UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
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Refer to NMFS No.: WCRO-2020-00237
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April 24, 2020

Curtis Bryan
Field Office Manager
U.S. Bureau of Land Management
915 N. Walla Walla Ave.
Wenatchee, Washington 98801

Re: Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion and Magnuson–Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the Enloe Dam Safety Repair and Maintenance Projects.

Dear Mr. Bryan:

Thank you for your letter dated February 12, 2020, requesting initiation of consultation with NOAA's National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act of 1973 (ESA) (U.S.C 1531 et seq.) for the Enloe Dam Safety Repair and Maintenance Project (Project). This consultation was conducted in accordance with the 2019 revised regulations that implement section 7 of the ESA (50 CFR 402, 84 FR 45016).

Thank you, also, for your request for consultation pursuant to the essential fish habitat (EFH) provisions in Section 305(b) of the Magnuson–Stevens Fishery Conservation and Management Act (MSA)(16 U.S.C. 1855(b)) for this action. We have included the results of that review in Section 3 of this document.

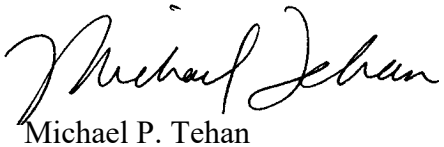
In this biological opinion (opinion), NMFS concluded that the proposed action is not likely to jeopardize the continued existence of ESA-listed Upper Columbia River steelhead (*Oncorhynchus mykiss*) or result in the destruction or adverse modification of their critical habitat. Rationale for our conclusions is provided in the attached opinion.

As required by Section 7 of the ESA, NMFS provided an incidental take statement (ITS) with the opinion. The ITS describes reasonable and prudent measures (RPMs) NMFS considers necessary or appropriate to minimize incidental take associated with these actions. The take statement sets forth nondiscretionary terms and conditions, including reporting requirements that the federal agency and any person who performs the action must comply with to carry out the RPMs. Incidental take from actions that meet these terms and conditions will be exempt from the ESA take prohibition.

This document also includes the results of our analysis of the action's effects on EFH pursuant to section 305(b) of the Magnuson–Stevens Fishery Conservation and Management Act (MSA), and includes one Conservation Recommendation to avoid, minimize, or otherwise offset potential adverse effects on EFH. This Conservation Recommendation is identical to the ESA Term and Condition. Section 305(b)(4)(B) of the MSA requires federal agencies provide a detailed written response to NMFS within 30 days after receiving this recommendation.

Please contact Justin Yeager of the Columbia Basin Branch at (509) 962-8911 x805 or electronic mail at justin.yeager@noaa.gov if you have any questions concerning this consultation, or if you require additional information.

Sincerely,



Michael P. Tehan
Assistant Regional Administrator
Interior Columbia Basin Area Office
NOAA Fisheries, West Coast Region

Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion and Magnuson–Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation

Enloe Dam Safety Repair and Maintenance

NMFS Consultation Number: WCRO-2020-00237

Action Agency: U.S. Bureau of Land Management

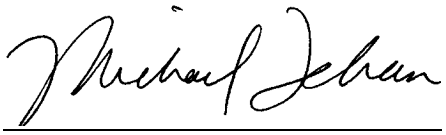
Affected Species and Determinations:

ESA-Listed Species	Status	Is Action Likely to Adversely Affect Species?	Is Action Likely To Jeopardize the Species?	Is Action Likely To Adversely Affect Critical Habitat?	Is Action Likely To Destroy or Adversely Modify critical habitat?
Upper Columbia River steelhead	Threatened	Yes	No	Yes	No

Fishery Management Plan That Describes EFH in the Project Area	Does Action Have an Adverse Effect on EFH?	Are EFH Conservation Recommendations Provided?
Pacific Coast salmon	Yes	Yes

Consultation Conducted By: National Marine Fisheries Service, West Coast Region

Issued By:



Michael P. Tehan
Assistant Regional Administrator

Date: April 24, 2020

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ACRONYM GLOSSARY

7-DADMax	7-Day Average of the Daily Maximum Temperature
BA	Biological Assessment
BLM	U.S. Bureau of Land Management
CFR	Code of Federal Regulations
Corps	U.S. Army Corps of Engineers
CTCR	Confederated Tribes of the Colville Reservation
DMMP	Dredged Material Management Program
DPS	Distinct Population Segment
DQA	Data Quality Act
Ecology	Washington State Department of Ecology
EFH	Essential Fish Habitat
ESA	Endangered Species Act
FR	Federal Register
HUC	Hydrologic Unit Code
ICTRT	Interior Columbia Basin Technical Recovery Team
ISAB	Independent Scientific Advisory Board
ITS	Incidental Take Statement
MSA	Magnuson–Stevens Fishery Conservation and Management Act
NMFS	National Marine Fisheries Service
OHWM	Ordinary High Water Mark
opinion	Biological Opinion
OPUD	Okanogan County Public Utility District No. 1
PBF	Physical and Biological Feature
PCE	Primary Constituent Element
PE	Project Element
Project	Elmway Levee and Okanogan River Levees Projects
RM	River Mile
ROW	Right-of-Way
RPM	Reasonable and Prudent Measure
RTT	Regional Technical Team
U.S.C.	United States Code
UCR	Upper Columbia River
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington State Department of Fish and Wildlife

1. INTRODUCTION

This Introduction section provides information relevant to the other sections of this document and is incorporated by reference into Sections 2 and 3 below.

1.1 Background

The National Marine Fisheries Service (NMFS) prepared the biological opinion (opinion) and incidental take statement (ITS) portions of this document in accordance with section 7(b) of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531 et seq.), and its implementing regulations at 50 CFR 402, as amended.

We also completed an essential fish habitat (EFH) consultation on the proposed action, in accordance with section 305(b)(2) of the Magnuson–Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. 1801 et seq.) and implementing regulations at 50 CFR 600.

We completed pre-dissemination review of this document using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (DQA) (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The document will be available within 2 weeks at the NOAA Library Institutional Repository [https://repository.library.noaa.gov]. A complete record of this consultation is on file at the Columbia Basin Branch field office in Ellensburg, Washington.

1.2 Consultation History

On December 4, 2019, the U.S. Bureau of Land Management (BLM), NMFS, United States Fish and Wildlife Service (USFWS), Okanogan County Public Utility District No. 1 (OPUD), and Tetra Tech participated in a conference call to discuss the Enloe Dam safety repair proposal, lead agency coordination, and drafting a biological assessment (BA). On February 12, 2020, the BLM requested consultation on actions relating to the Enloe Dam Safety and Maintenance Project (Project). The Project includes actions on BLM-administered lands, as well as within waters of the United States administered by the U.S. Army Corps of Engineers (Corps). The BLM is acting as the lead federal agency for this proposed action. On February 28, 2020, NMFS sent a letter to the BLM requesting additional information. On March 9, 2020, the BLM sent a revised BA and NMFS initiated consultation at that time.

1.3 Proposed Action

"Action" means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by federal agencies (50 CFR 402.02).

Enloe Dam and its associated power facilities were acquired by the OPUD in 1942. The OPUD's license to operate Enloe Dam was surrendered in 2019, at which point oversight of dam safety reverted to the Washington State Department of Ecology (Ecology). Ecology requires safety inspections of the dam; in this case, those will be performed by the OPUD.

The BLM proposes to issue a right-of-way (ROW) permit to the OPUD to access Enloe Dam and conduct safety or dam inspections. The proposed action includes the following activities: 1) widening of an existing access road and work bench construction; 2) removal of a historic penstock and installation of a new outfall for penstock flow to de-water Enloe Dam; and 3) ongoing road use and maintenance. The in-water activities associated with the proposed action will be administered under a Corps Nationwide Permit 3, and include penstock operation and fish salvage activities.

1.3.1 Access Road Widening and Work Bench Construction

Access Road

The OPUD will modify an existing access road on the northwest (right, looking downstream) bank of the Similkameen River below Enloe Dam, to make it accessible for heavy construction equipment (such as a 50-ton crane) and to transport materials and other equipment. This access road is currently closed to vehicles and is only administratively open to the OPUD under their existing ROW permit. This access road occupies a historic railroad grade, which is also used as a non-motorized trail. The existing access road is approximately 135 feet from the banks of the Similkameen River.

- The existing road leading to the western (right) dam abutment will be widened, in places, from approximately 10 feet of running surface to 10 feet of running surface with 10 feet of cleared area on either side, for 1.86 miles. Clearing this widened ROW will require removal of vegetation and minor grading within 10 feet on either side of the existing 10-foot-wide running surface (approximately 7 acres of ground disturbance).
- The access road will also be extended approximately 0.25 miles upstream (north) of the dam by converting a historic railroad berm to a road. The new road will not be graveled any more than what is authorized under the OPUD's existing ROW permit, approximately 10 feet in width. Approximately 0.8 acres of potential ground disturbance will occur associated with this road extension which would be used for staging and temporary material storage.
- Three turnouts will be constructed along the access road, disturbing approximately 0.16 acres in addition to disturbance detailed above. Disturbed areas will be cleared of vegetation and graveled, as necessary.
- The OPUD will install a temporary bridge directly over an existing wooden bridge over Ellemeham Draw (intermittent tributary to Similkameen River), near the dam, to protect the current wooden bridge and increase load carrying capacity. This will require adding a small amount (less than 15 cubic yards) of fill material on the existing access road to ramp up to the temporary bridge, but will not require installation of new footings, or any in-channel work. This temporary bridge will be no more than 20 feet wide. The temporary bridge and fill approaches will be removed following construction. A small washout area along the east side of the access road will be widened here to allow access and to install the temporary bridge.

- A rocky knob near the upstream end of the penstock that protrudes into the roadway area will be excavated back (without using blasting), increasing the total disturbance footprint by approximately 1,400 ft^2 to provide better access to the right abutment of the dam.
- All changes to the access road, turnouts, extension, and improvements will be maintained by the OPUD. The BLM will provide a ROW expiration date that will coincide with the dam's expiration date of 2068 (48 years). Maintenance will occur only within the disturbance footprint (access road, work bench, work bench access road, and penstock areas). Maintenance will not increase the footprint of disturbance, remove additional trees, or extend outside of the ROW. This disturbance area will not be restored to its historic condition (upland shrub-steppe and forest) during the life of the ROW.
- The OPUD or the BLM will use herbicide to control non-native species in the access road area and work bench area. Chemicals used will be from a list of BLM-approved and analyzed herbicides and adjuvants and covered under NMFS' 2007 biological opinion (National Marine Fisheries Service 2007b). Herbicides and adjuvants will be applied at least 50 feet from the active channel of the Similkameen River or other flowing water.

Work Bench and Work Bench Access Road

The OPUD will construct a permanent work bench to allow a large crane or other maintenance and construction equipment to access the penstock and adjacent construction areas. This bench will be needed for removing the old penstocks and in setting new dewatering pipes in place; it will be maintained for future project maintenance.

- The OPUD will excavate a work bench approximately 60 feet by 14 feet. This work will clear approximately 0.1 acres of upland shrub-steppe habitat, approximately 70 feet slope distance from the banks of the Similkameen River. Gravel will be installed on the bench surface to reduce erosion and compaction.
- A new access road will be developed from the existing road to the work bench, at approximately 12 percent grade. This new road will be approximately 330 feet long, with a 12-foot running surface and approximately 30-foot-wide total disturbance footprint, totaling 0.1 acres total new permanent disturbance.
- For both access road clearing and work bench development, approximately 10 trees will be removed. These trees are less than 20 inches in diameter, primarily ponderosa pine, and occur over 50 vertical feet and 75 horizontal feet from the banks of the Similkameen River.

Spoils

The OPUD will store spoils created in access and work bench road construction on-site. This will help reduce the amount of materials disposed off-site and minimize the total number of construction vehicle trips. The total amount of spoils will be up to 3,625 cubic yards. Spoils will be stored in a disturbed upland shrub-steppe area, approximately 125 feet slope distance above the banks of the Similkameen River, on the uphill side of the access road. The spoils pile will be

approximately 175 feet by 170 feet by 3 feet in height, covering approximately 0.8 acres. The OPUD will stabilize and re-vegetate this disturbed area with native vegetation.

1.3.2 Penstock Modification

Penstock Modification

The OPUD will replace a portion of an existing non-functional penstock with new dewatering pipes to divert water around Enloe Dam and allow safety inspections.

- The OPUD will remove and salvage approximately 200 feet of an existing 7-foot-diameter wood stave penstock. This historic penstock is currently in place downstream of the right abutment at the dam at an elevation approximately 60 feet above the banks of the river. The OPUD will remove debris from inside the intake gates and steel pipe thimbles at the downstream side of the right abutment. No work will occur within the 2-year floodplain of the Similkameen River.
- The OPUD will install reinforced concrete footings and foundation saddle supports for the new steel penstocks downstream of the dam along the northwest (right) bank. Construction will occur within the footprint of the historic penstock.
- The OPUD will connect two new 82-inch-diameter steel dewatering pipes to the existing right bank intake structure and follow the alignment of the existing wood stave penstocks. Work will be accomplished from the work pad using a large crane. Dewatering pipes will have a 5-foot outlet drop onto a rocky shelf, descending approximately 75 feet slope distance into the tailrace area (between the dam and Similkameen Falls (sometimes called Coyote Falls). Flows exiting this outfall will fall on existing bedrock.
- No below-dam in water work will be required for penstock replacement.

1.3.3 Ongoing Road Use and Maintenance

The OPUD will use and maintain the access road to Enloe Dam for the next 48 years, which is the duration of the ROW permit. It is expected that occasional road grading will occur, as well as occasional road use over 48 years. All road use will be along the existing road, no new road construction will occur and the disturbance footprint is not expected to change.

1.3.4 Penstock Operation

The proposed action also include actions within the banks (2-year floodplain) of the Similkameen River within the action area required to operate the newly installed dewatering pipes and inspect the downstream face of Enloe Dam. These activities will include (1) upstream penstock construction, (2) diversion operations, and (3) fish exclusion and salvage activities. Each of these is described below.

Upstream Intake Construction

The OPUD will install sheet piling parallel to the face of the existing intake structure to create a dry intake cell. They will then remove material from inside the cell and transport it to the spoils

storage area. The sheet piling will extend less than 50 feet into the reservoir above the dam, touching the upstream face of the dam. No dredging will be required for sheet piling installation. The existing gates will be removed, and new sliding gates installed in the dry.

Diversion Operations

Dewatering activities will be scheduled to meet dam safety inspection schedules and coincide with appropriate river flows. Initial operation will include an initial flushing at high flows. Once the initial flushing is completed, the OPUD will likely release flows during safety inspections and then yearly during maintenance operations to prevent sediment build up. New dewatering pipes will be able to release a maximum of 1,000 cfs when both gates are in full operation. Once the project is completed and the OPUD is able to divert water around the dam, dam safety inspection periods will be scheduled to occur during lower flows and will be of short duration (e.g., from 1 day to less than 1 week) depending on flows and type of inspection needed. These flows will be delivered to the tailrace section below the dam and above the crest of Similkameen Falls, mixing with any over-dam flow when present (high flow releases) or temporarily forming the downstream flow during late summer dewatering and dam safety inspection periods.

- Initial penstock release will occur during spring high flows. Up to 1,000 cfs will be released through the new dewatering pipes back into the Similkameen River overtopping flows of 10,000 to 20,000 cfs. Decision on times of release will be based on predicted high flows for the Okanogan River and the stream gage at the town of Nighthawk (approximately 9 miles upstream of the dam).
- Dam inspection will occur at low flows during the in-water work period for areas below the dam, July 1 to August 31. Over-dam flows at this time period are generally 600 to 1,000 cfs and will need to be less than 1,000 cfs to allow inspection. The decision on times of release for low flow periods will be based on predictions from Nighthawk station and weather reports. Low-water releases will be performed during late summer to early fall and inspections will last less than 1 week. After the initial inspection, the OPUD anticipates it will need to conduct a dam safety inspection every 5 years, depending on initial inspection results. These 5-year inspections will be conducted for the length of the ROW (48 years), resulting in approximately nine inspections by 2068.
- The OPUD will perform gate and dewatering pipe maintenance to prevent build-up of sediment upstream of gates. Annual maintenance will include operating each gate through its full range of motions every 12 months to ensure gate effectiveness and to minimize buildup of sediment upstream of the gates. It is anticipated that each gate will be opened a minimum of once per year but no more than twice per year for maintenance activities.

Fish Exclusion and Salvage

The OPUD will remove residual water from areas below Enloe Dam in the inspection area following de-watering, to facilitate visual inspection of the dam face. This will require removal of residual water and conducting a fish exclusion and salvage program. Fish removal will occur between the toe of the dam and the top of the falls with the focus on pools and ponded areas, and

areas within scoured rock rivulets in the tailrace area where fish could strand. The removal area will be approximately 200 feet wide by 300 feet long, less than 1.5 acres in total size. The OPUD will perform pool clearing using hand nets if possible; electro-shocking will be a last resort to remove fish. Fish removal will occur in coordination with regulatory agencies [Washington Department of Fish and Wildlife (WDFW) and NMFS] and partners (Colville Confederated Tribes and BLM). Depending on flows, dam safety inspections and fish exclusion/salvage will be scheduled to occur during the in-water work period (July 1–August 31) and after juvenile steelhead emergence. If flows did not allow safe inspection by the end of August, the OPUD will coordinate with WDFW and NMFS for an extension of in-water work.

1.3.5 Conservation Measures for Anadromous Fishes

The BLM has proposed a suite of conservation measures designed to minimize effects on UCR steelhead and UCR steelhead critical habitat. The OPUD will implement these conservation measures during construction, and relevant measures will be included in the BLM-issued ROW. The OPUD will also follow all other permit requirements and conditions issued by Corps and other permitting agencies.

1.3.6 Timeline

The proposed action will break ground (begin site preparation) beginning in the fall of 2020, permitting allowing. In-water work will occur in spring 2021 intermittently through September 2022. The initial opening of the new gates will occur during high flows in late May-early June of 2022 with the dam inspection scheduled for fall 2022.

2. ENDANGERED SPECIES ACT: BIOLOGICAL OPINION AND INCIDENTAL TAKE STATEMENT

The ESA establishes a national program for conserving threatened and endangered species of fish, wildlife, plants, and the habitat upon which they depend. As required by section 7(a)(2) of the ESA, each federal agency must ensure that its actions are not likely to jeopardize the continued existence of endangered or threatened species, or adversely modify or destroy their designated critical habitat. Per the requirements of the ESA, federal action agencies consult with NMFS and section 7(b)(3) requires that, at the conclusion of consultation, NMFS provide an opinion stating how the agency's actions would affect listed species and their critical habitats. If incidental take is reasonably certain to occur, section 7(b)(4) requires NMFS to provide an ITS that specifies the impact of any incidental taking and includes non-discretionary reasonable and prudent measures (RPMs) and terms and conditions to minimize such impacts.

2.1 Analytical Approach

This biological opinion includes both a jeopardy analysis and an adverse modification analysis. The jeopardy analysis relies upon the regulatory definition of "jeopardize the continued existence of" a listed species, which is "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50

CFR402.02). Therefore, the jeopardy analysis considers both survival and recovery of the species.

This biological opinion relies on the definition of "destruction or adverse modification," which "means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species" (50 CFR 402.02).

The designation(s) of critical habitat for (species) use(s) the term primary constituent element (PCE) or essential features. The 2016 critical habitat regulations (50 CFR 424.12) replaced this term with physical or biological features (PBFs). The shift in terminology does not change the approach used in conducting a "destruction or adverse modification" analysis, which is the same regardless of whether the original designation identified PCEs, PBFs, or essential features. In this biological opinion, we use the term PBF to mean PCE or essential feature, as appropriate for the specific critical habitat.

The 2019 regulations define effects of the action using the term "consequences" (50 CFR 402.02). As explained in the preamble to the regulations (84 FR 44977), that definition does not change the scope of our analysis and in this opinion we use the terms "effects" and "consequences" interchangeably.

We use the following approach to determine whether a proposed action is likely to jeopardize listed species, or destroy or adversely modify critical habitat:

1. Evaluate the range-wide status of the species and critical habitat expected to be adversely affected by the proposed action.
2. Evaluate the environmental baseline of the species and critical habitat.
3. Evaluate the effects of the proposed action on species and their habitat using an exposure-response approach.
4. Evaluate cumulative effects.
5. In the integration and synthesis, add the effects of the action and cumulative effects to the environmental baseline, and, in light of the status of the species and critical habitat, analyze whether the proposed action is likely to: (1) directly or indirectly reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species; or (2) directly or indirectly result in an alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.
6. If necessary, suggest a reasonable and prudent alternative to the proposed action.

2.2 Range-wide Status of the Species and Critical Habitat

This opinion examines the status of each species that would be adversely affected by the proposed action. The status is determined by the level of extinction risk that the listed species face, based on parameters considered in documents such as recovery plans, status reviews, and listing decisions. This informs the description of the species' likelihood of both survival and recovery. The species status section also helps to inform the description of the species' current "reproduction, numbers, or distribution" as described in 50 CFR 402.02.

The opinion also examines the condition of critical habitat throughout the designated area, evaluates the conservation value of the various watersheds and coastal and marine environments that make up the designated area, and discusses the current function of the essential PBFs that help to form that conservation value.

2.2.1 Status of the Species

For Pacific salmon, steelhead, and other relevant species, NMFS commonly uses four parameters to assess the viability of the populations that, together, constitute the species: spatial structure, diversity, abundance, and productivity (McElhany et al. 2000). These "viable salmonid population" criteria therefore encompass the species' "reproduction, numbers, or distribution" as described in 50 CFR 402.02. When these parameters are collectively at appropriate levels, they maintain a population's capacity to adapt to various environmental conditions and allow it to sustain itself in the natural environment. These attributes are influenced by survival, behavior, and experiences throughout a species' entire life cycle, and these characteristics, in turn, are influenced by habitat and other environmental conditions.

"Spatial structure" refers both to the spatial distributions of individuals in the population and the processes that generate that distribution. A population's spatial structure depends fundamentally on habitat quality and spatial configuration, and the dynamics and dispersal characteristics of individuals in the population.

"Diversity" refers to the distribution of traits within and among populations. These range in scale from DNA sequence variation at single genes to complex life history traits (McElhany et al. 2000).

"Abundance" generally refers to the number of naturally produced adults (i.e., the progeny of naturally spawning parents) in the natural environment (e.g., on spawning grounds).

"Productivity," as applied to viability factors, refers to the entire life cycle (i.e., the number of naturally spawning adults produced per parent). When progeny replace or exceed the number of parents, a population is stable or increasing. When progeny fail to replace the number of parents, the population is declining. McElhany et al. (2000) use the terms "population growth rate" and "productivity" interchangeably when referring to production over the entire life cycle. They also refer to "trend in abundance," which is the manifestation of long-term population growth rate. For species with multiple populations, once the biological status of a species' populations has been determined, NMFS assesses the status of the entire species using criteria for groups of populations, as described in recovery plans and guidance documents from technical recovery teams. Considerations for species viability include having multiple populations that are viable, ensuring that populations with unique life histories and phenotypes are viable, and that some viable populations are both widespread to avoid concurrent extinctions from mass catastrophes and spatially close to allow functioning as metapopulations (McElhany et al. 2000).

The summary that follows describe the status of the ESA-listed species, and their designated critical habitats that are considered in this opinion. More detailed information on the status and trends of these listed resources, and their biology and ecology, are in the listing regulations and

critical habitat designations published in the Federal Register (FR) (Table 1) and in the most recent 5-year status review (National Marine Fisheries Service 2016), as well as applicable recovery plans and 5-year status reports. These additional documents are incorporated by reference (National Marine Fisheries Service 2011a; National Marine Fisheries Service 2016; Upper Columbia Salmon Recovery Board 2007). These additional documents are incorporated by reference.

Table 1. Listing status, status of critical habitat designations and protective regulations, and relevant Federal Register (FR) decision notices for ESA-listed species considered in this consultation. Listing status: 'T' means listed as threatened; 'E' means listed as endangered.

Species	Listing Status	Critical Habitat	Protective Regulations
Steelhead (*O. mykiss*)			
Upper Columbia River	Revised T 1/05/2006; 71 FR 834 Original E 8/18/1997; 62 FR 43937	9/02/05; 70 FR 52630	2/01/06; 71 FR 5178

Upper Columbia River Steelhead

The Upper Columbia River (UCR) steelhead Distinct Population Segment (DPS) was listed as endangered on August 18, 1997 (62 FR 43937), and their status was upgraded to threatened on January 5, 2006 (71 FR 834). The threatened status was affirmed on August 15, 2011, after a 5-year status review (76 FR 50448) and again on May 26, 2016, after a 5-year status review (81 FR 33468). The UCR steelhead DPS includes all naturally spawned populations of steelhead in streams in the Columbia River Basin upstream from the Yakima River, Washington, to the United States–Canada border (62 FR 43937). There are four populations of UCR steelhead included in this DPS—the Wenatchee, Entiat, Methow, and Okanogan. Six artificial propagation programs are considered part of the DPS: the Wenatchee River, Wells Hatchery in the Methow and Okanogan rivers, Winthrop National Fish Hatchery, Omak Creek, and the Ringold steelhead hatchery programs.

The life-history pattern of steelhead in the Upper Columbia is complex (Peven et al. 1994). Adults return to the Columbia River in the late summer and early fall. Unlike spring-run Chinook salmon, most steelhead do not move up quickly to tributary spawning streams. A portion of the returning run overwinters in the mainstem reservoirs, passing over the Upper Columbia dams in April and May of the following year. Spawning occurs in the late spring. Juvenile steelhead generally spend 1 to 3 years rearing in freshwater before migrating to the ocean, but have been documented spending up to 7 years in freshwater before migrating. Most adult steelhead return to the Upper Columbia after 1 or 2 years at sea.

Abundance and Productivity. Both abundance and productivity characteristics remain at "high" risk for three of the four populations in this DPS (Table 2). Although UCR steelhead populations have increased in natural origin abundance in recent years, productivity levels remain low, except for the Wenatchee population. The proportions of hatchery origin returns in natural

spawning areas remain extremely high across the DPS, especially in the Methow and Okanogan river populations, 76 percent and 87 percent respectively (National Marine Fisheries Service 2014; Northwest Fisheries Science Center 2015). The modest improvements in natural returns in recent years are primarily the result of several years of relatively good survival in the ocean and tributary habitats.

Table 2. Summary of the Upper Columbia River steelhead population status and Interior Columbia Basin Technical Recovery Team viability criteria.

	Abundance and Productivity Metrics				Spatial Structure and Diversity Metrics			Rating
Population	Minimum Abundance Target	Natural Spawning Abundance 2009–2018*	Productivity (returns-per-spawner) 2005–2014	Integrated Abundance/ Productivity Risk	Natural Process Risk	Diversity Risk	Integrated Spatial Structure/ Diversity Risk	Overall Viability Rating
Wenatchee	1000	931	1.207	Low	Low	High	High	Maintained
Methow	1000	738	0.371	High	Low	High	High	High Risk
Entiat	500	140	0.434	High	Moderate	High	High	High Risk
Okanogan	500	227	0.154	High	High	High	High	High Risk

*Washington Department of Fish and Wildlife Salmon Stock Inventory (WDFW SaSI) wild salmonid population website, accessed 2020.

Spatial Structure and Diversity. The integrated spatial structure and diversity risk ratings for all four populations of UCR steelhead are at "high" risk. These ratings are largely driven by chronic high levels of hatchery spawners of 42 to 87 percent (Table 3) within natural spawning areas, and lack of genetic diversity among the populations. The relative effectiveness of hatchery origin spawners and the long-term impact on productivity of high levels of hatchery contribution to natural spawning are key uncertainties for these populations (Ford 2011; National Marine Fisheries Service 2014; Northwest Fisheries Science Center 2015).

Table 3. Estimate of hatchery origin spawning escapement for Upper Columbia River steelhead populations.

	Percent Hatchery Origin (5-year average)		
Population	2000 to 2004	2005 to 2009	2010 to 2014
Wenatchee	66	62	42
Entiat	76	76	69
Methow	89	85	76
Okanogan	94	91	87

The UCR steelhead DPS is not currently meeting the viability criteria [adapted from the Interior Columbia Basin Technical Recovery Team (ICTRT)] of the Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan. Overall, the viability of the UCR steelhead DPS has likely improved somewhat since the last status review, but the DPS is still in a condition that, but for continued hatchery supplementation, places it at "high" risk of extinction (Ford 2011; Northwest Fisheries Science Center 2015) in the next 100 years (Table 4).

Table 4. Matrix used to assess the status of Upper Columbia River steelhead populations across Viable Salmonid Population parameters or attributes.

Risk Rating for Abundance/Productivity	Risk Rating for Spatial Diversity: Very Low	Low	Moderate	High
Very Low (<1%)	High Viable	Highly Viable	Viable	Maintained
Low (1–5%)	Viable	Viable	Viable	Maintained ***Wenatchee***
Moderate (6–25%)	Maintained	Maintained	Maintained	High Risk
High (>25%)	High Risk	High Risk	High Risk	High Risk ***Entiat Methow Okanogan***

Limiting factors for Upper Columbia River steelhead. The UCR steelhead DPS continues to experience many problems that limit their productivity, and hence the ability to recover to a non-threatened level. The most significant factors limiting productivity of these species include: (1) mainstem Columbia River hydropower adverse effects (i.e., modified hydrograph, increase in lentic conditions/decrease in riverine conditions—passage barriers, stream temperature, dissolved oxygen problems, and invasive species); (2) riparian degradation and large wood recruitment; (3) altered floodplain connectivity and function; (4) altered channel structure and complexity; (5) reduced streamflow; 6) hatchery-related adverse effects; and 7) predation and competition (National Marine Fisheries Service 2011b).

Recovery Plan. In 2007, NMFS adopted a recovery plan for UCR steelhead that was developed by the Upper Columbia Salmon Recovery Board. The Upper Columbia Salmon Recovery Plan's overall goal is "to achieve recovery and delisting of steelhead by ensuring the long-term persistence and viable populations of naturally produced fish distributed across their native range." The recovery plan outlined specific recovery actions that were intended to reduce threats associated with land and water management activities in the Upper Columbia Basin. These actions were to address primary threats associated with population abundance, productivity, spatial structure, and diversity. The UCR Regional Technical Team (RTT) identified habitat concerns in the Similkameen River that included water quality (temperature), sediment conditions, and predation as a few of the concerns. They recommended trying to address these concerns by trying to restore watershed processes, such as restoring side channels, adding spawning gravels, studying predation, and restoring riparian areas (Upper Columbia Regional Technical Team 2014).

Summary. Although the abundance of steelhead in the Upper Columbia has increased, the improvement has been minor and none of the populations have achieved recovery criteria established in their respective recovery plans. In addition, all populations remain at high risk in their overall viability rating and risk of extinction (National Marine Fisheries Service 2011a; Northwest Fisheries Science Center 2015).

2.2.2 Status of Critical Habitat

This section examines the status of designated critical habitat affected by the proposed action by examining the condition and trends of PBFs throughout the designated areas. These features are essential to the conservation of the listed species because they support one or more of the species' life stages (e.g., sites with conditions that support spawning, rearing, migration, and foraging).

For salmon and steelhead, NMFS ranked watersheds within designated critical habitat at the scale of the HUC5 in terms of the conservation value they provide to the listed species they support. The conservation rankings are high, medium, or low. To determine the conservation value of each watershed to species viability, NMFS' critical habitat analytical review teams evaluated:

1) The quantity and quality of habitat features (e.g., spawning gravels, wood and water condition, side channels).
2) The relationship of the area compared to other areas within the species' range.
3) The significance of the population occupying that area to the species' viability criteria.

Thus, even a location that has poor quality habitat could be ranked as a high conservation value, if it were essential due to factors such as limited availability (e.g., one of a very few spawning areas), a unique contribution of the population it served (e.g., a population at the extreme end of geographic distribution), or the fact that it serves another important role (e.g., obligate area for migration to upstream spawning areas).

The following table describes the PBFs of the habitat types within the full range of habitat designated as critical for the listed salmonid species. Range-wide, all habitat types are impaired to some degree, even though many of the watersheds comprising the fully designated area are ranked as providing high conservation value. The proposed action, however, affects only freshwater habitats.

Table 5. Physical and biological features of critical habitats designated for ESA-listed steelhead considered in this opinion.

Physical and Biological Features		
Site Type	**Site Attribute**	**Species Life History Event**
Freshwater spawning	Substrate Water quality Water quantity	Adult spawning Embryo incubation Alevin growth and development
Freshwater rearing	Floodplain connectivity Forage Natural cover Water quality Water quantity	Fry emergence from gravel Fry/parr/smolt growth and development
Freshwater migration	Free of artificial obstruction Natural cover Water quality Water quantity	Adult sexual maturation Adult upstream migration and holding Kelt (steelhead) seaward migration Fry/parr/smolt growth, development, and seaward migration

Physical and Biological Features		Species Life History Event
Site Type	**Site Attribute**	
Estuarine areas	Forage Free of artificial obstruction Natural cover Salinity Water quality Water quantity	Adult sexual maturation and "reverse smoltification" Adult upstream migration and holding Kelt (steelhead) seaward migration Fry/parr/smolt growth, development, and seaward migration
Nearshore marine areas	Forage Free of artificial obstruction Natural cover Water quantity Water quality	Adult growth and sexual maturation Adult spawning migration Nearshore juvenile rearing
Offshore marine areas	Forage Water quality	Adult growth and sexual maturation Adult spawning migration Subadult rearing

The PBFs of freshwater spawning and incubation sites include water flow, water quality, and suitable substrate for spawning and incubation, as well as migratory access for adults and juveniles (Table 5). These features are essential to conservation because without them the species cannot successfully spawn and produce offspring.

The PBFs of freshwater migration corridors associated with spawning and incubation sites include water flow, water quality, and temperature conditions supporting larval and adult mobility, abundant prey items supporting larval feeding after yolk sac depletion, and free passage (no obstructions) for adults and juveniles. These features are essential to conservation because they allow adult fish to swim upstream to reach spawning areas, and they allow larval fish to proceed downstream and reach the ocean.

Interior Columbia Recovery Domain

Habitat quality in tributary streams in the Interior Columbia Recovery Domain range from excellent in wilderness and roadless areas to poor in areas subject to heavy agricultural and urban development (National Marine Fisheries Service 2009; Wissmar et al. 1994). Critical habitat throughout much of the Interior Columbia Recovery Domain has been degraded by intense agriculture, alteration of stream morphology (i.e., channel modifications and diking), riparian vegetation disturbance, wetland draining and conversion, livestock grazing, dredging, road construction and maintenance, logging, mining, and urbanization. Reduced summer stream flows, impaired water quality, and reduction of habitat complexity are common problems for critical habitat in developed areas.

Many stream reaches designated as critical habitat in the Interior Columbia Recovery Domain are over-allocated, with more allocated water rights than existing streamflow conditions can support. Withdrawal of water, particularly during low-flow periods that commonly overlap with agricultural withdrawals, often increase summer stream temperatures, block fish migration, strand fish, and alter sediment transport (Spence et al. 1996). Reduced tributary stream flow has been identified as a major limiting factor for all listed salmon and steelhead species in this area (National Marine Fisheries Service 2007a; National Marine Fisheries Service 2011c).

Despite these degraded habitat conditions, the HUCs that have been identified as critical habitat for these species are largely ranked as having high conservation value. Conservation value reflects several factors, including: (1) how important the area is for various life history stages, (2) how necessary the area is to access other vital areas of habitat, and (3) the relative importance of the populations the area supports relative to the overall viability of the DPS.

2.2.3 Climate Change

Climate change has negative implications for salmon, steelhead, and their designated critical habitat in the Pacific Northwest (Independent Scientific Advisory Board 2007; Northwest Fisheries Science Center 2015; Scheuerell and Williams 2005; Zabel et al. 2006). Average annual Northwest air temperatures have increased by approximately 1ºC since 1900, or about 50 percent more than the global average over the same period (Independent Scientific Advisory Board 2007). The latest climate models project a warming of 0.1ºC to 0.6ºC per decade over the next century.

Climate change affects salmon, steelhead, and their habitat throughout the Interior Columbia Basin. Several studies have demonstrated that climate change has the potential to affect ecosystems in nearly all tributaries throughout the region (Battin et al. 2007; Independent Scientific Advisory Board 2007). While the intensity of effects will vary by region (Independent Scientific Advisory Board 2007), climate change is generally expected to alter aquatic habitat (water yield, peak flows, and stream temperature). As climate change alters the structure and distribution of rainfall, snowpack, and glaciations, each factor will in turn alter riverine hydrographs. Given the increasing certainty that climate change is occurring and is accelerating (Battin et al. 2007), NMFS anticipates salmonid habitats will be affected. Climate and hydrology models project significant reductions in both total snow pack and low-elevation snow pack in the Pacific Northwest over the next 50 years (Mote and Salathé 2009), changes that will shrink the extent of the snowmelt-dominated habitat available to salmon. Such changes may restrict our ability to conserve diverse salmon life histories.

The Independent Scientific Advisory Board (ISAB) identified a number of effects climate change would have on Columbia Basin salmon. A few of these include: (1) water temperature increases and depletion of cold water habitat that could reduce the amount of suitable salmon habitat by about 22 percent by the year 2090 in Washington State; (2) variations in precipitation that may alter the seasonal hydrograph and modify shallow mainstem rearing habitat; and (3) earlier snowmelt and higher spring flows with warmer temperatures that may cause spring Chinook salmon and steelhead yearlings to smolt and emigrate to the ocean earlier in the spring (Crozier et al. 2010; Independent Scientific Advisory Board 2007; O'Neal 2002). In addition, climate impacts in one life stage generally affect body size of timing in the next life stage and can be negative across multiple life stages (Healey 2011; Wade et al. 2013; Wainwright and Weitkamp 2013).

In summary, climate change is expected to make recovery targets for these salmon populations more difficult to achieve. However, habitat restoration actions can ameliorate the adverse impacts of climate change on salmon. Examples include restoring connections to historical floodplains, and freshwater and estuarine habitats to provide fish refugia and areas to store

excess floodwaters; protecting and restoring riparian vegetation to reduce stream temperature; retiring irrigation water diversions; and purchasing or applying easements to lands that provide important cold water or refuge habitat (Battin et al. 2007; Independent Scientific Advisory Board 2007).

2.3 Action Area

"Action area" means all areas affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR 402.02). For this consultation, the action area includes all aquatic habitats in the Similkameen River below the dam to its tributary junction with the Okanogan River. This downstream reach includes the immediate area below the dam where fish removal activities will take place and the distance that fine sediment produced by the proposed action could be transported within the Similkameen River. This area includes sufficient river area to encompass all reasonably likely effects to ESA-listed species and designated critical habitat, and extends to the point where any effects would be lost.

The action area is used by UCR steelhead, and is designated as critical habitat (September 2, 2005; 70 FR 52630). This area supports spawning, rearing, and migration. The action area is also designated as EFH for Chinook salmon (Pacific Fishery Management Council 2014).

2.4 Environmental Baseline

The "environmental baseline" refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes 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 consultations, and the impact of state or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 CFR 402.02).

The Similkameen River begins in Canada west of the Okanogan Basin, draining the eastern slopes of the Cascade Mountains in southern British Columbia and northern Washington. About 78 percent of the Similkameen Basin lies in Canada and it runs nearly 122 miles before entering the Okanogan River roughly 7 miles south of the United States–Canada border, near the City of Oroville, Washington. The Similkameen subbasin size is approximately 3,580 square miles. The Similkameen is a perennial, primarily snowmelt system. High flows generally occur in late spring (June mean 8,500 cfs; maximum 44,800 cfs) (Federal Energy Regulatory Commission 2011). Low flows occur in fall (September mean 596 cfs; minimum 164 cfs). Enloe dam operates in run-of-river mode, meaning river flows measured at Nighthawk River Mile (RM) 15.8 occur at the dam. High flows produce intense scour due to the canyon constraint and limited floodplain development in the action area reach (below). Low flows effect temperatures but maintain perennial flow in the lowest portions of the channel, with several deep pools, particularly near Similkameen Falls.

Enloe Dam is located at river mile 8.8. This dam was completed in 1923, with a height of approximately 54 feet and storage of approximately 507 acre-feet. The OPUD acquired the dam in 1945. Enloe Dam has no fish passage facilities. The dam has been operated as a run-of-river facility for most of its lifespan. Enloe Dam was constructed directly above Similkameen Falls, which is considered to be at least a partial fish passage barrier. However, recent observations have been made of Chinook salmon passing the falls. Similkameen Falls is located about 370 feet below Enloe dam, and forms a 33-foot-long and 20-foot-high falls.

The major land uses in the United States portion of the Okanogan Basin are forestry, range, and croplands. The valley bottom lands are dominated by agriculture including fruit crops, grain and hay production. Livestock grazing and hay production dominate the bench lands, and most of the lower to mid-upper elevation forests have been harvested for timber and used for livestock grazing (Northwest Power Planning Council 2001). The Northwest Power and Conservation Council (NPCC) (2004) identified the following main threats to fish and aquatic habitats in the Okanogan Basin: (1) residential development, (2) agricultural development, (3) livestock grazing, (4) exotic species, (5) hydropower development and operation, and (6) wildfire suppression. Other factors affecting aquatic habitats in the basin include channelization of the mainstem Okanogan River from the outlet at Osoyoos Lake to the confluence with the Columbia River, withdrawal of water for irrigation and poor water quality.

The river downstream of Similkameen Falls is divided into three reaches based on habitat conditions and channel morphology. Reach 1 (RM 0–4.7) is a low-gradient (less than 0.1 percent), braided channel. The dominant substrates are cobble and gravel with areas of sand and boulders. The majority of salmonid spawning occurs in this reach, although gravel is relatively scarce, limiting the amount of spawning habitat. Reach 2 (RM 4.7–7.1) has a wider active channel than reach 1 and a few side channels. The gradient is low to moderate (0.1 to 2 percent; average 0.4 percent). The substrates are cobble, sand, and boulders. Reach 3 (RM 7.1–8.8) is a canyon reach. The channel gradient in reach 3 averages greater than 2 percent. Although the dominant substrate is bedrock, sand deposits occur in the center of the channel (Federal Energy Regulatory Commission 2011).

Reaches of both the Okanogan and Similkameen Rivers are listed on the 2012 Clean Water Act Section 303(d) list of water quality impaired water bodies for elevated stream temperatures (Washington State Department of Ecology 2020). The aquatic life maximum water temperature criterion set by Washington State Department of Ecology (Ecology) to protect this use is 17.5°C, measured by the 7-day average of the daily maximum temperatures (7-DADMax). Both the Similkameen and Okanogan River water temperatures often exceed lethal tolerance levels for salmonids in the mid-to late summer months. In addition, Ecology has identified the Similkameen River below Enloe Dam as a water body requiring special protection for spawning and incubation and set the maximum 7-DADmax criterion of 13°C from February 15 through June 15 annually (Washington State Department of Ecology 2011; Washington State Department of Ecology 2019). Maximum daily water temperatures in the Similkameen River can exceed the spawning temperature criterion of 13.0°C, below the falls and at the Oroville Bridge.

The Similkameen River is not Clean Water Act Section 303(d)-listed for turbidity. The estimated long-term sediment discharge from the Similkameen River was estimated to be 134,000 tons per year (Nelson 1972). At lower flows (less than 300 cfs), the river carries less than 3 mg/L suspended sediment (approximately 1 NTU); at moderate flows (greater than 8,500 cfs) the river carried more than 30 mg/L [more than 10 NTU (Public Utility District No. 1 of Okanogan County 2008)].

The Similkameen River in the analysis reach is under a Total Maximum Daily Load for arsenic (Washington State Department of Ecology 2004). This arsenic (as well as elevated levels of cadmium and copper) is associated with contamination from historical mining operations in the Similkameen River watershed (Federal Energy Regulatory Commission 2011). Measured levels of these metals were below levels known to cause adverse effects to fishes (Federal Energy Regulatory Commission 2011). Because arsenic levels naturally exceed water quality criteria, the loading capacity for the river was set equal to the natural background concentration of arsenic (i.e., 0.4 to 0.6 µg/L total recoverable arsenic).

In summary, water impoundments in the Okanogan Basin in both Canada and the United States over the past century have changed the functioning of this ecosystem. Dams and water withdrawals for municipal use, irrigation and flood control have altered the flow regime and created impassable obstacles to anadromous fish stocks including UCR steelhead.

2.5 Effects of the Action

Under the ESA, "effects of the action" are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (see 50 CFR 402.17). In our analysis, which describes the effects of the proposed action, we considered 50 CFR 402.17(a) and (b).

To begin our analysis of effects, we typically deconstruct projects into separate Project Elements (PEs) that trigger different impact mechanisms or stressors. NMFS characterizes the proposed action as consisting of five PEs [see Project Description above and the Project BA (Bureau of Land Management 2020) for details]:

1) Access road widening
2) Penstock construction
3) Road use and maintenance
4) Fish salvage
5) Penstock operation

When assessing the potential effects of an action, NMFS evaluates whether individuals or critical habitat will be exposed to stressors produced by the action. NMFS then evaluates whether those stressors will elicit responses from exposed individuals or critical habitat.

2.5.1 Fish Exposure

Both adult and juvenile steelhead are present in the Similkameen River. Steelhead enter the Similkameen as early as mid-July and may remain until mid-May of the following year. Adults will typically hold in deeper pools, including the pool immediately below Similkameen Falls, and other cool-water habitat downstream, until temperatures decrease to a suitable level and they can move to spawning areas. Spawning generally occurs throughout the mainstem Okanogan and lower Similkameen Rivers from March through May with the peak spawning period occurring from late March to early May. Steelhead do not spawn in the immediate area below the dam, but redds have been observed within about 0.8 miles downstream (The Okanogan Basin Monitoring and Evaluation Program 2020a). The highest density of redds occur in the lower 5 miles of the Similkameen River and downstream of Zosel Dam on the Okanogan River where better quality spawning gravels are available (The Okanogan Basin Monitoring and Evaluation Program 2020a). Juvenile steelhead use the Similkameen River for rearing year around, but their presence in the summer is likely limited by high river temperatures (The Okanogan Basin Monitoring and Evaluation Program 2020b). During times when river temperatures are high, we expect juvenile steelhead to be located in pools, areas of complex habitat, and locations where cold waters seeps are present.

NMFS assumes that one or more life stage (e.g., adults, juveniles, alevins) of this species will be present in the river below Enloe Dam year-round and may be affected by the proposed action.

2.5.2 Effects to Species

The Enloe Dam Safety Repair and Maintenance Project is expected to have project elements that have direct effects to UCR steelhead. Fish salvage and penstock operations are the two project elements that are likely to cause the greatest adverse effects to steelhead, while access road construction, penstock construction, and continuing road use and maintenance have the potential to cause more limited adverse effects to steelhead.

Fish Salvage

The proposed action will dewater and remove fish from pools immediately below Enloe Dam. These actions will directly affect UCR steelhead if they are present in removal areas. The area where dewatering and fish removal will be between the base of Enloe Dam and Similkameen Falls, roughly 1.5 acres in area. The area below the dam will be dewatered by passing the entirety of the flow of the Similkameen River through the improved penstocks to the outlet about halfway between the base of Enloe Dam and Similkameen Falls. The tailrace area (between dam and falls) is scoured rock with no steelhead spawning habitat and very little complexity. NMFS does not expect very many, if any, juvenile steelhead to be able to ascend Similkameen Falls. Adult steelhead may be able to ascend, but there is no spawning habitat, and timing restrictions of the proposed action will eliminate the possibility of adult steelhead within this area. Given the above, NMFS does not believe that there will be many steelhead in the pools between the dam and the falls, however, we cannot with 100% certainty say there will be none. Therefore, we will assume there to be some juvenile steelhead in the pools.

The dewatering and fish salvage is likely to injure or kill any steelhead present in the pools either by the actual dewatering itself or by salvage. Most fish that are salvaged by either net or electro-fishing are expected to survive. We referred to juvenile steelhead densities reported in Mullan et al. (1992) to estimate the number of juvenile fish that will be directly injured or killed by the proposed action. Mullan et al. (1992) reported that juvenile steelhead densities in poor-quality habitat in Columbia River tributaries averaged 1.1 parr per 360 square feet. We estimate that the dewatering and fish salvage will not kill or injure more than 25 percent as many juvenile steelhead as suggested by the densities reported in Mullan et al (1992). We believe this to be accurate given that no spawning occurs in this area and juvenile steelhead would have a very difficult time ascending Similkameen Falls. Given an estimated in-water construction footprint of 65,000 square feet, we estimate that construction will injure or kill 17 juvenile steelhead. Given the very low survival rates of steelhead in the Okanogan subbasin from the rearing juvenile stage to returning adult stage, the injury or death of 17 juveniles is likely to represent no more than one adult steelhead returning to the basin.

Penstock Operations

Several project elements associated with operation of the newly improved penstocks could have effects on UCR steelhead. These include the initial penstock flushing flows, dam inspection flows, and penstock cleaning and maintenance. The effects of each of these penstock operation components is detailed below.

Initial flushing. Initial penstock release will occur during spring high flows. During this initial high flow release, up to 1,000 cfs of water will be routed through the penstocks. Total downriver flow below the falls will remain the same. The overall flows in the Similkameen River will be high (approximately 10,000 cfs), with turbidity levels expected to be high, based on past observations. This initial flow is expected to flush approximately 1,000 cubic yards of sediment that has deposited in front of the gates since they were last operated in the mid-1990s. This material will be flushed downstream following replacement of the intake gates during this initial operation. This represents approximately 1,000 tons of total sediment; the average yearly discharge of sediment for the river is 134,000 tons (Public Utility District No. 1 of Okanogan County 2008). Daily sediment discharge for 10,000 cfs flow on this river would be approximately 2,000 tons (Public Utility District No. 1 of Okanogan County 2008). Discharge of sediment will likely occur over more than 1 day; thus, maximum sediment loads will probably change by less than 50 percent during the initial release period. This initial release of sediment will increase turbidity below the dam, with the possibility of slight increases in turbidity into downstream reaches of the Similkameen River.

If steelhead are rearing below the dam during this release it is likely that turbidity could cause changes in behavior (Servizi and Martens 1992). Increased sediment loads could lead to minor changes in juvenile steelhead growth and development; overwintering adult foraging behavior could also be affected. However, this area already is known to have highly turbulent flow during high flow events, with high baseline levels for turbidity and very limited cover (off-channel areas, large wood, undercut banks). Increases in turbidity will be brief (likely one to a few days) so any adverse effect to behavior from elevated turbidity will be short lived. Although turbidity

will be elevated, it will likely remain within the historic range of variability for high flow events. We expect some changes to both adult and juvenile steelhead behavior to occur with the increase in turbidity levels downstream of the dam, such as decreased foraging, increased movement to locations with lower turbidity, and, in some situations, gill irritation. In general, these effects are expected to be short-lived (hours to days) and have variable effects to individual fish.

Sedimentation. Penstock operation will transport sediment during the initial flushing. Approximately 1,000 cubic yards of material will be transported downstream with fine sediments (<0.1 mm) possibly travelling as far as the lower reach (Reach 1) of the Similkameen River where steelhead are known to spawn. Following initial flushing of material, penstock operations will transport suspended sediment similar to the environmental baseline (run-of-river operation).

Initial penstock flushing is expected to deliver sediment downstream into the Similkameen River and could have effects on UCR steelhead spawning gravels. Upper Columbia River steelhead spawning occurs in spring, so sediment deposition could reduce the quality of total available spawning bed area temporarily, depending on timing and amount of the release and location of any deposition. Reach 1 gravels are not highly embedded, and Reach 1 is not high in fine sediment (Public Utility District No. 1 of Okanogan County 2008). The amount of sediment to be delivered to the lower reaches of the Similkameen River will likely be much less than 1,000 cubic yards. The estimated yearly amount of sediment load in the river is 134,000 cubic yards, so this would increase the yearly amount by 0.7 percent. The sediment will be delivered during high flows and not during spawning or egg incubation. Therefore, we expect that the effects of the proposed action on salmonid spawning habitat in the lower Similkameen are expected to be similar to baseline conditions.

Heavy metals. Measured levels of heavy metals in the Similkameen River were below levels known to cause adverse effects to fishes (Federal Energy Regulatory Commission 2011). The quantity of sediment (up to 1,000 cubic yards) expected to be released through the penstock during the initial opening of the new gates during high flows could lead to an increase in transport of heavy metals downstream. Dam gates were periodically operated until the mid-1990s, so any sediment buildup over the last 20 years will likely not contain high concentrations of heavy metals from historic mining activities upstream of Enloe Dam. The OPUD coordinated the Dredged Material Management Program (DMMP) agencies (the Corps, Ecology, U.S. Environmental Protection Agency, and Department of Natural Resources), and jointly concluded that DMMP involvement or testing of sediment would not be required for this proposed action. Their conclusions were based on the small volume of sediment to be released and the heavy metal concentrations falling below the DMMP criteria. Therefore, due to the expected minor increase in total heavy metal concentration associated with the proposed action, it is not expected to lead to reduced growth, changed behavior, or reduced fitness of any steelhead in the Similkameen River.

Dam inspection flows (low flows). Dam inspection will occur at low flow periods between July 1 and August 31. During this time, the Similkameen River will be diverted through the penstock and discharged above the falls. This will require fish salvage as described above. Penstock operation during summer low flow periods will carry minimal sediment due to the initial flushing

(above). Over-dam flows at this time will be less than 1,000 cfs, likely between 600 to 1,000 cfs. The proposed action will also meet state water quality standards which means that turbidity will not exceed 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU. Therefore, these low flow releases are not expected to lead to changes in steelhead rearing behavior in the area below the falls.

Penstock cleaning and maintenance. The OPUD will perform gate and penstock maintenance to prevent build-up of sediment upstream of the gates. This is expected to occur at least once every 12 months. This action is expected to deliver a few cubic yards of sediment that has deposited in front of the gates downstream every year. During the time period that this is expected to occur (high flows), we expect that it would be difficult to impossible to measure changes in downstream turbidity resulting from the action.
Therefore, changes in behavior of steelhead in the Similkameen River are not expected to occur.

Access Road Widening, Penstock Construction, and Ongoing Road Use and Maintenance

Several project elements will occur outside of the banks of the Similkameen River and include widening an existing access road, modifying the penstocks, and occasional road use and maintenance. These actions have the potential to have effects that would occur later in time, on UCR steelhead from decreases in forage and increases in turbidity. However, no in-water work will occur as part of these two components. All work will occur at least 50 feet from the banks of the Similkameen River or upstream of Enloe Dam. Removal of overstory shading trees can have effects on stream temperature and forage. However, the approximately 10 trees removed during construction are at least 50 feet from the banks of the Similkameen River and play a minor, if any, role in shading; this reach receives shade primarily through topographic shading. Removal of these trees will have little effect on Similkameen River temperatures or alter forage in any measurable way. Sediment production associated with access road widening and penstock construction is expected to be minimal. The BLM estimated the amount of sediment delivery over a 10-year period will amount to less than a cubic yard. This amount of sediment delivered over 10 years is not expected to have any meaningful changes to steelhead behavior in the Similkameen River.

2.5.3 Effects on Critical Habitat

Designated critical habitat within the action area for UCR steelhead considered in this opinion consists of freshwater spawning sites, freshwater rearing sites, freshwater migration corridors, and their essential PBFs as listed below. The effects of the proposed action on these features are summarized as a subset of the habitat-related effects of the action that were discussed more fully above.

1. Freshwater spawning sites
    a. Substrate – The proposed action will create one large pulse of sediment and small pulses during yearly maintenance. The proposed action will also add very small, chronic, fine sediment delivery from the initial road construction and then yearly with road use and maintenance. The single pulse from penstock flushing is

expected to deliver 1,000 cubic yards of sediment downstream and this could be deposited onto spawning gravels. However, given the high level of sediment (134,000 cubic yards) transported yearly in the Similkameen River, an additional 1,000 cubic yards is not expected to change spawning gravels miles downstream.

b. Water quality – The proposed action will cause short-term (hours to days) pulses of suspended sediment from penstock flushing, and road use and maintenance. Approximately 10 trees removed during the road construction are at least 50 feet from the banks of the Similkameen River and play a minor, if any, role in shading; this reach receives shade primarily through topographic shading. Removal of these trees would have little effect on Similkameen River temperatures.

c. Water quantity – The proposed action is not expected to reduce water quantities.

2. Freshwater rearing sites

   a. Floodplain connectivity – The proposed action will not reduce floodplain connectivity.

   b. Forage – The proposed action will cause a slight decrease in forage from removal of 10 trees that could potentially reduce food (insects) from falling into the river. However, the distance of the trees from the river and small number of trees removed will minimize this reduction.

   c. Natural cover – The project generally maintains the level of natural cover in the area, which is already low given the lack of precipitation and shrub-steppe vegetation. Access road widening and penstock improvement will remove almost entirely upland vegetation. No bankside vegetation or large wood will be removed.

   d. Water quality – The proposed action will cause short-term (hours to days) pulses of suspended sediment from penstock flushing, and road use and maintenance. Approximately 10 trees removed during the road construction are at least 50 feet from the banks of the Similkameen River and play a minor, if any, role in shading; this reach receives shade primarily through topographic shading. Removal of these trees would have little effect on Similkameen River temperatures.

   e. Water quantity – The proposed action is not expected to reduce water quantities.

3. Freshwater migration corridors

   a. Free of artificial obstruction – The proposed action will not create any artificial obstructions.

   b. Natural cover – The project generally maintains the level of natural cover in the area, which is already low given the lack of precipitation and shrub-steppe vegetation. Access road widening and penstock improvement will remove almost entirely upland vegetation. No bankside vegetation or large wood will be removed.

c. Water quality – The proposed action will cause short-term (hours to days) pulses of suspended sediment from penstock flushing, and road use and maintenance. Approximately 10 trees removed during the road construction are at least 50 feet from the banks of the Similkameen River and play a minor, if any, role in shading; this reach receives shade primarily through topographic shading. Removal of these trees would have little effect on Similkameen River temperatures.

d. Water quantity – The proposed action is not expected to reduce water quantities.

2.6 Cumulative Effects

"Cumulative effects" are 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 CFR 402.02 and 402.17(a)). 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.

Some continuing non-federal activities are reasonably certain to contribute to climate effects within the action area. However, it is difficult if not impossible to distinguish between the action area's future environmental conditions caused by global climate change that are properly part of the environmental baseline vs. cumulative effects. Therefore, all relevant future climate-related environmental conditions in the action area are described in the environmental baseline (Section 2.4).

NMFS is not aware of any specific future actions that are both reasonably certain to occur in the action area and that would likely contribute to cumulative effects on steelhead. For this description of cumulative effects, NMFS assumes that future non-federal activities in the area of the proposed action will continue into the future at present or slightly increased intensities.

NMFS searched for information on future state, tribal, local, or private actions that were reasonably certain to occur in the action area. Most activities that occur across the Project area either are on federal land or require some type of federal permit, which will require some type of future ESA consultation. In addition, most future state or tribal actions would likely have some form of federal funding or authorization and therefore would be reviewed by NMFS.

2.7 Integration and Synthesis

The Integration and Synthesis section is the final step in our assessment of the risk posed to species and critical habitat as a result of implementing the proposed action. In this section, we add the effects of the action (Section 2.5) to the environmental baseline (Section 2.4) and the cumulative effects (Section 2.6), taking into account the status of the species and critical habitat (Section 2.2), to formulate the agency's biological opinion as to whether the proposed action is likely to: (1) reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing its numbers, reproduction, or distribution; or (2) appreciably diminish the value of designated or proposed critical habitat as a whole for the conservation of the species.

The status of UCR steelhead is driven by the high risk of extinction from low abundance, productivity, spatial structure, and diversity for all of their component populations. The ICTRT (2005) noted a high viability risk for UCR steelhead populations. UCR steelhead are not meeting the five recovery criteria as outlined in the Recovery Plan (Upper Columbia Salmon Recovery Board 2007).

The information presented in the environmental baseline section (Section 2.4) details that the habitat quality in the action area has been effected by agricultural, urban development, and mining (National Marine Fisheries Service 2009; Wissmar et al. 1994). In general, the Similkameen River in the action area offers suboptimal habitat for steelhead. It experiences high summer temperature, frequent high turbidity, and has minimal instream complexity.

The cumulative effects of state and private actions within the action area will continue largely unchanged. It is also likely that the overall pattern of state and private development, especially in the City of Oroville, and outlying areas will contribute adversely, in some areas, to the condition of riparian habitat.

As noted in Section 2.2, climate change is likely to affect steelhead in the Okanogan Basin. The ISAB identified a number of effects climate change would have on Columbia Basin salmon. A few of these include: (1) water temperature increases and depletion of cold water habitat that could reduce the amount of suitable salmon habitat by about 22 percent by the year 2090 in Washington State; (2) variations in precipitation that may alter the seasonal hydrograph and modify shallow mainstem rearing habitat; and (3) earlier snowmelt and higher spring flows with warmer temperatures that may cause steelhead yearlings to smolt and emigrate to the ocean earlier in the spring (Independent Scientific Advisory Board 2007; O'Neal 2002).

The proposed action will reduce abundance in the short term by killing or injuring (that later die) juvenile fish as a consequence of dewatering and electrofishing. Based upon densities described above, NMFS estimates that a total of 17 steelhead juveniles will be killed or injured during construction. All killed and injured fish will be from the Okanogan population of the UCR steelhead DPS. Even assuming a very high juvenile-to-adult survival rate of 2 percent, 17 juvenile steelhead are expected to produce not more than one adult steelhead. In the context of the Okanogan population's 10-year geomean abundance of 227 spawners, the expected injury or death of these fish from fish salvage is not expected to meaningfully affect adult returns.

The proposed action will cause short-term (hours to days) pulses of suspended sediment from penstock flushing and road use and maintenance. These are expected to lead to minor changes in juvenile steelhead growth and development; overwintering adult foraging behavior could also be effected. The project will also clear approximately 10 trees along the ROW, which will slightly reduce riparian vegetation, food availability, and shade. However, the small size of the reduction is not likely to reduce growth or survival for juvenile steelhead.

In sum, the proposed Project will kill or injure 17 juvenile steelhead, increase turbidity and sediment in the Similkameen River, and remove some vegetation. We feel that the adverse effects of the proposed action will not likely appreciably diminish the likelihood that UCR

steelhead will survive and recover in the wild. Also, because the action will not appreciably diminish the value of designated critical habitat at the action area scale, it will also not appreciably diminish the value of designated or proposed critical habitat as a whole for the conservation of the species.

2.8 Conclusion

After reviewing and analyzing the current status of the listed species and critical habitat, the environmental baseline within the action area, the effects of the proposed action, any effects of interrelated and interdependent activities, and cumulative effects, it is NMFS' opinion that the proposed action is not likely to jeopardize the continued existence of UCR steelhead, or destroy or adversely modify their designated critical habitat.

2.9 Incidental Take Statement

Section 9 of the ESA and federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a 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 by regulation to include significant habitat modification or degradation that actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102). "Incidental take" is defined by regulation as takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the federal agency or applicant (50 CFR 402.02). Section 7(b)(4) and section 7(o)(2) provide that taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA if that action is performed in compliance with the terms and conditions of this ITS.

2.9.1 Amount or Extent of Take

In the opinion, NMFS determined that incidental take of UCR steelhead is reasonably certain to result in incidental take as follows:

- Injury or death to 17 juveniles from dewatering and fish salvage directly below the dam
- Injury and behavioral changes from initial sediment release and increased turbidity

For certain elements of the proposed action (water releases). we will use a habitat surrogate to account for this take. For the initial flushing and sediment release, we will use as-built construction surrogate of the penstock pipe sizes. If the penstock pipes are able to deliver more than 1,000 cfs of water during high flow, we can assume that more sediment, located behind the dam, will be delivered downstream. For low flow water operations, we expect turbidity to remain below Washington State Department of Ecology standards of not exceeding 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU. The point of compliance for waters over 100 cfs will occur 300 feet downstream of the activity.

The extent of habitat change to which steelhead will be exposed is readily discernible and presents a reliable measure of the extent of take that can be monitored and tracked. Therefore, when the specific number of individuals "harmed" cannot be predicted, NMFS quantifies the extent of take based on the extent of habitat modified (June 3, 1986, 51 FR 19926 at 19954).

Although these surrogates could be considered coextensive with the proposed action, monitoring and reporting requirements will provide opportunities to check throughout the course of the proposed action whether the surrogates are exceeded. For this reason, the surrogates function as effective reinitiation triggers. For death or injury to fish, the amount of take will be exceeded if more than 17 fish are injured or killed.

2.9.2 Effect of Take

In the opinion, NMFS determined that the amount or extent of anticipated take, coupled with other effects of the proposed action, is not likely to result in jeopardy to the species, or destruction or adverse modification of critical habitat.

2.9.3 Reasonable and Prudent Measures

"Reasonable and prudent measures" are nondiscretionary measures that are necessary or appropriate to minimize the impact of the amount or extent of incidental take (50 CFR 402.02).

The BLM shall:

1. Minimize the effects of fish salvage.
2. Minimize the effects of turbidity.
3. Monitor the project to ensure that the conservation measures are meeting the objective of minimizing take and that the amount or extent of take is not exceeded.

2.9.4 Terms and Conditions

The terms and conditions described below are non-discretionary, and the BLM or any applicant must comply with them in order to implement the RPM (50 CFR 402.14). The BLM or any applicant has a continuing duty to monitor the impacts of incidental take and must report the progress of the action and its impact on the species as specified in this ITS (50 CFR 402.14). If the entity to whom a term and condition is directed does not comply with the following terms and conditions, protective coverage for the proposed action would likely lapse.

1. The following terms and conditions implement RPM 1:
    a. Use electrofishing only where other means of fish capture may not be feasible or effective. If electrofishing will be used to capture fish for salvage, NMFS' electrofishing guidelines will be followed (National Marine Fisheries Service 2000).

2. The following terms and conditions implement RPM 2:
    a. Follow Ecology's water quality standards for turbidity using WAC 173-201A-200 or the most recent version of Ecology's water quality standards.
3. The following terms and conditions implement RPM 3:
    a. By January 31, 2021, the BLM shall report monitoring items to include, at a minimum, the following:
        i. Project identification
        ii. Project name: Enloe Dam Safety and Maintenance Project (WCRO 2020-00237)
        iii. Construction details
            1. Starting and ending dates for work completed
            2. Proved as-builts of penstock pipes
            3. Total area (square feet) of in-water construction footprint
            4. Total area (square feet) of riparian reserve or Riparian Habitat Conservation Area disturbance
            5. Results of turbidity monitoring, if any
            6. A description of any elements of the project that were constructed differently than depicted in the BAs, associated addendums and communications, or this opinion
    b. If take is exceeded, contact NMFS promptly to determine a course of action.
    c. All reports will be sent to National Marine Fisheries Service, Attention: Justin Yeager, 304 South Water Street, Suite 201, Ellensburg, Washington, 98926. NOTICE: To follow inactive projects and, if necessary, withdraw the opinion for an incomplete project, the BLM shall provide an annual report even if no actual work was completed in a particular year.

2.10 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 threatened and endangered species. Specifically, conservation recommendations are suggestions regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information (50 CFR 402.02). NMFS is not recommending any conservation measures as part of this consultation.

2.11 Reinitiation of Consultation

This concludes formal consultation for the Enloe Dam Safety and Maintenance Project.

As 50 CFR 402.16 states, reinitiation of consultation is required and shall be requested by the federal agency or by NMFS where discretionary federal agency involvement or control over the action has been retained or is authorized by law and if: (1) the amount or extent of incidental taking specified in the ITS is exceeded, (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion, (3) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action.

3. MAGNUSON–STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT ESSENTIAL FISH HABITAT RESPONSE

Section 305(b) of the MSA directs federal agencies to consult with NMFS on all actions or proposed actions that may adversely affect EFH. The MSA (Section 3) defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." Adverse effect means any impact that reduces quality or quantity of EFH, and may include direct or indirect physical, chemical, or biological alteration of the waters or substrate and loss of (or injury to) benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects on EFH may result from actions occurring within EFH or outside of it and may include site-specific or EFH-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) also requires NMFS to recommend measures that can be taken by the action agency to conserve EFH.

This analysis is based, in part, on the EFH assessment provided by the BLM and descriptions of EFH for Pacific Coast salmon (Pacific Fishery Management Council 2014) contained in the fishery management plans developed by the Pacific Fishery Management Council and approved by the Secretary of Commerce.

3.1 Essential Fish Habitat Affected by the Project

The proposed action and action area are described in the BA and this opinion. The project area includes habitat that has been designated as EFH for various life stages of Chinook salmon (*O. tshawytscha*).

3.2 Adverse Effects to Essential Fish Habitat

See Section 2.4 of the opinion for a description of the adverse effects on anadromous species habitat for Pacific salmon. The effects of the action on Pacific Coast salmon are similar to those described above in the ESA portion of the document.

NMFS concludes that the proposed action will have adverse effects on EFH designated for Pacific Coast salmon in freshwater habitats where BLM program activities occur. Based on information provided by the action agency and the analysis of effects presented in the ESA portion of this document (Section 2.4), we conclude that the proposed action will have the following adverse effects on EFH for Pacific Coast salmon.

Specifically, NMFS has determined that the action will adversely affect EFH as follows:

1. Freshwater EFH quantity and quality, including juvenile rearing and salmon spawning habitat will be reduced from increased turbidity and sedimentation/substrate embeddedness at the site scale.

3.3 Essential Fish Habitat Conservation Recommendations

NMFS believes that the following conservation measures are necessary to avoid, mitigate, or offset the impact of the proposed action on EFH.

1. The BLM should insure that Term and Condition #2 above (Section 2.9.4) in the ESA portion of this document to offset adverse effects to EFH from the proposed action.

Fully implementing this EFH recommendation will protect Chinook salmon EFH by avoiding or minimizing adverse effects described in Section 3.2 above.

3.4 Statutory Response Requirement

As required by section 305(b)(4)(B) of the MSA, the BLM must provide a detailed response in writing to NMFS within 30 days after receiving EFH Conservation Recommendations. Such a response must be provided at least 10 days prior to final approval of the action, if the response is inconsistent with any of NMFS' EFH Conservation Recommendations, unless NMFS and the federal agency have agreed to use alternative time frames for the federal agency response. 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 the Conservation Recommendations, the federal agency must explain its reasons for not following the recommendations, including the scientific justification for any disagreements with NMFS over the anticipated effects of the action and the measures needed to avoid, minimize, mitigate, or offset such effects (50 CFR 600.920(k)(1)).

In response to increased oversight of overall EFH program effectiveness by the Office of Management and Budget, NMFS established a quarterly reporting requirement to determine how many conservation recommendations are provided as part of each EFH consultation and how many are adopted by the action agency. Therefore, we ask that in your statutory reply to the EFH portion of this consultation, you clearly identify the number of conservation recommendations accepted.

3.5 Supplemental Consultation

The BLM must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600.920(l)).

4. DATA QUALITY ACT DOCUMENTATION AND PRE-DISSEMINATION REVIEW

The DQA specifies three components contributing to the quality of a document. They are utility, integrity, and objectivity. This section of the opinion addresses these DQA components, documents compliance with the DQA, and certifies that this opinion has undergone pre-dissemination review.

4.1 Utility

Utility principally refers to ensuring that the information contained in this consultation is helpful, serviceable, and beneficial to the intended users. The intended users of this opinion are the BLM, Corps, and OPUD. Other interested users could include potential users of the Similkameen River and Okanogan River as well as people interested in the conservation of UCR steelhead. Individual copies of this opinion were provided to the BLM. The document will be available within 2 weeks at the NOAA Library Institutional Repository [https://repository.library.noaa.gov].

4.2 Integrity

This consultation was completed on a computer system managed by NMFS in accordance with relevant information technology security policies and standards set out in Appendix III, 'Security of Automated Information Resources,' Office of Management and Budget Circular A-130; the Computer Security Act; and the Government Information Security Reform Act.

4.3 Objectivity

Information Product Category: Natural Resource Plan

Standards: This consultation and supporting documents are clear, concise, complete, and unbiased, and were developed using commonly accepted scientific research methods. They adhere to published standards including the NMFS ESA Consultation Handbook, ESA regulations, 50 CFR 402.01 et seq., and the MSA implementing regulations regarding EFH, 50 CFR 600.

Best Available Information: This consultation and supporting documents use the best available information, as referenced in the References section. The analyses in this opinion (and EFH consultation, if applicable) contain more background on information sources and quality.

Referencing: All supporting materials, information, data and analyses are properly referenced, consistent with standard scientific referencing style.

Review Process: This consultation was drafted by NMFS staff with training in ESA (and MSA implementation, if applicable), and reviewed in accordance with West Coast Region ESA quality control and assurance processes.

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