



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
1201 NE Lloyd Boulevard, Suite 1100
Portland, Oregon 97232-1274

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Refer to NMFS No: WCRO-2024-00004

June 18, 2024

Cheryl F. Probert
Forest Supervisor
Nez Perce Clearwater National Forest
1008 Highway 64
Kamiah, Idaho 83536

Re: Endangered Species Act Section 7(a)(2) Biological Opinion for the Twentymile Project, Twentymile Creek watershed (HUC 170603050504) and Wing Creek-South Fork Clearwater River (HUC 170603050505), Idaho County, Idaho.

Dear Ms. Probert:

This letter responds to your December 22, 2023, request for initiation of consultation with the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act of 1973 (ESA) (16 U.S.C. 1531 et seq.) for the Twentymile fuels reduction and timber harvest project (hereinafter referred to as “Project”) on the Nez Perce Clearwater National Forest (NPCNF). NMFS also reviewed the likely effects of the proposed action on essential fish habitat (EFH), pursuant to section 305(b) of the Magnuson–Stevens Fishery Conservation and Management Act [16 U.S.C. 1855(b)] (MSA), and concluded that the action would adversely affect the EFH of Pacific Salmon. Therefore, we have included the results of that review in this document. Your request qualified for our expedited review and analysis because it met our screening criteria and contained the required information on, and analysis of, your proposed action and its potential effects to listed species, and designated critical habitat (DCH).

We reviewed the NPCNF consultation request and related initiation package. Where relevant, we have adopted the information and analyses you have provided and/or referenced but only after our independent, science-based evaluation confirmed they meet our regulatory and scientific standards. In our biological opinion (opinion) below, we indicate what parts of your document(s) we have incorporated by reference and where that information is being incorporated.

On April 26, 2023, the Project was introduced during a Level 1 meeting. A first draft of the Biological Assessment (BA) was submitted on September 15, 2023, and revised on September 28, 2023. Between September 28, 2023, and December 22, 2023, NMFS and the NPCNF discussed the proposed action and needed edits to the BA. In this time, the NPCNF and NMFS agreed to change the determination from a not likely to adversely affect to likely to adversely affect because juvenile steelhead could be salvaged as part of the proposed action. The NPCNF requested to initiate consultation on December 22, 2023, and submitted a revised BA on



January 2, 2024 in response to NMFS comments. The NPCNF concluded the proposed action is likely to adversely affect Snake River Basin (SRB) steelhead but is not likely to adversely affect SRB steelhead DCH. NMFS initiated formal consultation on January 2, 2024. During the consultation, NMFS sought additional clarification regarding road maintenance activities that would be part of the proposed action. Through email exchanges with the NPCNF from February 6, 2024 through March 28, 2024, the NPCNF revised the proposed action to include dust abatement using magnesium chloride ($MgCl_2$) and water. After initiating consultation, NMFS determined there were adverse effects to critical habitat included effects analyses for DCH in this opinion. In addition, NMFS determined that the proposed action will adversely affect EFH and included that analysis in the document.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on May 6, 2024 (89 Fed. Reg. 24268). We are applying the updated regulations to this consultation. The 2024 regulatory changes, like those from 2019, were intended to improve and clarify the consultation process, and, with one exception from 2024 (offsetting reasonable and prudent measures), were not intended to result in changes to the Services' existing practice in implementing section 7(a)(2) of the Act. 89 Fed. Reg. at 24268; 84 Fed. Reg. at 45015. We have considered the prior rules and affirm that the substantive analysis and conclusions articulated in this biological opinion and incidental take statement would not have been any different under the 2019 regulations or pre-2019 regulations.

Proposed Action. The proposed action is described in Section 2.2 of the NPCNF (2024) Twentymile Project BA. The Project includes 2,209 acres of commercial timber harvest with a mix of intermediate and regeneration harvest, with regeneration harvest being the main strategy over a period of 16 years. There will be a combination of both ground-based and aerial logging. Regeneration and intermediate timber harvest, will occur on the north and east sides of the action area but will not be located near DCH. The harvest will require some road work including widening strategic corners and a large turn around, and turnouts spaced every 1,000 to 2,000 feet. Additionally, one culvert on Twentymile Creek (fish bearing) and one culvert on a tributary to Twentymile (non-fish bearing) will be replaced within an instream work window of July 15 to October 30. Both culverts are at least 5 miles upstream of SRB steelhead critical habitat. Prior to replacing the Twentymile Creek culvert, the stream will be dewatered. Blocknets will be placed and electrofishing will occur to salvage fish. Once the culvert is in place, the channel will be rewatered. About 11 miles of new temporary roads will be constructed and additional road maintenance on 36 miles of existing road will occur. Road maintenance activities will include new earthwork; grading and shaping of the road surface; constructing or cleaning ditches, catch basins, culvert inlets/outlets, or other drainage features; roadside brushing; cut slope and fill slope stabilization and spot surface gravel placement; or clearing and grubbing; surface compaction; and dust abatement.

Dust abatement, as described in Johnson (2024), will include $MgCl_2$ for haul routes carrying greater than one million board feet (MMBF) and water for routes with lighter haul. Because of the availability of water, the NPCNF does not plan on using $MgCl_2$, but if necessary, it would only be used on the main haul road (Road 1875). Water for abatement will be pumped from streams following NMFS' pumping criteria (NMFS 2023b).

New temporary roads and new access roads will be located in the northeast, east, and south sides of the action area, with road maintenance occurring throughout the action area. A typical timber sale contract lasts four years spanning from initial access road work to road closure. All temporary roads will be decommissioned within three years of no use. Light hauling (124,000 board feet or approximately 48 truckloads), making up 0.002 percent of haul, will take place on a road that has one crossing over Twentymile Creek (fish-bearing water). This stream crossing is greater than one mile upstream of DCH for steelhead. Light haul is considered any haul under one million board feet. All additional hauling (54,672,000 board feet) will be outside of DCH, and there are no sections of the main haul route that are adjacent to streams. There will be hauling on paved roads along the Clearwater River at the edge of the action area.

The proposed action will also include prescribed burns on 6,807 acres to attempt to reduce hazardous fuels and decrease the risk of wildfires. There will be no ignition in Riparian Habitat Conservation Area (RHCA). Because of the specific conditions necessary for prescribed burning activities, prescribed burning is expected to take place over the next 16 years.

We considered, under the ESA, whether or not the proposed action would cause any other activities and determined that it would not.

BIOLOGICAL OPINION

Status of Species and Designated Critical Habitat. We examined the status of each species that would be adversely affected by the proposed action to inform the description of the species' "reproduction, numbers, or distribution" as described in 50 CFR 402.02. We also examined the condition of critical habitat throughout the designated area and discuss the function of the physical or biological features (PBFs) essential to the conservation of the species that create the conservation value of that habitat.

A summary of the current status of the SRB steelhead can be found on NMFS' publicly available internet site (<https://www.fisheries.noaa.gov/s3/2023-02/feb-2023-status-snake-r-steelhead.pdf>), and is incorporated by reference here (NMFS 2023a). SRB steelhead continue to be at a moderate risk of extinction within the next 100 years (NMFS 2022). This DPS continues to face threats from tributary and mainstem habitat loss, degradation, or modification; predation; harvest; hatcheries; and climate change (NMFS 2022). The action area includes habitat occupied by fish from the South Fork (SF) Clearwater River steelhead population. The SF Clearwater River population is viable but the Clearwater River major population group (MPG) is not viable. In order to be viable, two additional populations must be viable and the remaining two populations must be rated as at least maintained (NMFS 2022).

In evaluating the condition of designated critical habitat, NMFS examines the condition and trends of PBFs which are essential to the conservation of the ESA-listed species because they support one or more life stages of the species. Proper function of these PBFs is necessary to support successful adult and juvenile migration, adult holding, spawning, incubation, rearing, and the growth and development of juvenile fish. Modification of PBFs may affect freshwater spawning, rearing or migration in the action area. Generally speaking, sites required to support one or more life stages of the ESA-listed species (i.e., sites for spawning, rearing, migration, and

foraging) contain PBFs essential to the conservation of the listed species (e.g., spawning gravels, water quality and quantity, side channels, or food) (Table 1).

Table 1. Types of sites, essential physical and biological features (PBFs), and the species life stage each PBF supports.

Site	Essential Physical and Biological Features	Species Life Stage
Snake River Basin steelhead^a		
Freshwater spawning	Water quality, water quantity, and substrate	Spawning, incubation, and larval development
Freshwater rearing	Water quantity and floodplain connectivity to form and maintain physical habitat conditions	Juvenile growth and mobility
	Water quality and forage ^b	Juvenile development
	Natural cover ^c	Juvenile mobility and survival
Freshwater migration	Free of artificial obstructions, water quality and quantity, and natural cover ^c	Juvenile and adult mobility and survival

^a Additional PBFs pertaining to estuarine areas have also been described for Snake River steelhead. These PBFs will not be affected by the proposed action and have therefore not been described in this opinion.

^b Forage includes aquatic invertebrate and fish species that support growth and maturation.

^c Natural cover includes shade, large wood, log jams, beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks.

Table 2 describes the geographical extent of critical habitat within the Snake River basin for SRB steelhead species. Critical habitat includes the stream channel and water column with the lateral extent defined by the ordinary high-water line, or the bankfull elevation where the ordinary high-water line is not defined. Although not part of DCH, the riparian zone is critical because it provides shade, streambank stability, organic matter input, and regulation of sediment, nutrients, and chemicals.

Table 2. Geographical extent of designated critical habitat within the Snake River basin for ESA-listed salmon and steelhead.

Distinct Population Segment (DPS)	Designation	Geographical Extent of Critical Habitat
Snake River Basin steelhead	70 FR 52630; September 2, 2005	Specific stream reaches are designated within the Lower Snake, Salmon, and Clearwater River basins. Table 21 in the Federal Register details habitat areas within the DPS's geographical range that are excluded from critical habitat designation.

Spawning and rearing habitat quality in tributary streams in the Snake River varies from excellent in wilderness and roadless areas to poor in areas subject to intensive human land uses (NMFS 2017). Critical habitat throughout much of the Interior Columbia (which includes the Snake River and the Middle Columbia River) has been degraded by intensive 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 streamflows, impaired water quality, and reduction of habitat complexity are common problems for critical habitat in non-wilderness areas. Human land use practices throughout the basin have caused streams to become straighter, wider, and shallower, thereby reducing rearing habitat and increasing water temperature fluctuations.

In many stream reaches designated as critical habitat in the Snake River basin, streamflows are substantially reduced by water diversions (NMFS 2017). Withdrawal of water, particularly during low-flow periods that commonly overlap with agricultural withdrawals, often increases summer stream temperatures, blocks fish migration, strands fish, and alters sediment transport (Spence et al. 1996). Reduced tributary streamflow has been identified as a major limiting factor for Snake River basin steelhead (NMFS 2017).

Many stream reaches designated as critical habitat for these species are listed on the Clean Water Act 303(d) list for impaired water quality, such as elevated water temperature (IDEQ 2022). Many areas that were historically suitable rearing and spawning habitat are now unsuitable due to high summer stream temperatures, such as some stream reaches in the Upper Grande Ronde. Removal of riparian vegetation, alteration of natural stream morphology, and withdrawal of water for agricultural or municipal use all contribute to elevated stream temperatures. Water quality in spawning and rearing areas in the Snake River has also been impaired by high levels of sedimentation and by heavy metal contamination from mine waste (e.g., IDEQ and U.S. EPA2003; IDEQ 2001). The SRB steelhead 5-year review (NMFS 2022) reveals excess fine sediment as a limiting factor in the Columbia River basin, but is improving likely from more conservative management standards in riparian areas and the implementation of best management practices to reduce sediment delivery to streams from roads.

The construction and operation of water storage and hydropower projects in the Columbia River basin, including the eight run-of-river dams on the mainstem lower Snake and lower Columbia Rivers, have altered biological and physical attributes of the mainstem migration corridor. Hydrosystem development modified natural flow regimes, resulting in warmer late summer and fall water temperature. Changes in fish communities led to increased rates of piscivorous predation on juvenile salmon and steelhead. Reservoirs and project tailraces have created opportunities for avian predators to successfully forage for smolts, and the dams themselves have created migration delays for both adult and juvenile salmonids. Physical features of dams, such as turbines, also kill out-migrating fish. In-river survival is inversely related to the number of hydropower projects encountered by emigrating juveniles. However, some of these conditions have improved. The Bureau of Reclamation and U.S. Army Corps of Engineers have implemented measures in previous Columbia River System hydropower consultations to improve conditions in the juvenile and adult migration corridor including 24-hour volitional spill, surface passage routes, upgrades to juvenile bypass systems, and predator management measures. These measures are ongoing and their benefits with respect to improved functioning of the migration corridor PBFs will continue into the future.

Action Area. “Action area” means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02). As described in Section 2.1 of the BA, the action area is located within the Red River Ranger District in the Twentymile Creek subwatershed, a tributary to the SF Clearwater River (Map 2 of the BA). The action area includes the following areas where harvest, haul, and prescribed burning will occur: Twentymile Creek subwatershed (HUC 170603050504) and only the area of the Wing Creek-SF Clearwater River subwatershed (HUC 170603050505) south of the SF Clearwater River, which also includes the Rainy Day Creek drainage. The action area also includes the one-mile section of the SF Clearwater River downstream from the Rainy Day Creek Road bridge (Route 412)

over the SF Clearwater River. This section of the SF Clearwater River is included because road work and haul will occur on Route 412, close to the bridge, over tributary stream crossings that drain to and are within 200-300 feet of SF Clearwater River. Sediment effects are expected to extend 600 feet downstream of stream crossing work and are therefore expected to reach the SF Clearwater River.

Environmental Baseline. The “environmental baseline” refers to the condition of the listed species or its DCH in the action area, without the consequences to the listed species or DCH 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 DCH 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 SF Clearwater River and Twentymile Creek are the only streams known to contain accessible habitats for migratory salmonids in the action area. As described in the BA (Section 3.9 and 3.10), surveys by Idaho Department of Fish and Game (IDFG) have shown the presence of rainbow trout in Twentymile Creek upstream of the reportedly impassible barrier (IDFG 2000). The potential barrier is more than 5.5 miles downstream of the Twentymile Creek culvert replacement site. NMFS believes it is reasonable to conclude juvenile steelhead could be present in Twentymile Creek because: (1) rainbow trout have been detected in the upper reaches of Twentymile Creek; and (2) there is no certainty that the barrier functions as a complete barrier to both adult and juvenile steelhead at all flows.

The action area is comprised of mainly national forest land that allows for snowmobiling activity, hiking and other public use of the area. Currently, there are multiple miles of maintained roads within the action area that are used for ingress and egress by the public and firefighters in the case of a large fire. The Forest Service does not know of other projects occurring within the action area. There have been no high severity fires within or adjacent to the action area within the last 40 years (Section 3.2.1).

Within the action area, SRB steelhead are only present in Twentymile Creek and the SF Clearwater River. The SF Clearwater steelhead population is viable. The Twentymile subwatershed is within the SF Clearwater population, but is not a major or minor spawning area. Steelhead spawning occurs in Twentymile Creek from the confluence with the SF Clearwater River upstream to below the potential barrier in Twentymile Creek (0.4 miles). DCH is only found in the SF Clearwater River and in the downstream most 0.4 miles of Twentymile Creek below the potential natural passage barrier.

The action area has elevated sediment from past and ongoing land use management including the unpaved road network (IDEQ 2004). The SF Clearwater River and Rainy Day Creek are impaired for physical substrate alteration, sediment/siltation, and temperature (IDEQ 2022). Twentymile Creek (critical habitat near mouth) is listed for temperature but not sediment (IDEQ 2022). U.S. Forest Service surveys from 2001-2016 found high levels of cobble embeddedness

and low habitat integrity (BA Section 3.10.2). Twentymile creek currently does not attain water quality objectives nor Forest Plan objectives (Section 3.10.3). The SRB steelhead 5-year review (NMFS 2022) prioritizes elimination of chronic sediment within the SF Clearwater population area to achieve population (viable) and MPG viability.

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).

The BA and supplemental material provide a detailed discussion and assessment of the effects of the proposed action in Section 3.11 – Effects of the Action. NMFS has evaluated this section and after our independent, science-based evaluation determined it meets our regulatory scientific standards and is adopted here (50 CFR 402.14(h)(3)). Rearing of juvenile SRB steelhead occurs year-round. SRB steelhead juvenile downstream migration occurs in May through early June. Because the instream work window is July 15 to October 30, migrating juvenile SRB steelhead are unlikely to be exposed to the effects of the proposed action.

Potential adverse effects from implementation of the proposed action include:

1. Injury or death to a few juvenile steelhead by electrofishing when conducting fish salvage for the Twentymile Creek culvert replacement (BA Section 3.11.1).
2. Death from predation of juvenile steelhead displaced by dewatering, turbidity, and fish salvage (NMFS analysis).
3. Harassment or injury to juvenile steelhead from exposure to temporary increases in turbidity associated with the Twentymile Creek culvert replacement (3.10.3 and 3.11.1), and machinery noise (NMFS analysis).
4. Sedimentation of substrate from culvert and road work, and haul (BA Sections 3.10.3 and 3.11.1; NMFS analysis).
5. Reduced water quality from chemical contamination to streams from petroleum storage and spills, herbicides, and application of magnesium chloride ($MgCl_2$); increased sediment delivery to streams and substrates from road maintenance, road building (temporary roads), haul, timber harvest and skidding, and prescribed burning; and water temperature and flow effects from canopy removal (NMFS analysis).
6. Reduced streamflow from withdrawal of water for dust abatement (NMFS analysis).

Effects to Species

Only one culvert replacement is in waters with ESA-listed species, Twentymile Creek. In order to replace the culvert, dewatering of the area will need to occur. Approximately 400 feet of stream will be dewatered for the culvert replacement and will require fish salvage. Turbidity from this activity is expected to not exceed 600 feet downstream of the dewatered/rewatered area (1,000 linear feet of impact from turbidity) The first step will be partial dewatering to allow most fish to exit volitionally. Block nets and seine nets will then be used to herd fish out of the

area and the block nets left in place to prevent their return. The remaining fish will be removed using electrofishing. Fish salvage will occur in a 400-foot reach (Section 3.11.1). We applied steelhead density surveys from IDFG in 1980 and 1981 to estimate the number of juveniles that will be exposed to electroshocking and fish salvage (0.2 per 100 square feet [ft²]). With a reported bankfull width of 26 feet in the BA (Section 3.10.2) and approximately 1,000 linear feet of affected stream length for culvert replacement, approximately 26,000 ft² will be affected. NMFS estimates a total of 52 juvenile steelhead may be affected in the Twentymile Creek culvert replacement dewatered area (21 juveniles) and downstream turbidity plume (31). The juvenile steelhead captured during work area isolation will experience lethal and non-lethal effects. NMFS makes the following assumptions about injury and death rates for fish salvage:

- After the stream reach has been partially dewatered to encourage fish to leave the area on their own volition and after fish have been herded out of the dewatered area, approximately 50 percent (11) of the 21 will remain (percentage based on personal communication with Tom Curret, fisheries biologist with Idaho Department of Fish and Game, 2005).
- Of the 11 fish remaining after herding, approximately 50 percent (5) of them will be captured through electrofishing (Peterson et al. 2004).
- Electrofishing will injure 25 percent (1) (Nielson 1998) and kill 5 percent (1) of all fish captured by electrofishing (Hudy 1985; McMichael et al. 1998).
- Of the 50 percent of fish (5) remaining after electrofishing, up to half (2) will then be able to be salvaged with nets out of pools as the stream reach is completely dewatered. The remaining half (3) will potentially become stranded in the dewatered reaches and die.
- A few juvenile steelhead may be killed from predation after being displaced from the dewatered area and from the turbidity plume during rewatering of the isolated work area.

In summary, NMFS assumes 52 juvenile steelhead will be present in the stream area affected by the culvert replacement on Twentymile Creek. Of these juveniles, 11 will be subject to electrofishing after dewatering, with up to four of these fish being killed.

Rewatering of dewatered stream reaches may mobilize sediment disturbed at the culvert replacement site leading to short term turbidity plumes. This activity will cause water quality degradation in the short term (usually 6 hours or less above 50 nephelometric units: NTUs; BA). Temporary elevated turbidity could affect juvenile steelhead up to 600 feet downstream of the isolated instream work area during rewatering. Juveniles within 600 feet downstream of the project site are likely to migrate out of the most turbid waters thereby avoiding the highest levels of sublethal effects. The increased turbidity could lead to harassment of juvenile steelhead when avoiding turbidity plumes and injury by gill abrasion. Additionally, predation of juvenile steelhead will likely increase as they seek alternate rearing habitat.

The proposed action calls for dust abatement on active haul routes using water pumped from streams within the action area. If necessary, MgCl₂ could be used on only the main haul route

Road 1875. Only two stream crossings where pumping could occur are over occupied habitat (Twentymile Creek) or occupied critical habitat (bridge over the SF Clearwater River). Pumping will follow NMFS criteria (NMFS 2023b) for water drafting to minimize the possibility of adverse effects to steelhead from pump entrainment, impingement, or reduced streamflow. Because the possible presence of steelhead is at only two crossings for all haul routes, the NPCNF will follow the NMFS criteria for water drafting, and the two locations where steelhead presence is possible are perennial streams where pumping would have a small short-term (minutes) effect on flow and not impede passage, it is highly unlikely that pumping water for dust abatement would cause lethal or sublethal effects to steelhead.

Magnesium chloride is used for dust abatement because it chemically binds to road material and attracts water; both processes harden the road surface suppressing dust and reducing erosion. However, $MgCl_2$ can be carried into streams via ditches during rain events that produce runoff. Chloride concentrations as low as 40 milligrams per liter (mg/L) have been found to be toxic to trout (Piechota et al. 2004). In contrast, Hintz and Relyea (2017) found $MgCl_2$, at concentrations from 25 to 3000 mg/L (low to extremely high), to have no statistically significant effect on the growth of newly hatched rainbow trout when immersed for 25 days. The proposed action calls for water to be used as dust abatement for all haul roads, with the possibility of using $MgCl_2$ only on the main haul route (Road 1875). Road 1875 crosses 8-10 non-fish-bearing streams in locations that are less than one mile from critical habitat. Implementation of a 1-foot buffer from the edge of the road will prevent $MgCl_2$ from being sprayed directly into ditches and will minimize the risk of runoff to nearby streams. In the action area, no non-paved haul routes run parallel and adjacent to occupied streams. With the low possibility of application, low amount of road surface contributing runoff to streams, with only two stream crossings over occupied habitat, the distance of most crossings to steelhead, and the most recent literature showing a lack of effects to juvenile *O. mykiss* growth at low to high concentrations, it is highly unlikely that the application of $MgCl_2$ will have lethal or sublethal effects to steelhead if it is applied.

Excess fine sediment in substrate is high within the action area and within occupied critical habitat. In addition, the level of fine sediment is greater optimal for steelhead spawning, incubation, and rearing and currently is not meeting Forest Plan objectives. Sediment delivery to streams from culvert replacements, road work, increased road maintenance, and log haul will increase during implementation of the proposed action and is reasonably certain to occur during rewatering or rain events when fine sediment is transported to streams (Luce and Black 2001). Furthermore, lapses in road maintenance or failure to identify potential or ongoing road drainage problems likely cause excessive sediment delivery (Al-Chokhachy et al. 2016) during or following wet periods of sediment transport.

When suspended sediment settles out of suspension, it can cause detrimental effects on spawning and rearing habitats by filling interstitial spaces between gravel particles (Anderson et al. 1996; Suttle et al. 2004). Sedimentation can: (1) Bury salmonid eggs or smother embryos; (2) destroy, alter or displace prey habitat; and (3) destroy, alter or displace spawning and rearing habitat (Spence et al. 1996). Excessive sedimentation can reduce the flow of water and supply of oxygen to eggs and alevins in redds. This can decrease egg survival, decrease fry emergence rates (Bash et al. 2001; Cederholm and Reid 1987; Chapman 1988), delay development of alevins (Everest et al. 1987), reduce growth and cause premature hatching and emergence (Birtwell 1999), and

cause a loss of summer rearing and overwintering cover for juveniles (Bjornn et al. 1977; Griffith and Smith 1993; Hillman et al. 1987).

Any fine sediment delivery from the project is additive to ongoing elevated sediment in occupied critical habitat which is a limiting factor for SRB steelhead recovery (NMFS 2022). Additional sediment added to an already impaired habitat is expected to harm juvenile steelhead because the additional sediment will further reduce forage, interstitial spaces, and overwintering habitat.

PACFISH buffers will be implemented for the project, maintaining current ecological services from RHCA. Key BMPs for the buffers are no tree cutting or harvest and no ignition for prescribed burning. As discussed in the BA section 3.9.1. because of no-cut riparian buffers: shade, and therefore water temperatures, sediment filtration, and streambank stabilization should not be significantly affected. Section 3.3.2 discusses the expected outcome of prescribed burning as being low intensity, a mosaic pattern, and with less than 25 percent tree mortality with a possible benefit of large woody debris recruitment (LWD). In addition, because no trees will be cut at least 150 feet from perennial and intermittent streams, 100 percent of potential LWD sources should be retained (Pollack 2013).

Heavy equipment that will be used for implementing the proposed action (e.g., excavator, grader, dump truck, log-haul truck, etc.) operating near the two occupied stream crossing will create point source noise and vibration. Vibration affects eggs in redds which are not expected in the action area during the instream work window for the culvert replacement or near haul at any time of year. Noise produced from these types of heavy equipment in air, at 50 feet from the source, are under 100dB 20 μ Pa (reference pressure for air; FHA 2008; USNRC 2012). The impedance of water is 3600 times that of air, and sound not reflected from the water's surface will propagate from air to water with a reduction of approximately 36 dB 20 μ Pa (Caltrans 2020). This means sound from air is reduced in intensity after entering water and sound in water from machinery is expected to much less than 100dB 1 μ Pa (reference pressure for water). A threshold of 150 dB 1 μ Pa is recommended by NOAA as the threshold for behavioral effects to fish (Caltrans 2020). Because the sound from machinery and haul trucks will be less than the threshold established for behavioral effects, noise is not expected to cause lethal, sublethal, or behavioral effects to steelhead.

Effects to Designated Critical Habitat

Steelhead utilize DCH in the action area for foraging, spawning, rearing, migration, and overwintering habitat. The NPCNF concluded the action would not adversely affect designated critical habitat (Sections 3.9, 3.11.2, and 3.11.5 of the BA). After our independent, science-based evaluation of the information in the biological assessment, NMFS has supplemented the effects analysis as well as added an analysis for the use of MgCl₂. The following physical and biological features (PBFs) of DCH may be affected by the proposed action: water quality, water quantity, substrate, forage and natural cover.

The possible use of MgCl₂ was added to the proposed action after the BA was received and warrants analysis to critical habitat. There are three general potential pathways of effect to critical habitat. MgCl₂ applied to roads as a deicer can “splash” on to vegetation resulting in

discolored leaves or needles to tree death. Generally, splash does not apply to unpaved Forest roads (Hagle 2002) because of low speeds, native surfaces do not receive deicer, and some roads are closed in winter. During precipitation events resulting in runoff from the roads, $MgCl_2$ can concentrate in ditches and thus streams where cumulative chloride concentrations could become toxic to fish. As discussed above, concentrations of $MgCl_2$ in streams is expected to be low and therefore will not appreciably reduce the conservation value of the water quality PBF. Roadside trees can receive surficial $MgCl_2$ from road splash or dust settling, and if frequent enough, can “brown” leaves or needles or kill a tree. Dust laden with $MgCl_2$ can also poison trees if dust is persistent over time. Tree roots that are within about 30 feet of roads can uptake the chloride ion that may accumulate in roadside soils and cause defoliation or tree mortality (Hagle 2002). In the action area, there are no haul routes adjacent to streams but only limited crossings of small tributaries upstream of critical habitat. In addition, only two stream crossings are over critical habitat. Application of $MgCl_2$ will only occur on Road 1875, and application is expected to be infrequent over a period of about 4 years (the typical term of a timber sale contract). For these reasons, defoliation and tree mortality, if it were to occur, are not expected to be widespread or have appreciable effects on stream shading and water temperature, or large woody debris recruitment. Therefore, applying $MgCl_2$ will not appreciably reduce the conservation value of the water quality or natural cover PBFs.

After evaluating the BA information regarding water quality and sediment, NMFS focused on lines of evidence in the BA that show excess fine sediment in substrate: (1) is high throughout the action area including DCH; (2) is above optimal for steelhead spawning and rearing; and (3) does not meet Forest Plan objectives. As discussed above in the Effects to Species section, sediment delivery to streams will increase from ground disturbing activities including increased haul and road maintenance, culvert replacements, and road work. In addition, increased sediment delivery will occur during rewatering or rain events when fine sediment is transported to streams (Luce and Black 2001). Furthermore, lapses in road maintenance or failure to identify potential or ongoing road drainage problems could cause excessive sediment delivery (Al-Chokhachy et al. 2016) during or following wet periods of sediment transport. Despite NPCNF’s commitment to conduct road maintenance commensurate with the increased road use, we predict sediment delivery will increase. While this increased sediment is expected to be attenuated by distance and time before reaching DCH, this sediment is additive to ongoing excess sediment in DCH which further compromises the conservation value of the substrate and forage PBFs.

Pumping water from streams and reduction of trees will have little effect on flow in DCH. As discussed above, streams with DCH are larger size and are protected by a proposed extraction limit on instream flow of 10 percent, an amount that would exceed the pumping capacity for water trucks. Equivalent clearcut acres (ECA) is a metric used to gage the effects of vegetative removal on increasing moderate peak flows. The action area has a baseline of 5 percent to 6 percent ECA for the two subwatersheds in the action area. NOAA’s matrix of pathways and indicators (NMFS 1998) uses less than 15 percent ECA for a subwatershed as a threshold comparable to natural flow conditions. The amount and spacing of proposed harvest units will not increase ECA to greater than 15 percent for the action area. Because pumping and timber harvest will have only very minor effects on flow and natural cover, they will not reduce the conservation value of the water quantity and natural cover PBFs.

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. The Cumulative Effects section of the BA (Section 3.11.7) includes a description of cumulative effects and is adopted here. Because the action area is entirely within national forest land, it is unlikely that non-Federal actions will occur within the action area. However, the SF Clearwater River will continue to be subject to land use and soil disturbing activities from upstream private and State-owned lands that will continue to deliver fine sediment to the SF Clearwater River. Additionally, recreationalists actively use this area for travel, hunting, fishing, and snowmobiling. None of these actions are anticipated to cause additional adverse effects beyond what was discussed in the environmental baseline.

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 to the environmental baseline and the cumulative effects, taking into account the status of the species and critical habitat, 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.

Juvenile steelhead use the action area for rearing and migration. Additionally, adults utilize the 0.4 miles of DCH in Twentymile Creek for spawning habitat. SRB steelhead continue to be at a moderate risk of extinction with the Clearwater River MPG not reaching viable status. This DPS continues to face threats from tributary and mainstem habitat loss, degradation, or modification; predation; harvest; hatcheries; and climate change (NMFS 2023a). The SF Clearwater River population is heavily influenced by hatchery fish and the habitat has been impacted more by land uses than the other intermediate-sized populations in the MPG (NMFS 2017). The action area includes DCH in the lowermost 0.4 miles of Twentymile Creek and the SF Clearwater River. Steelhead utilize this habitat for spawning; therefore, improving habitat quality (i.e., water temperature and substrate) is important to the recovery of the Clearwater River MPG.

For cumulative effects, although there is no private or State land in the action area, activities that generate sediment delivery to the SF Clearwater River from private and State lands will continue.

Based on the species life stages and the activities described in the submitted BA, supplemental information, and NMFS’ analysis, the proposed action is expected to result in harm, harassment, injury or death of a few juvenile steelhead within the action area from, fish salvage and increased turbidity associated with the culvert replacement on Twentymile Creek. Replacement of the culvert will have beneficial long term affects by providing fish passage and being able to pass larger flow events with lesser risk of failure. The replacement will also have short-term adverse effects from fish salvage and turbidity.

The culvert replacement on Twentymile Creek has the potential to harm up to 52 juvenile steelhead from fish salvage and turbidity. NMFS estimated a total number of 21 juvenile steelhead may experience adverse effects from fish salvage and electrofishing during channel dewatering. Of the 21, four juvenile steelhead may be killed or injured during channel dewatering and fish salvage. NMFS expects that a short-term (hours) sediment plume associated with rewatering the isolated stream channel will extend up to 600 feet downstream of the dewatered work area. Juvenile fish will likely respond to a turbidity plume by avoiding the plume and temporarily seeking refuge nearby. However, harm to juveniles is still likely to occur as a result with increased exposure of juveniles to predators and or injury to fish through gill abrasion from suspended sediment.

Increased sediment delivery is expected to result from initial road work, increased haul, and increased road maintenance. Additional sediment added to an already impaired habitat is expected to harm juvenile steelhead because the additional sediment will further reduce forage, interstitial spaces, and the quality of overwintering habitat.

NMFS has determined that the loss of a few juvenile steelhead caused by the proposed action is not substantial enough to negatively influence the viability at the population scale for this DPS, and will not appreciably reduce the likelihood of the population maintaining its current status. Because the effects of the proposed action will not be substantial enough to negatively influence viability at the population scale, the viability of the major population group and DPS are also not expected to be reduced. Therefore, the effects of proposed action are not likely to appreciably reduce survival of steelhead considered in this opinion, nor is the proposed action likely to reduce the likelihood of recovery of the species.

For DCH, PACFISH buffers will be implemented for the project, maintaining current ecological services from RHCAs. Because of no-cut riparian buffers and no prescribed burning ignition within buffers: shade, and therefore water temperatures, sediment filtration, streambank stabilization, and LWD recruitment would experience only minor effects. Although the project may take 16 years to complete, ecosystem processes within riparian areas should remain intact and buffer against effects from increased disturbance caused by timber harvest.

DCH PBFs that may be affected by the proposed action include: water quality, water quantity, substrate, forage and natural cover. None of these PBFs would suffer adverse effects from the proposed action except substrate. Sediment from culvert replacements, road work, haul, and increased road maintenance will deposit in DCH substrates. Lapses in road maintenance or failure to identify potential or ongoing road drainage problems could cause excessive sediment delivery during or following wet periods of sediment transport. Under increased road maintenance and following proposed road and culvert BMPs, sediment yield and delivery is expected to be minimized as much as possible. Project sediments will be attenuated by distance and time before reaching DCH. However, this sediment is additive to ongoing excess sediment in DCH which further compromises the conservation value of the substrate and forage PBFs. In addition, because pumping and timber harvest will have only very minor effects on flow and natural cover, they will not reduce the conservation value of the water quantity and natural cover PBFs. While we do expect adverse effects on DCH at the scale of the action area, we do not

expect these effects to alter the conservation value of the habitat. Thus, when we scale up the designation, we expect the conservation value of DCH for SRB steelhead to be maintained.

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, the effects of other activities caused by the proposed action, and cumulative effects, it is NMFS' biological opinion that the proposed action is not likely to jeopardize the continued existence of SRB steelhead or destroy or adversely modify its designated critical habitat.

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). "Harass" is further defined by interim guidance as to "create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering." "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.

Amount or Extent of Take. In the biological opinion, NMFS determined that incidental take is reasonably certain to occur as follows: (1) recent and historical surveys indicate ESA-listed species are expected to occur in the action area; and (2) the proposed action includes instream work activities that could harm or kill juvenile steelhead (e.g., dewatering, rewatering/turbidity). In some instances, NMFS is able to quantify the amount of take; however, where available information precludes our ability to quantify take, we use surrogates to describe the incidental take pursuant to 50 CFR 402.14.

In the biological opinion, NMFS determined that incidental take would occur as follows:

- (1) Harm or harassment of juvenile steelhead during channel dewatering for culvert replacement on Twentymile Creek;
- (2) Injury or mortality of juvenile steelhead during dewatering and fish salvage for culvert replacement on Twentymile Creek.
- (3) Harassment, injury, or death (predation due to displacement) of juvenile steelhead during channel rewatering after culvert replacement by temporary increases in turbidity in Twentymile Creek.

- (4) Harm of juvenile steelhead from sedimentation of substrate resulting from road work, stream crossing replacements, log haul, and increased road maintenance.

Incidental Take from Channel Dewatering, Fish Salvage, and Rewatering

As described in the species effects analysis, NMFS was able to quantify the take associated with the only culvert replacement that is likely to have steelhead present (i.e., take from channel dewatering and turbidity plumes). NMFS estimated a total number of 21 steelhead may experience adverse effects from fish salvage and electrofishing during channel dewatering. Of the 21, four juvenile steelhead may be killed during channel dewatering and fish salvage. The total number of juvenile steelhead (52) harmed or killed during the culvert replacement is based on the channel area dewatered and the channel area of disturbance from the turbidity plumes while rewatering the dewatered area. Therefore, the total area of disturbance, or linear stream length, since width is generally static during baseflows, is a good surrogate as a threshold for take. NMFS will use the length of stream to be dewatered (400 feet) and the expected extent of turbidity below the dewatered area (600 feet) as the extent of take (1,000 feet).

NMFS will consider the extent of take exceeded if more than four juvenile steelhead in total are killed or injured during culvert replacement activities.

The extent of take will be exceeded from channel rewatering turbidity if turbidity is visible greater than 600 feet downstream of the downstream extent of the dewatered area.

Incidental Take from Increased Road Maintenance and Heavy Road Use

Heavy road use and increased road maintenance will cause increased levels of instream deposited sediment below any drainage point from the road prism. This sediment is expected to be delivered downstream and will reach occupied habitat. Due to the extremely high variability that occurs when measuring deposited sediment in stream substrates (Leonard 1995), it is not practicable to assess changes in deposited sediment from the proposed action through direct measurements. The type of sampling design and number of samples required to detect a statistically significant change would be prohibitive. In addition, take cannot be quantified because steelhead presence and density are highly variable due to natural factors such as seasonal water temperature, seasonal flow, or channel conditions. For this reason, NMFS will use the condition of the road at the stream crossings as a surrogate for take from sedimentation of substrate. Road condition is a reasonable surrogate for take because of the causal relationship between disrepair of roads and consequent sediment delivery to streams and substrate. Because road surface and drainage condition affect the amount of erosion and fine sediment delivery (Luce and Black 2001) from the road to stream substrates, and excess fine sediment in substrates can cause harm to steelhead, monitoring road surface and drainage conditions is a reasonable surrogate for this take pathway. The NPCNF monitors the road surface and drainage condition while administering timber sales and uses PED (Potential Environmental Damage) as a threshold for any deterioration of the road surface or drainage in need of mechanical repair. The PED develops after significant precipitation events. Because of the potential for erosion and sedimentation of substrates is greatest downstream from roads segments exhibiting PED, it is important that PED be identified and repaired as quickly as possible after PED develops.

NMFS will consider the extent of take to be exceeded if PED meets either of these conditions:

- (1) PED is present at 25 percent or more of stream crossings on active haul routes within two days of roads becoming drivable following closure of haul due to wet road conditions (i.e., a Sales Administrator's vehicle); or
- (2) PED on active haul routes is not corrected within six days after roads become drivable for cars.

NMFS uses 25 percent PED as a threshold of take not to be equaled or exceeded because it would represent (on average) a need for mechanized repairs at a quarter or more of active haul crossings and a more-than-infrequent occurrence of effects on non-fish bearing streams that could be sources of eventual sediment movement into areas with steelhead. Effects in excess of that percentage would indicate a prevalence of design/maintenance execution problems and/or rain events that were more intense and exceeding road drainage capacity. Although these effects would be addressed quickly under the action, their temporary presence could indicate future erosion issues and a greater source of sediment delivery at these crossings, and more take in the stream reaches below the crossings, than NMFS anticipated.

Effect of the Take. In the biological 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.

Reasonable and Prudent Measures. The "reasonable and prudent measures" listed below are measures that are necessary or appropriate to minimize and/or monitor the impact of the amount or extent of incidental take (50 CFR 402.02).

1. Minimize the extent of take from the culvert replacement on Twentymile Creek, road work, log haul, and increased road maintenance.
2. Prepare and provide NMFS with plan(s) and report(s) describing how impacts of the incidental take on listed species in the action area would be monitored and documented.

Terms and Conditions. In order to be exempt from the prohibitions of Section 9 of the ESA, the Federal action agency must comply (or must ensure that any applicant complies) with the following terms and conditions. The NPCNF 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, the NPCNF shall ensure that:
 - a. Electrofishing will be implemented only where other means of fish capture are not feasible or effective, and will follow NMFS (2000) electrofishing guidelines.

- b. The dewatered channel is wetted down first to facilitate settling of fine material into interstitial spaces. Then, water should be slowly reintroduced to the channel to reduce the chance of a sudden increase in turbidity and minimize the duration of turbidity.
 - c. Visible turbidity will be monitored every two hours 600 feet downstream of the dewatered area during any activity that causes turbidity at the culvert replacement on Twentymile Creek.
 - d. If turbidity is visible, the activity causing the increased turbidity must cease or be modified until turbidity is no longer visible at the monitoring point.
 - e. For any haul route, PED will be identified and corrected prior to haul.
 - f. PED will be identified within 2 days of roads becoming drivable following closure of haul due to wet road conditions (i.e., a Sales Administrator's vehicle)
 - g. PED on active haul routes will be corrected within 6 days after roads become drivable for cars.
2. To implement RPM 3 (monitoring and reporting), the NPCNF shall ensure that:
- a. All steelhead injured or killed shall be identified, counted, and recorded. These data will be reported in the annual project report.
 - b. If project take of steelhead (total of four fish injured or killed) is exceeded at the culvert site, work will be suspended and NMFS will be called within 72 hours to discuss reinitiation of consultation.
 - c. Turbidity monitoring shall be conducted for the culvert replacement on Twentymile Creek. Turbidity will be recorded every 2 hours 600 feet downstream of dewatered area for culvert replacement until the plume is no longer visible at 600 feet or less downstream. Monitoring time and distance of measurements, and maximum extent of turbidity will be reported in the project annual report.
 - d. The Forest shall document by date: haul closures due to wet conditions, inspections for PED after roads become drivable, and correction of PED.
 - e. Documentation of haul closures and PED will be included in the annual monitoring report until haul ceases for project.
 - f. Post-project reports will be required for any year there is culvert replacement on Twentymile Creek and any year there is log haul. Summary results of all monitoring shall be submitted to NMFS by December 31 of each year for the duration of log haul. The annual project report shall also include a statement on

whether all the terms and conditions of this opinion were successfully implemented.

- g. The post-project reports shall be submitted electronically to:
nmfswcr.srbo@noaa.gov.

Conservation Recommendations. Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. 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).

1. Water drafting with trucks should occur from existing roadways to reduce sediment delivery from ground disturbance
2. Add additional cross drains to minimize ditch drainage length to stream crossings to reduce sediment delivery to streams.
3. Inspect non-haul routes for PED in the action area during the road work phase prior to haul and correct PED to reduce chronic sediment delivery sources in the action area.

Reinitiation of Consultation. Under 50 CFR 402.16(a): Re-initiation of consultation is required and shall be requested by the Federal agency or by the Service where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and: (1) if the amount or extent of taking specified in the incidental take statement is exceeded; (2) if new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) if 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 written concurrence; or (4) if a new species is listed or critical habitat designated that may be affected by the identified action.

Magnuson-Stevens Fishery Conservation and Management Act

Section 305(b) of the MSA directs federal agencies to consult with NMFS on all actions or proposed actions that may adversely affect EFH. Under the MSA, this consultation is intended to promote the conservation of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity," and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10). 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 may result from actions occurring within EFH or outside of it and may include direct,

indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) of the MSA also requires NMFS to recommend measures that can be taken by the action agency to conserve EFH. Such recommendations may include measures to avoid, minimize, mitigate, or otherwise offset the adverse effects of the action on EFH (50 CFR 600.905(b)).

EFH Affected by the Proposed Action

The proposed project occurs within EFH for Chinook and coho salmon within the Pacific Coast Salmon Fishery Management Plan (PFMC 2014). In addition, the project occurs within, or in the vicinity of spawning habitat which is designated as a habitat area of particular concern (HAPC) for various federally managed fish species within the Pacific Coast Salmon Fishery Management Plan. The HAPC are described in the regulations as subsets of EFH which are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. Designated HAPC are not afforded any additional regulatory protection under the MSA; however, federal projects with potential adverse impacts on HAPC will be more carefully scrutinized during the consultation process.

Adverse Effects on EFH

NMFS determined that the proposed action would adversely affect EFH as described in the DCH section of the biological opinion. In particular, spawning and rearing habitat within the action area are impaired for fine sediment in substrates and the proposed action will exacerbate and prolong this impairment.

EFH Conservation Recommendations

NMFS determined that the following conservation recommendations are necessary to avoid, minimize, mitigate, or otherwise offset the adverse effects of the proposed action on EFH.

1. Add additional cross drains where practicable to minimize ditch drainage length to stream crossings to reduce sediment delivery to streams and spawning habitat.

Statutory Response Requirement

As required by section 305(b)(4)(B) of the MSA, the Nez Perce-Clearwater National Forest must provide a detailed response in writing to NMFS within 30 days after receiving an EFH conservation recommendation. 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 the measures proposed by the agency for avoiding, minimizing, mitigating, or otherwise 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)).

Supplemental Consultation

The NPCNF 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)).

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The biological opinion will be available within 2 weeks at the NOAA Institutional Repository (<https://repository.library.noaa.gov/welcome>). A complete record of this consultation is on file at NMFS's Northern Snake Branch office, Boise, Idaho.

Please contact Aurele LaMontagne, Northern Snake Branch, Boise, ID at 208-378-5686 or aurele.lamontagne@noaa.gov if you have any questions concerning this consultation.

Sincerely,



Nancy L. Munn, Ph.D.
Acting Assistant Regional Administrator
Interior Columbia Basin Office

cc: R. Smith– NPCNF
E. Judson – NPCNF
J. Diluccia – NPCNF
M. Lopez – NPT
M. Carter – NPT
S. Brinkman – USFWS
C. Johnson-Hughs – USFWS

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