As required by section 7 of the ESA, NMFS provides an incidental take statement (ITS) with the Opinion. The ITS describes reasonable and prudent measures (RPM) NMFS considers necessary or appropriate to minimize the impact of incidental take associated with this action. The take statement sets forth nondiscretionary terms and conditions, including reporting requirements, that the BLM, COE, and any permittee who performs any portion of the action must comply with to carry out the RPM. Incidental take from actions that meet these terms and conditions will be exempt from the ESA take prohibition.

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, with NMFS. The opinion includes three Conservation Recommendations to help avoid, minimize, or otherwise offset potential adverse effects on EFH. These Conservation Recommendations are a non-identical set of the ESA Conservation Recommendations. Section 305(b)(4)(B) of the MSA requires federal agencies provide a detailed written response to NMFS within 30 days after receiving these recommendations.

If the response is inconsistent with the EFH Conservation Recommendations, the BLM or COE must explain why the recommendations will not be followed, including the justification for any disagreements over the effects of the action and the recommendations. 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, in your statutory reply to the EFH portion of this consultation, NMFS asks that you clearly identify the number of Conservation Recommendations accepted. The NMFS has made a Likely to Adversely Affect determination for EFH.

Please contact Mr. Dennis Daw, Northern Snake Branch, at 208-378-5698 or dennis.daw@noaa.gov if you have any questions concerning this consultation, or if you require additional information.

Sincerely,

Michael Tehan
Assistant Regional Administrator
Interior Columbia Basin Office

Enclosure
cc:
- C. Johnson – BLM
- M. Kosterman – USFWS
- M. Lopez – Nez Perce Tribe
- W. Schrader - COE

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ACRONYMS

ACRONYM	DEFINITION
BA	Biological Assessment
BLM	Bureau of Land Management
BMP	Best Management Practices
BO	Biological Opinion
Cfs	Cubic Feet per Second
CY	Cubic Yard
COE	U.S. Army Corps of Engineers
CWA	Clean Water Act
dB	Decibel
DPS	Distinct Population Segment
DQA	Data Quality Act
EFH	Effective Fish Habitat
ESA	Endangered Species Act
ESU	Evolutionarily Significant Units
ICTRT	Interior Columbia Technical Recovery Team
IDFG	Idaho Department of Fish and Game
ISAB	The Independent Scientific Advisory Board
ITS	Incidental Take Statement
HUC	Hydrological Unit Number
kPa	Kilopascals
lbs	Pounds
LWD	Large Woody Debris
MPG	Major Population Group
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NTU	Nephelometric Turbitityy Unit
NWFSC	Northwest Fisheries Science Center
ODFW	Oregon Department of Fish and Wildlife
OHWM	Ordinary High Water Mark
Opinion	Biological Opinion
PBF	Physical and Biological Features
PCE	Primary Constituent Element
NMFS	National Marine Fisheries Service
RCH	Riparian Conservation Area
RPA	Reasonable Prudent Alternative
RPM	Reasonable Prudent Measures
RPM	Road Management Plan

USDI	U.S Department of Interior
USFWS	U.S. Fish and Wildlife Services
USFW	U.S Forest Service
USGS	U.S Geological Service
VSP	Viable Salmonid Population
WDFW	Washington Department of Fish and Wildlife
WMA	Wildlife Management Area
YOY	Young-of-the-Year

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 USC 1531 et seq.), and 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/welcome]. A complete record of this consultation is on file at NMFS Snake River Branch in Boise, Idaho.

1.2 Consultation History

The Bureau of Land Management (BLM) Cottonwood Field Office reached out to NMFS on October 24, 2019, to discuss the upcoming Eagle Creek road maintenance plan. On January 22, 2020, the BLM submitted a draft of the Eagle Creek Road and Bridges Project for review prior to the level one meeting. The BLM presented the Eagle Creek Road and Bridges Project at the January 23, 2020 level one meeting. Based on that discussion the BLM submitted a revised draft Biological Assessment (BA) to NMFS on February 3, 2020. NMFS reviewed and commented on the draft BA on February 27, 2020. The BLM submitted another draft of the Eagle Creek Road and Bridges Project on April 3, 2020. NMFS completed a review of the second draft on April 29, 2020. NMFS determined that the BA was complete and the project was ready for initiation of consultation. On May 6, 2020, the BLM submitted a letter and final BA to NMFS requesting formal consultation. In a May 21, 2020 letter to BLM, NMFS documented acceptance of the BA and initiation of formal consultation on May 6, 2020.

1.3 Proposed Federal 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). The BLM proposes to implement road maintenance and repairs on 10.9 miles of the Eagle Creek Road. The BLM also proposes to place riprap at the abutments of the bridges crossing Eagle and China Creeks near their confluences with the Salmon River.

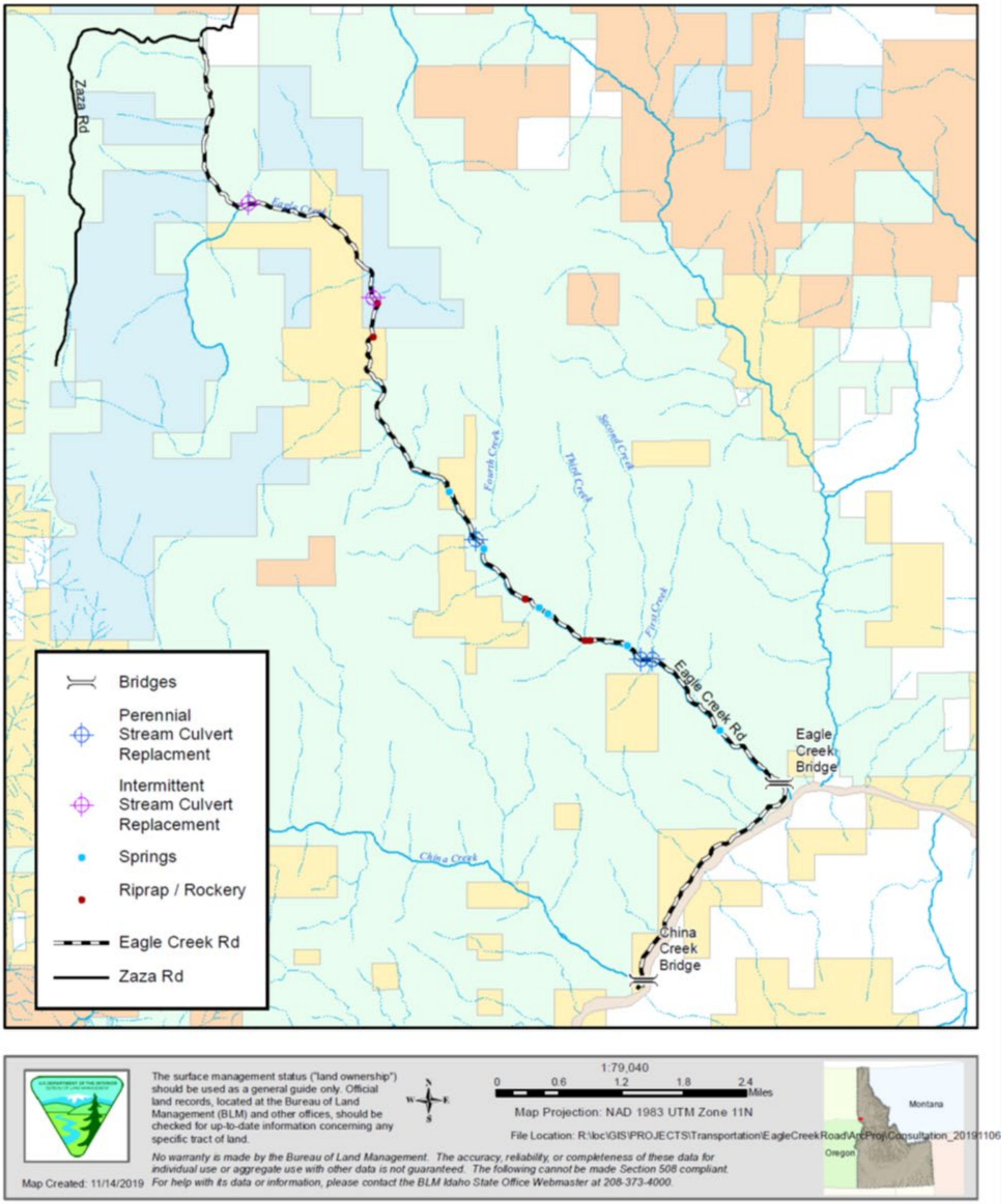
We considered whether the proposed action would cause any other activities and determined that it would not.

The purpose of the Eagle Creek Road and Bridges Project is to address the goal for Transportation and Travel Management for road management from the Cottonwood Resource Management Plan (RMP) (USDI-BLM 2009), which states, "Manage travel, roads, and trails to provide access and recreational opportunities, while minimizing resource impacts and user conflicts." To accomplish this goal, the proposed action would include road and bridge maintenance, and improvement actions to provide long-term reliable vehicle access to public lands in the Eagle Creek drainage and along the Salmon River. The proposed action was designed to minimize short-term adverse impacts to high value resources, while providing long-term benefits for public access, water quality, aquatic habitats, and cultural resources.

Within the lower 53 miles of the Salmon River, public motorized access only includes two public access roads. The Eagle Creek road provides public motorized access in this segment of the Lower Salmon River. This primitive road occurs within the Craig Mountain Wildlife Management Area (WMA), the largest WMA in the state, and it is a very popular access road for recreationists. This road has experienced severe erosion and flood damage from past events, and has been periodically closed due to road washouts and gullying. Snow in the upper elevation sections of the road generally closes the Eagle Creek Road to vehicle passage from December through March.

The BLM proposes to conduct maintenance and improvements on the Eagle Creek Road, and maintenance on the Eagle Creek and China Creek Bridges (Figure 1). The project area occurs within the Lower Salmon River subbasin and occurs in the Eagle and China Creeks drainages, and the Salmon River face drainages (Figure 1). The majority of project work will occur within the Eagle Creek drainage on the Eagle Creek Road. Minor work would occur on the road paralleling the Salmon River, and riprap placed at the abutments of the China Creek Bridge.

Figure 1. Map of Eagle Creek road and the location of the proposed action.



The BLM is proposing to implement road maintenance and improvements on 10.9 miles of the Eagle Creek road and conduct maintenance on the Eagle Creek and China Creek Bridges from

April 1, 2021 to October 1, 2022. (Figure 1). Eagle Creek Road would be left open during weekends for the duration of the project.

Specific road improvements and maintenance actions include the following:

1. Improve road drainage and conduct road reconditioning on 10.9 miles of the Eagle Creek Road (Zaza Road Junction to Eagle Creek Bridge), which includes: blading; ditch cleaning; cleaning inlets and outlets of culverts; replacing stream culverts, installing relief culverts, ditch construction; constructing drivable water-bars; removing road berms; selective graveling at specific sites; adding fill material at specific locations to raise the elevation of the road; and reshaping the road, as needed, to provide proper drainage (outsloping and insloping) (Table 1).

2. At three locations, between Eagle Creek and China Creek Bridges, rock (3-inch minus) would be placed on existing roadbed to protect cultural resources. These cultural resources are Nez Perce Tribal artifacts that were exposed during road construction in the 1950s-1960s. The added gravel will help protect the artifact from future erosion. No ground disturbing activity is required prior to placement of rock. This would only involve the placement of rock (3-inch minus) on existing road at three locations to protect cultural resources.

3. Replace culverts at road crossings for three perennial, and two intermittent, non-fish bearing streams. Riprap material would be placed at inlets and outlets of culverts (Figure 1).

4. Provide road drainage for six springs/seeps. As needed, improved spring/seep drainage would include construction of armored drivable water-bars or constructing ditching with relief culverts (Figure 1).

5. Armor/gabion construction/riprap placement at three locations of eroding fill slope with riprap material (Table 1 and 2).

6. Construct gabion and riprap embankment at three locations where the road is sloughing off. These three locations are above the ordinary high water mark (OHWM) and not associated with the creek.

7. Place riprap material to protect Eagle Creek and China Creek bridge abutments from high flow erosion events. Minor repairs would occur to the bridges; including the removal and replacement of bridge running boards, adding weld plates at decking ends, and replacing signage.(Table 1 and 2)

8. Selectively remove pieces of an Eagle Creek high flow woody debris jam to prevent road erosion and diversion of water onto the road (stream mile 6.7).

9. Cut down five white alder snags that are located immediately upstream from Eagle Creek Bridge which may cause a logjam, fall on the bridge, or potentially divert water towards

abutments. These snags would be cut and removed leaving high stumps (3-4 feet) to secure and maintain the integrity of large woody debris that occurs at the base of these trees and occurs in the stream channel.

10. As needed, brushing would occur the entire length of the Eagle Creek Road (Zaza Road Junction to Eagle Creek Bridge). Brushing would occur 5-feet horizontally from the existing edge of the road.

11. Dynamite/blasting may be used in areas where excavation is needed in bedrock areas for construction purposes such as culvert installation, ditching, or road re-shaping. Use of dynamite would only occur in very few specific locations if needed at all. For this action and ESA consultation, BLM assumed and specified in the BA that dynamite will be used at no more than 10 sites total, up to five of these may be within spring/summer Chinook salmon designated critical habitat.

12. There would be no dispersed camping authorized between Zaza Road and Eagle Creek Bridge for the duration of the project.

13. A gate would be installed near the top of Eagle Creek Road (Zaza Road Junction) to help prevent the public from accessing the road during active construction periods and to prevent potential theft and vandalism of equipment and materials.

14. Implement Best Management Practices (BMPs) and project design measures to minimize or avoid erosion and sediment (e.g., erosion control barriers, mulching, seeding, etc.), minimize adverse impacts to aquatic and riparian habitats, minimize potential impact to special status fish, and avoid impacts to cultural sites.

Table 1. List of activities, number, and location of each activity.

Activity	Eagle Creek	China Creek	Salmon River	Comments
Road Improvements and Maintenance	10.9 miles	0	0	With the exception of 0.2 mile of road, a total of 10.7 miles of road maintenance activities would occur within riparian conservation areas RCHs. A total of 9.1 miles of road occurs within 200 feet of designated critical habitat for steelhead. A total of 6.35 miles occurs within 200 feet of designated habitat for spring/summer Chinook salmon.
Perennial Tributary Culverts	Replacement 3 culverts	0	0	All culvert replacements occur within 100 feet of Eagle Creek and designated critical habitat for spring/summer Chinook salmon and steelhead.

Activity	Eagle Creek	China Creek	Salmon River	Comments
Intermittent Tributary Culvert Replacement	2 culverts	0	0	All culvert replacements occur within 100 feet of Eagle Creek and designated critical habitat for steelhead.
Provide road drainage for 6 spring/seeps	6 spring/seep drainage structures	0	0	All spring/seep drainage structures would occur within 50-100 feet of Eagle Creek. Eagle Creek provides designated critical habitat for spring/summer Chinook salmon and steelhead.
Bridge riprap placement and streambank stabilization.	1 Bridge	1 Bridge	0	Eagle Creek bridge approx. 0.25 mile from Salmon River. China Creek bridge approx. 75 – 100 feet from Salmon River. China Creek and Eagle Creek provide designated critical habitat for spring/summer Chinook salmon and steelhead.
Selective removal of large woody debris in Eagle Creek.	2 sites	0	0	At stream mile 0.25, five dead white alder would be removed (potential impacts to bridge). At stream mile 6.7, selective removal of large woody debris jam would occur to prevent stream diversion onto road. Designated critical habitat for steelhead.
At three locations, between Eagle Creek and China Creek Bridges, rock (3-inch minus) would be placed on existing roadbed to protect cultural resources from further erosion.	0	0	3 sites	Three sites occur within Salmon River RCHA.
Riprap placement for bank stabilization	3 riprap placements	0	0	Riprap placement would occur below OHWM for Eagle Creek. Steelhead designated critical habitat (3 sites) and Chinook salmon designated critical habitat (2 sites).

Table 2. Riprap (Rockery) Placement for Eagle and China Creeks Streambank Stabilization

Approximate Stream Mile	Length of site(feet)	Cubic Yards (CY) of Riprap Below OHWM
Eagle Creek		
3.4	30	10
6.7	75	15-20
7.0	40	13
0.05	20	No new riprap, just relocating existing riprap that has sloughed.
China Creek		
0.05	15	5

There will be riprap placements at three culverts on small perennial streams, two culverts on intermittent streams, three locations on Eagle Creek below OHWM, Eagle Creek Bridge and at China Creek Bridge. There will not be any new riprap added to the Eagle Creek Bridge, the riprap will be relocated due to the sloughing of the riprap.

1.3.1 Project Design Measures and Best Management Practices

The proposed action would incorporate Best Management Practices (BMPs) and design measures, as needed, to protect and conserve aquatic and riparian habitat, avoid or minimize adverse impacts to special status species (ESA– listed species and BLM sensitive species), prevent erosion, conserve watershed resources, and avoid adverse impacts to cultural resources. Project design measures and BMPs would include:

1. Construction work below mean-high-water level in Eagle Creek or China Creek would only occur between July 15 – October 1 (USDI-BLM 2009). All heavy equipment would operate from areas above mean-high-water level.

2. The use of dynamite/blasting is not authorized between October 1 – July 15. The use of dynamite/blasting would require pre-project site inspection regarding distance from Eagle Creek, charge weight, and setback distance. Individual dynamite charge weight would not exceed 25 pounds per charge (charges will be separated by at least eight milliseconds). The setback distance is the distance from the blasting site that will be required to prevent harm or death to fish. All areas of the stream within the setback distance will require fish salvage/removal to prevent injury or mortality. The setback distance is dependent on dynamite charge weight (Table 3). If the blasting site were more than 100 feet from Eagle Creek then fish salvage would not be required.

   Upstream and downstream bounds at each site identified for block netting and fish removal would be based on a 100-foot radius from the blasting source. The 100 feet is based on the 86 feet (plus 14 feet additional buffering distance) for the 25-lb charge as determined in the study summarized in Table 3. For any blasting site within a 100-foot radius of the stream, block nets would be installed and fish would be removed by electro-fishing. The maximum length of a block netted/fish salvaged reach would be 200 feet, i.e., if the blasting site is directly adjacent to the stream. Block nets would be placed in Eagle Creek the day blasting is scheduled to occur and would be removed immediately after all blasting is completed, generally the same day. If block nets need to be in place longer than one day, they would be inspected daily to ensure they are not full of debris and they are still functioning as a barrier to fish movement. Block nets would never be in place longer than two days at each site.

Table 3. Charge weight and setback distance for a 50kPa pressure threshold Wright and Hopkey (1998)

Charge weight (lbs)	25	50	75	100	125	150	200	500	1000
Setback Distance (ft)	86	122	149	172	193	211	285	385	545

3. All electro-fishing would be conducted in accordance with the National Marine Fisheries Service Guidelines for Electrofishing Water Containing Salmonids Listed under the Endangered Species Act (NMFS 2000) and in accordance with the Idaho Department of Fish and Game provisions for this activity. Electrofishing will be supervised by a qualified fisheries biologist. Captured fish would be placed upstream and downstream of block nets prior to blasting.

4. As needed, project design measures would be implemented to avoid or minimize erosion or sediment delivery to streams. This would include a combination of the following:

    a. Installation of sediment barriers or traps (i.e., sediment fences, straw waddles, straw bales, etc.);

    b. seeding with desired plant species (see Table 4);

    c. mulching with certified weed-free straw mulch.

Table 4. Rehabilitation Seed Mixture

Species	Percentage	Pounds per Acres
StreamBank Wheatgrass	35%	7 lbs
Mountain Brome	35%	7 lbs
Hard Fescue or Sheep Fescue	10%	2 lbs
Tufted Hairgrass	10%	2 lbs
Annual Ryegrass	10%	2 lbs
TOTAL	**100%**	**20 lbs**

5. Vegetation and soil disturbance on road cuts, fills, turnouts, staging areas, drainage structures, or material source sites would be rehabilitated to avoid or minimize erosion. All erosion/sediment rehabilitation would occur prior to the end of the current field season that construction took place and where practical should be concurrent with construction activity.

6. All new soil/vegetation construction activities outside of existing road prism (e.g., material sources, new turnouts, staging areas, etc.) would have site evaluations and clearances for cultural, historical, special status species, and other resources of concern prior to any ground disturbance. The road prism is defined as the existing soil disturbance from road construction including road surface, fill, and cut areas.

7. Where practical and feasible, drivable water-bars will be constructed in areas that divert run-off into upland or riparian vegetation rather than directly into the stream.

8. During improved drainage construction at spring/seep sites, sediment traps or barriers will be installed below outlets (e.g., of culvert or armored crossing) to prevent erosion/sediment from reaching Eagle Creek. Placement of riprap below outlets will be installed to prevent gullying or erosion of fill slope.

9. All construction activity will be in accord with state and federal permits and authorizations (U.S. Army Corps of Engineers, Idaho Department of Water Resources, and Idaho Department of Environmental Quality).

10. All authorized actions would be in accord with Federal, State, and County laws, and authorized uses and restrictions.

11. Culvert inlets and outlets would be armored with riprap to minimize erosion and sediment.

12. Water will be needed for compaction of culvert trenches, and other work requiring compaction (road grading, backfilling of retaining walls, etc.). Water will not be needed for dust abatement. Any project water withdrawals from fish-bearing streams would be properly screened and screen openings would not exceed 3/32 inch and approach velocity would not exceed 0.33 feet per second. NMFS fish screen criteria (NMFS 2011) will be utilized for all water pumping activities. Undercut banks shall not be exposed and connected flow at and below pump location shall be maintained. No more than 20 percent of stream flow shall be pumped. No instream coffer dam construction for water withdrawal would be authorized that would impair juvenile and adult fish- upstream or downstream fish passage. Prior to any water withdrawal occurring in a fish-bearing stream, the site would be approved by a Fisheries Biologist. No temporary road construction would be authorized to provide vehicle access to a stream for water withdrawals. Temporary water rights would be required for water withdrawals from streams (Idaho Department of Water Resources).

13. No brushing would occur on streambanks or any area below mean-high-water. Riparian vegetation at construction sites will be retained unless removal is absolutely necessary for construction purposes. No brushing activity would occur in areas where shrubs occur on streambanks, provide overhead stream shade, or provide streambank stability. Brushing activity would primarily only occur in road fill, cut, ditches, or branches cut that extend into the road.

14. All fuel storage would have a containment basin for a minimum of 125% of fuel volume being stored. All fuel storage, fueling, or maintenance sites would occur in areas that would minimize or avoid potential for any spill reaching water bodies. Slip-on tank capacity for equipment fueling would not exceed 100 gallons. An emergency spill kit would be located on site during construction, at fuel storage site, and at fueling sites. All hazardous materials spills (e.g., fuel, oils, hydraulic fluid, etc.) would be reported immediately to the Bureau of Land Management (BLM).

15. Prior to placement of riprap material instream for the three sites on Eagle Creek and at Eagle Creek or China Creek bridges, the work site would have fish herded with nets. Herding fish will consist of individuals wading through the area with nets to move the fish out of the area. The nets will be used only to move fish; no fish will be captured during this process. Where practical, all riprap placement at each specific site would be completed in one day, and fish would be herded immediately prior to riprap placement. Block nets would be installed immediately after fish are flushed to prevent fish from entering the area. Block nets will be placed parallel to the bank, a minimum of two feet from any area where riprap is placed, and would form an exclosure area. Block nets would be removed immediately after the instream work is completed.

16. At one location, where large woody debris (LWD) and debris jams are diverting water onto the road and causing erosion to the road prism (stream mile 6.7), BLM proposes selective removal or relocation of large wood as directed by a BLM Fisheries Biologist. Such action would only occur to protect existing road template and prism and if other alternatives are not practical. Selective removal and/or relocation of LWD would maintain integrity of stream channel stability and instream fish habitat conditions where possible. Prior to removal of any instream LWD or cutting of dead trees below mean-high-water-level (Eagle Creek bridge) the work site preparation would include herding fish out of the immediate area with nets, in a similar manner as described above, and the LWD removal and relocation would be completed within 2 hours.

17. Disturbance of cut and fill areas would be minimized and side casting of material onto fill would be avoided, unless needed for providing improved road drainage and preventing road erosion.

18. All heavy equipment or other machinery would be cleaned of external oil, grease, hydraulic fluids, or other toxic materials; and all leaks repaired prior to arriving at the project site. All machinery and equipment would be washed and cleaned of soil, plant parts, seeds, and other debris before entering the project area. All equipment would be inspected by a Contracting Officer or Representative, or project inspector before unloading. Equipment would be inspected daily for leaks or accumulations of grease, and any identified problems corrected before working near streams or areas that drain directly to streams or wetlands.

19. Existing weed infestations along access roads would be treated prior to project implementation and following project completion. All weed control activities will be conducted in accord with the BA of the BLM 2011 – 2022 Noxious Weed Control

Program (BLM 2011) and corresponding Biological Opinions from NMFS (NMFS Fisheries 2012) and USFWS (USFWS 2012). Any updates and amendments to referenced consultation for weed control activities would also be adhered to.

20. All rock and gravel used for road surfacing must be free of noxious weed seed. Borrow pits and stockpiles would not be used if it is determined they are infested with undesirable invasive plants. Riprap material used for bridge abutment and streambank stabilization will meet standards for required rock size. Project inspector will monitor to ensure that none or unmeasurable amounts of fine material or loose dirt occurs in riprap placements.

21. All culvert replacements or new culverts for streams would be properly sized to handle 100-year flow events. All culvert replacements would have approaches rocked/graveled for a distance of 25-feet on each side.

22. Prior to replacing culverts in perennial non-fish-bearing streams, the work site would be de-watered. Culvert replacements in intermittent streams would occur when the stream has no flowing water, if possible, or when flows are very low. If any flowing water reaches Eagle Creek; a straw bale sediment trap will be placed and staked in the stream to trap sediment.

23. Restrict construction and maintenance activities when soils are wet, to prevent resource damage (indicators include excessive rutting, soil displacement, and erosion).

24. In the event of needing access for conducting road improvements and maintenance activities at lower elevation areas, snow plowing would maintain a minimum of two inches of snow on the road, and leave ditches and culverts functional. Side cast material will not include dirt and gravel, and berms would not be left on the shoulder unless drainage holes are opened and maintained. Where feasible, drainage holes would be at sites that avoid diverting run-off flows directly into Eagle Creek.

25. With the exception of snow plowing for access, no road improvement actions would occur in areas where snow cover occurs.

1.3.2 Monitoring

1. The BLM will conduct monitoring to document that environmental design measures were implemented to avoid or minimize adverse impacts to aquatic habitats, riparian areas, and water quality.

2. Monitoring of Eagle Creek and China Creek turbidity would be conducted at sites where there are instream activities such as replacing culverts in the three perennial (non-fish-bearing) streams including construction activities and dewatering, construction activities to improve drainage for springs/seeps, installation of riprap material, and selective removal of large woody debris. For actions that involve instream work, turbidity monitoring would occur 150-feet downstream from work sites in Eagle Creek and 50-

likely also included populations in the Clearwater River drainage and extended above the Hells Canyon Dam complex.

Within the Snake River ESU, the Interior Columbia Technical Recovery Team (ICTRT) identified 28 extant and 4 extirpated or functionally extirpated populations of spring/summer-run Chinook salmon, listed in Table 6 (ICTRT 2003; McClure et al. 2005). The ICTRT aggregated these populations into five MPGs: Lower Snake River, Grande Ronde/Imnaha Rivers, South Fork Salmon River, Middle Fork Salmon River, and Upper Salmon River. For each population, Table 6 shows the current risk ratings that the ICTRT assigned to the four parameters of a VSP (spatial structure, diversity, abundance, and productivity).

Spatial structure risk is low to moderate for most populations in this ESU (NWFSC 2015) and is generally not preventing the recovery of the species. Spring/summer Chinook salmon spawners are distributed throughout the ESU albeit at very low numbers. Diversity risk, on the other hand, is somewhat higher, driving the moderate and high combined spatial structure/diversity risks shown in Table 6 for some populations. Several populations have a high proportion of hatchery-origin spawners—particularly in the Grande Ronde, Lower Snake, and South Fork Salmon MPGs—and diversity risk will need to be lowered in multiple populations in order for the ESU to recover (ICTRT 2007; ICTRT 2010; NWFSC 2015).

Abundance and Productivity. Historically, the Snake River drainage is thought to have produced more than 1.5 million adult spring/summer Chinook salmon in some years (Matthews and Waples 1991), yet in 1994 and 1995, fewer than 2,000 naturally produced adults returned to the Snake River (ODFW and WDFW 2019). From the mid-1990s and the early 2000s, the population increased dramatically and peaked in 2001 at 45,273 naturally produced adult returns. Since 2001, the numbers have fluctuated between 32,324 (2003) and 4,425 (2017), and the trend for the most recent five years (2014-2018) has been generally downward (ODFW and WDFW 2019). Although most populations in this ESU have increased in abundance since listing, 27 of the 28 extant populations remain at high risk of extinction due to low abundance/productivity, with one population (Chamberlin Creek) at moderate risk of extinction (NWFSC 2015). Furthermore, the most recent returns indicate that all populations in the ESU were below replacement for the 2013 brood year (Felts et al. 2019)[1] which reduced abundance across the ESU. All currently extant populations of Snake River spring/summer Chinook salmon will likely have to increase in abundance and productivity in order for the ESU to recover (Table 6).

[1] The return size is not known until five years after the brood year. Preliminary results for the 2019 redd counts indicate that the 2014 brood year will be below replacement for the vast majority (possibly all) of the populations in the Snake River spring/summer Chinook salmon ESU.

No adult Chinook salmon use has been documented in China Creek, however, the lower reaches are accessible and it is expected that some limited YOY rearing for juveniles exist. China Creek is designated critical habitat for Chinook salmon. China Creek also provides 5.1 miles of steelhead designated critical habitat, which is used by spawning and rearing steelhead.

Chinook salmon and steelhead use the mainstem Lower Salmon River as a juvenile and adult migration corridor (Table 10). These two species also use the mainstem Salmon River to a limited extent for rearing habitat. Salmon River tributary drainages with suitable aquatic habitat and that are accessible provide spawning and rearing habitat for Chinook salmon and steelhead. The action area likely does not have spawning habitat for spring/summer Chinook salmon, but these streams may be used to a limited extent for juvenile rearing.

Table 10. List of ESA-listed species and the life stage present in the action area.

Life stage	spring/Summer Chinook Salmon	steelhead
Adult Migration	APR-JUL Salmon River	AUG-Apr Salmon River
Adult Spawning	AUG-SEP Trib. Streams	MAR-JUN Trib. Streams
Adult Overwintering	N/A	NOV-MAR Salmon River
Incubation & Emergence	SEP-MAY Trib. Streams	MAR-JUN Trib. Streams
Juvenile Rearing	1 Year Tributary Streams	1-3 Years Trib. Streams
Smolt Emigration	APR-JUL Salmon River	APR-JUL Salmon River

In general, the overall habitat quality of the action area is slightly degraded. Elevated water temperatures and deposited sediment are the main limiting factors for fish production within the action area. In addition, large wildfires in the recent decades have caused destruction of riparian habitat and created potential for sediment input into the system. However, the action area is part of the Craig Mountain Wildlife Management Area (WMA), and many of the past human-caused impacts are no longer occurring or minimized. Steelhead use 11 miles of Eagle Creek and 5.1 miles of China Creek for spawning and rearing habitat. There is no documented spawning of Chinook salmon in either creek. Chinook salmon YOY use the lower reaches of both creeks as rearing habitat.

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

Please notify NMFS if the BLM or COE, or another entity, carries out these recommendations so that we will be kept informed of actions that minimize or avoid adverse effects and those that benefit listed species or their designated critical habitats.

2.11 Reinitiation of Consultation

This concludes formal consultation for the BLM and COE.

As 50 CFR 402.16 states, reinitiation of consultation is required and shall be requested by the federal agency or by the 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 (PFMC 2014); contained in the fishery management plans developed by the Pacific Fishery Management Council (PFMC) and approved by the Secretary of Commerce.

3.1 Essential Fish Habitat Affected by the Project

- The proposed project includes essential fish habitat for Chinook salmon. Habitat areas of particular concern within the action area are complex channel and floodplain habitat, spawning habitat, and thermal refugia. (see descriptions of salmon HAPCs in Appendix A to the Pacific Coast Salmon FMP.

3.2 Adverse Effects on Essential Fish Habitat

Based on the information provided in the BA and the analysis of effects presented in the ESA portion of this document, NMFS concludes that the proposed action will have the following adverse effects on EFH designated for Chinook salmon:

1) Temporary migration barriers due to block net installation for fish salvage.

3.3 Essential Fish Habitat Conservation Recommendations

NMFS believes that the following Conservation Recommendation is necessary to avoid, mitigate, or offset the impact that the proposed action has on EFH.

a. Blasting and fish salvage shall not involve more than ten 200-foot reaches of Eagle Creek.

b. For those actions requiring fish salvage and block net installation, block nets shall not be in place for more than two days, and shall be removed immediately after the work at each site is completed.

c. Block nets shall only be installed within the approved work window in the Opinion.

Fully implementing this EFH conservation recommendation would protect, by avoiding or minimizing the adverse effects described in Section 3.2, above, approximately 10 (one acre at each of the fish salvage sites) acres of designated EFH for Pacific Coast salmon.

3.4 Statutory Response Requirement

As required by section 305(b)(4)(B) of the MSA, BLM and COE 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 NMFS' EFH Conservation Recommendation unless NMFS and the federal agency have agreed to use alternative timeframes for the federal agency response. The response must include a description of 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 Recommendation, the BLM and COE must explain their reasons for not following the recommendation, 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 agencies. 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 and COE 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 and COE. Other interested users could include the Nez Perce Tribes. Individual copies of this Opinion were provided to the BLM and COE. The document will be available within 2 weeks at the NOAA Library Institutional Repository [https://repository.library.noaa.gov/welcome]. The format and naming adheres to conventional standards for style.

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 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, and reviewed in accordance with West Coast Region ESA quality control and assurance processes.

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