. The COE will minimize the incidental take from construction activities at the SR 12 bridge replacement, by limiting the duration, timing and extent of in-water work.
2. The COE will minimize incidental take from construction activities in or near the creek by protecting water quality.
3. The COE will minimize incidental take by taking measures to minimize impacts to riparian and instream habitat or by replacing or restoring lost riparian and instream function.
4. The COE will minimize incidental take by requiring monitoring of all erosion control measures and plantings for site restoration during and following construction to meet criteria as described below in the terms and conditions.

### 2.2.3 Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the ESA, the COE must comply with the following terms and conditions, which implement the RPM's described above. Implementation of the terms and conditions within this BO will further reduce the risk of impacts to fish and their habitat. These terms and conditions are non-discretionary.

1. To implement RPM No. 1 (in-water work) above, the COE shall ensure that:

1.1 Passage shall be provided for both adult and juvenile forms of MCR steelhead throughout the construction period.

1.2 All work within the active channel of Coppei Creek will be completed between July 15th and September 30th. Staging plans for temporary waterway diversions will be submitted and approved by COE Environmental Staff prior to proceeding with associated in-water activities. Any additional extensions of the in-water work period will first be approved by, and coordinated with, NOAA Fisheries and WDFW.

1.3 All in-water work will be isolated by a cofferdam (sand bags), or the stream shall be routed through a culvert, to minimize the potential for sediment entrainment. If a cofferdam is used, any fish trapped in the isolation pool will be removed prior to dewatering, using NOAA Fisheries approved methods.

1.3.1 If possible, fish will be captured by seining under the supervision of a fishery biologist experienced in such efforts and all staff working with the seining operation must have the necessary knowledge, skills, and abilities to ensure the safe handling of all ESA-listed fish.

1.3.2 If seining is not possible, fish may be captured using electrofishing gear as described in NOAA Fisheries guidelines (NMFS 2000). No electrofishing may occur if water temperatures exceed 18° C, or are expected to rise above this temperature before concluding the capture.

1.3.3 ESA-listed fish must be handled with extreme care and kept in water to the maximum extent possible during capture and transfer procedures. The transfer of ESA-listed fish must be conducted using a sanctuary net that holds water during transfer, whenever necessary to prevent the added stress of an out-of-water transfer.

1.3.4 No fin clipping or use of anaesthetics is authorized for MCR steelhead.

1.3.5 Captured fish must be released in appropriate habitat, as near as possible to the capture site.

1.3.6 Within three months of any fish removal activities, the COE shall provide a report to NOAA Fisheries that contains all of the information for reporting take that is contained in the 2001 Washington Department of Fish and Wildlife Scientific Taking Permit application.

1.4 Alteration or disturbance of stream banks and existing riparian vegetation will be minimized. Where bank work is necessary, bank protection material shall be placed to maintain normal waterway configuration.

1.5 During excavation, native streambed materials will be stockpiled out of the two-year floodplain for later use in backfilling the trenches used to construct the coffer dams.

1.6 Any water diversions or withdrawals done for the purpose of supplying water for construction or for riparian plantings will comply with all state and federal laws, particularly those that require a temporary water right and fish screening of intakes. The COE shall be responsible for informing all contractors of their obligations to comply with existing, applicable statutes.

2. To implement RPM No. 2 (construction activities), the COE shall ensure that all erosion and pollution control measures included in the BA are included as special provisions in the Coppei Creek Setback Levee and Bridge Replacement contract. COE will prepare an erosion control plan (ECP). The ECP will outline how and to what specifications various erosion control devices will be installed to meet water quality standards, and will provide a specific inspection protocol and time response. Erosion control measures shall be sufficient to ensure compliance with applicable water quality standards and this BO. The ECP shall be maintained on site and shall be available for review upon request.

2.1 Effective erosion control measures shall be in-place at all times during the contract. Construction within the project vicinity will not begin until all temporary erosion controls (e.g., sediment barriers and containment curtains) are in place.

2.2 All exposed areas will be replanted with a native seed mix. Erosion control planting will be completed on all areas of bare soil within 14 days of completion of construction.

2.3 All equipment that is used for instream work will be cleaned prior to entering the two year floodplain. External oil and grease will be removed, along with dirt and mud. Untreated wash and rinse water will not be discharged into streams and rivers without adequate treatment.

2.4 Material removed during excavation shall only be placed in upland locations, at least 50 feet from the two year floodplain, where it cannot enter the permitted work area or any other waters of the state of Washington. Conservation of topsoil (removal, storage and reuse) will be employed.

2.5 Measures 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.

2.6 Project actions will follow all provisions of the Clean Water Act (40 C.F.R. Subchapter D).

2.7 The Contractor will develop an adequate, site-specific Spill Prevention and Countermeasure or Pollution Control Plan (PCP), and is responsible for containment and removal of any toxicants released. The Contractor will be monitored by the COE to ensure compliance with this PCP. The PCP shall include the following:

2.7.1 A site plan and narrative describing the methods of erosion/sediment control to be used to prevent erosion and sediment for contractor's operations related to disposal sites, borrow pit operations, haul roads, equipment storage sites, fueling operations, and staging areas.

2.7.2 Methods for confining and removing and disposing of excess construction materials, and measures for equipment washout facilities.

2.7.3 A spill containment and control plan that includes: Notification procedures; specific containment and clean up measures which will be available on site; proposed methods for disposal of spilled materials; and employee training for spill containment.

2.7.4 Measures to be used to reduce and recycle hazardous and non-hazardous waste generated from the project, including the following: Types of materials, estimated quantity, storage methods, and disposal methods.

2.7.5 The person identified as the Erosion and Pollutant Control Manager shall also be responsible for the management of the contractor's PCP.

2.8 Areas for fuel storage, refueling, and servicing of construction equipment and vehicles will be at least 50 meters from the stream channel and all machinery fueling and maintenance will occur within a contained area. Overnight storage of vehicles and equipment must also occur in designated staging areas.

2.9 Equipment refueling and storage areas will have hydrologic function restored (e.g., ripping or subsoiling) in areas where it has been degraded.

2.10 No surface application of nitrogen fertilizer will be used within 50 feet of any water body.

3. To implement RPM No. 3 (riparian habitat protection), the COE shall ensure that:

3.1 Alteration of native vegetation will be minimized. Where native vegetation will be altered, measures will be taken to ensure that roots are left intact. This will reduce erosion while still allowing room to work. No protection will be made of invasive exotic species (e.g. Himalayan blackberry), although no chemical treatment of invasive species will be used.

3.2 Riparian vegetation removed will be replaced with a native seed mix, shrubs, and trees. Replacement will occur within the project vicinity at a replanting ratio of 3:1.

4. To implement RPM No. 4 (monitoring), the COE shall ensure that:

4.1 Erosion control measures as described above in RPM No. 2 shall be monitored.

4.2 All significant riparian plantings will be monitored to ensure the following:

4.2.1 Finished grade slopes and elevations will perform the appropriate role for which they were designed.

4.2.2 Plantings are performing correctly and have an adequate success rate (success rate depends on the planting density, but the goal is to have a functional riparian vegetation community).

4.3 Failed plantings and structures will be replaced as warranted.

4.4 By December 31 of the year following the completion of construction, the COE shall submit to NOAA Fisheries (Washington Branch) a monitoring report with the results of the monitoring required in terms and conditions 4.1 to 4.3 above.

### **3.0 MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT**

#### **3.1 Background**

The MSA, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance EFH for those species regulated under a Federal fisheries management plan. Pursuant to the MSA:

- 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 (§305(b)(2));
- NOAA Fisheries must provide conservation recommendations for any Federal or State action that would adversely affect EFH (§305(b)(4)(A));
- Federal agencies must provide a detailed response in writing to NOAA Fisheries within 30 days after receiving EFH conservation recommendations. The response must 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 NOAA Fisheries EFH conservation recommendations, the Federal agency must explain its reasons for not following the recommendations (§305(b)(4)(B)).

EFH means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting this 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 (50 C.F.R. 600.10). Adverse effect means

any impact which reduces quality and/or quantity of EFH, and may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey or reduction in species fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 C.F.R. 600.810).

EFH consultation with NOAA Fisheries is required regarding any Federal agency action that may adversely affect EFH, including actions that occur outside EFH, such as certain upstream and upslope activities.

The objectives of this EFH consultation are to determine whether the proposed action would adversely affect designated EFH and to recommend conservation measures to avoid, minimize, or otherwise offset potential adverse effects to EFH.

### **3.2 Identification of EFH**

Pursuant to the MSA the Pacific Fisheries Management Council (PFMC) has designated EFH for three species of federally-managed Pacific salmon: chinook; 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 1999), 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, in part, on this information.

### **3.3 Proposed Actions**

The proposed action and action area are detailed above in Section 1.2 and 1.3 of this BO. The action area includes habitats that have been designated as EFH for various life-history stages of chinook and coho salmon.

### **3.4 Effects of Proposed Action**

As described in detail in Section 2.1.3 of this BO, the proposed action may result in short- and long-term adverse effects to a variety of habitat parameters. These adverse effects include sediment mobilization, increased turbidity, and disturbance to riparian vegetation.

### **3.5 Conclusion**

NOAA Fisheries concludes that the proposed action would adversely affect designated EFH for chinook and coho 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 to Federal agencies regarding actions which may adversely affect EFH. While NOAA Fisheries understands that the conservation measures described in the BA will be implemented by the COE, it does not believe that these measures are sufficient to address the adverse impacts to EFH described above. However, the Terms and Conditions outlined in Section 2.2.3 are generally applicable to designated EFH for chinook and coho salmon, and address these adverse effects. Consequently, NOAA Fisheries recommends that they be adopted as EFH conservation measures.

### **3.7 Statutory Response Requirement**

Pursuant to the MSA (§305(b)(4)(B)) and 50 C.F.R. 600.920(j), Federal agencies are required to provide a detailed written response to NOAA Fisheries' EFH conservation recommendations within 30 days of receipt of these recommendations. The response must include a description of measures proposed to avoid, mitigate, or offset the adverse impacts of the activity on EFH. In the case of a response that is inconsistent with the EFH conservation recommendations, the response must explain the reasons for not following the recommendations, including the scientific justification for any disagreements over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects.

### **3.8 Supplemental Consultation**

The COE must reinitiate EFH consultation with NOAA Fisheries if the proposed action is substantially revised in a manner that may adversely affect EFH, or if new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations (50 C.F.R. 600.920(k)).

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