UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
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August 25, 2023

Ralph Rizzo
Division Administrator
U.S. Department of Transportation
Federal Highway Administration
Suite 501 Evergreen Plaza
711 South Capitol Way
Olympia, WA 98501-1284

Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson–Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Walla Walla South–Umatilla Repairs 2020, Phase 1, Umatilla River, HUC 1707010301, Yakima County, Washington

Dear Mr. Rizzo:

This letter responds to your February 8, 2023, request for initiation of consultation with the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act (ESA) for the subject action. Your request qualified for our expedited review and analysis because it met our screening criteria and contained all required information on, and analysis of, your proposed action and its potential effects to ESA-listed species and designated critical habitat.

We reviewed the Federal Highway Administration's (FHWA) 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 met our regulatory and scientific standards. We adopt by reference the following sections of the FHWA's Biological Assessment (BA): subchapters 1.2 and 1.3 (project description), chapter 2 (status/presence in the action area), subchapters 3.1 to 3.4 (environmental baseline), subchapter 3.5 (avoidance and minimization measures), chapter 4 (action area), and chapter 5 (effects analysis and cumulative effects) (US DOT 2022).

The FHWA submitted a consultation initiation package, including a BA, to NMFS on February 8, 2023 and formal consultation was initiated on February 10, 2023. On May 8, 2023, NMFS received an email stating that the implementation timeline and the in-water footprint need to be changed. On that same date, NMFS paused the consultation while waiting for the updated information. An updated BA was received by NMFS on June 9, 2023 and consultation resumed

on that date. Additional information was received by NMFS on August 8, 2023 that clarified the in-water footprint and area of effects.

On July 5, 2022, the U.S. District Court for the Northern District of California issued an order vacating the 2019 regulations that were revised or added to 50 CFR part 402 in 2019 ("2019 Regulations," see 84 FR 44976, August 27, 2019) without making a finding on the merits. On September 21, 2022, the U.S. Court of Appeals for the Ninth Circuit granted a temporary stay of the district court's July 5 order. On November 14, 2022, the Northern District of California issued an order granting the government's request for voluntary remand without vacating the 2019 regulations. The District Court issued a slightly amended order two days later on November 16, 2022. As a result, the 2019 regulations remain in effect, and we are applying the 2019 regulations here. For purposes of this consultation and in an abundance of caution, we considered whether the substantive analysis and conclusions articulated in the biological opinion and incidental take statement would be any different under the pre-2019 regulations. We have determined that our analysis and conclusions would not be any different.

The project proposes to repair roadway locations on Forest System (FS) Road 32 (also known as FS 3200) damaged by a flood on February 5 and 6, 2020. The project is located primarily on FS 32, along the South Fork (SF) Umatilla River, just upstream of the confluence of the North and South Forks. Seventeen work zones are included in the proposed action. Eight discreet road damage locations will involve in-water work in the SF Umatilla to reconstruct FS 32 between milepost (MP) 1.30 and MP 3.53. Of the eight in-water work zones, four involve partial road reconstruction, and four involve rebuilding complete road washouts. In addition, the proposed action includes replacing an existing 4-foot-diameter culvert with a 12-foot diameter culvert in an unnamed tributary to the SF Umatilla River. The remainder of the work zones are uplands, and involve the removal of landslide debris and reconstruction of the road surface.

Repairs to the complete road washouts at MP 2.02 to 2.14, MP 3.08, MP 3.23, and MP 3.53 will require relocating the current post-flood river channel and reconstructing the road in its pre-flood location. Road reconstruction will involve bank armoring with riprap, bank reinforcement with large wood (totaling 410 pieces, including 180 logs with rootwads), roadbed filling and surfacing, and bank restoration that includes riparian plantings/live stakes. Project designs incorporate the construction of small floodplains at four of the eight repair sites; the floodplains are 20 to 30 feet wide and constructed so that they are accessed by the river at flows just under a 100-year event.

The Project is expected to begin in the summer of 2024 and be constructed over three years during in-water work windows (July 1 to August 15). Upland construction, debris removal, and construction access is not constrained by in-water work timing considerations and will likely commence in early summer. The site is remote—road and streambank construction materials will have to be brought in from distant sources. There are eight sites that require in-water work. Each site will require 3 to 7 days to construct the stream isolation structure, conduct fish salvage and potentially de-water behind the isolation structure. It is anticipated that construction of the road repair would be performed concurrently at both the north end and south end of the action area (downstream and upstream ends of FS 32 repair project that parallels SF Umatilla River) working toward the middle of the action area. Isolation and fish salvage will be conducted at

each work zone. The Umatilla National Forest plans to use FS 32 Road for administrative and emergency use after year 2 of construction.

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. Chapter 2 of the BA covers the status of the species, in this case, Middle Columbia River (MCR) steelhead who occupy the SF of the Umatilla River in the project area. Critical habitat for MCR steelhead has been designated in the SF Umatilla River where the proposed action is located.

"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). Chapter 4 of the BA describes the action area. Based on the likely construction effects of the project, the action area includes all affected upland areas in the former roadbed, all affected riparian areas, and all instream areas from bank to bank 100 feet upstream and 500 feet downstream of each of the eight work zones. Based on the maximum expected sediment plumes, the action area extends for 2.37 miles along the SF Umatilla River from FS 32 MP 1.16 to 3.53.

The "environmental baseline" refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultations, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 CFR 402.02). Chapter 4 of the BA describes the Environmental Baseline and is being adopted here. Major limiting factors in the action area include degraded floodplain and channel structure, altered sediment routing, altered hydrology, and altered water quality and quantity.

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).

Chapter 5 of the BA provides an assessment of the proposed action's effects and is adopted here (50 CFR 402.14(h)(3)). After a constructability review, FHWA revised the size of the work areas of each of the eight construction zones and verified those changes in a June 22, 2023 email to NMFS. The BA found that effects would include:

- Fish salvage associated with 2.66 acres of isolated area along approximately 2,600 feet of channel.

- Short term effects on water and sediment quality up to 100 feet upstream and 500 feet downstream of each work site.

NMFS has evaluated this chapter and determined it needs the additional information included in the following paragraphs.

Based on documented juvenile steelhead densities of between 4.0 and 32.9 fish per 100 square meters and the proposed area of temporary impacts (2.66 acres or 10,765 square meters), we anticipate between 431 and 3,542 juvenile steelhead to be present in areas where fish salvage will occur in total across the eight locations.

Once each area is partially isolated, seines will be used to herd fish from the in-water work zones. However, approximately 20 percent of the juvenile steelhead that we estimate will be present (86 to 708 individuals) are likely to remain in the work zones and be exposed to the effects of additional salvage efforts, likely via electrofishing. We expect that some juvenile MCR steelhead will be exposed to harassment and will be injured or killed during electrofishing or other removal operations. NMFS estimates that as many as 25 percent (Nielson 1998), or 22 to 177 juvenile steelhead will potentially remain in the work area and are likely to be injured due to exposure to electrofishing, other forms of capture, and handling. This injury rate accounts for variable site conditions and experience levels. Fish that survive handling will be released in suitable habitat and are expected to survive. Given mean smolt-to-adult return rates of 5.5 percent from 2015–2019 (Ford 2022), the injury or loss of up to 177 juvenile steelhead in the Umatilla River population would mean a total loss of up to ten adult equivalents returning to spawn. The expected loss of up to 177 juveniles will be spread out between the three years of project implementation, resulting in a loss of approximately three adult equivalents per year.

NMFS has evaluated chapter 5 of the BA and, after our independent science-based evaluation, determined additional adverse effects will likely occur:

- Death or injury from in-water crushing or impingement by working equipment.
- Permanent habitat alteration totaling 1.65 acres.

Initial fish exclusion activities are not likely to remove all juvenile steelhead from the work areas, particularly young-of-the-year fish that are known to hide in the substrate. The subsequent activities of placing the isolation structures, impingement on or crushing by working equipment, and excavating the streambed will therefore kill the remaining juvenile fish. Because of fish salvage and worksite isolation, the number of fish remaining after fish exclusion activities is expected to be very small. Therefore, we expect that lethal take of juvenile steelhead from crushing or impingement will be small, involving very few juvenile fish.

Reconstruction of FS 32 will change instream morphology significantly. Road reconstruction and excavation of the stream channel will fill or eliminate at least one large pool and one side channel in an area that already has low pool density. On the other hand, the use of large wood in bank reconstruction will provide refugia for steelhead in an area with a shortage of large woody material, and contribute to channel forming processes that will form and maintain pools and create more diverse instream habitat. Overall, we expect both habitat quantity and quality within the inwater work zones to be reduced during project construction, but below levels that would

injure or kill juvenile or adult steelhead. Habitat quantity and quality will recover and become improved compared to current conditions after the first high flow events following each construction season and these conditions will continue to improve over time.

In summary, the expected loss of up to 177 juveniles will be spread out between the three years of project implementation, resulting in a loss of approximately three adult equivalents per year. These juvenile losses will not meaningfully affect the abundance or productivity of the population and will have no effect on its spatial structure or diversity.

Critical habitat for MCR steelhead will be temporarily affected during construction; the following PBF's will be affected:

- Water quality: The proposed action will cause short-term decreases in water quality due to construction-derived turbidity. Effects to water quality are discussed in detail in Chapter 5.1.
- Substrate: The proposed action will cause short-term increases in fine sediment deposition downstream of in-water work zones. Effects to substrate are detailed in Chapters 5.1 and 5.2.
- Forage: The proposed action will reduce forage in up to 2.66 acres of streambed in the action area. However, benthic macroinvertebrate communities are expected to recolonize and reestablish to background levels in less than one year. Affects to the forage base are discussed in Chapter 5.1.

Beneficial effects of the proposed action include the addition of 410 pieces of wood that will be incorporated into the bank treatments, which will provide immediate cover and habitat diversity. The wood addition will also likely increase foraging opportunities, bank complexity, refugia, and pool habitat. The proposed action includes the construction of small floodplains at four of the eight repair sites; the floodplains will promote the growth of riparian vegetation and provide long-term shade for this reach of the river. Also, all repair sites will be planted with riparian shrub species resulting in the potential for increased forage, shade, and bank complexity compared to current conditions. We anticipate that riparian vegetation will be providing functional benefits within two to five years of planting.

"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. We were not able to identify any additional cumulative effects not already discussed in Chapter 5.5 of the BA, which are likely to be minimal.

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.

The environmental baseline is characterized by degraded floodplain and channel structure, altered sediment routing, altered hydrology, and altered water quality and quantity. Major sources of impacts to steelhead are from the continued presence of the road and upstream land uses. Poor habitat quality is present throughout the action area and includes low summer flows, high water temperatures, changes in channel structure, high sediment loads, insufficient pools, and lack of in-stream large wood. Future federal actions within the action area (e.g. timber harvest) are anticipated to continue to have negative effects on ESA-listed salmonids.

The Road 32 repair construction-related activities will result in harm to juvenile MCR steelhead as a result of fish salvage and other effects (e.g., crushing from excavation and fill placement activities, and exposure to suspended sediments and elevated turbidity). These effects to juvenile steelhead will occur over three years; approximately 59 juveniles are expected to be harmed annually for a total of 177 juveniles. Given those totals, we estimate that up to three adult equivalents will be lost annually with a total loss of less than ten adults. In the context of the Umatilla River population, which has an average annual abundance of 2,451 adult spawners from 2015 to 2019 (Ford 2022), producing about 44,500 smolts annually, the juvenile losses will not meaningfully affect the abundance or productivity of the population and will have no effect on its spatial structure or diversity. The likelihood of persistence and recovery potential of the Umatilla/Walla Walla MPG will not be affected because none of the component populations will meaningfully be affected. Similarly, the likelihood of persistence and recovery potential of MCR steelhead as a whole will not be affected because we expect no change in the viability status of the Umatilla/Walla Walla MPG.

The proposed action will reduce water quality, sediment, and forage PBFs in juvenile rearing and migration habitat in the South Fork Umatilla River. The proposed action will dewater and disturb a total of up to 2.66 acres of stream and create short-term pulses of turbidity up to 500 feet downstream of each of the eight work sites. Temporary impairment of the ability of the PBFs in this location to support juvenile rearing will not meaningfully affect its ability to support recovery of the DPS. The proposed action will re-establish the road bed in its previous location resulting in a loss of 1.65 acres of critical habitat along 2,600 feet of stream channel. The addition of 410 pieces of large wood, the anticipated establishment of riparian vegetation, construction of small floodplains at four of the sites, and streambank stabilization measures, should enhance existing habitat. Therefore, it is reasonably certain that the proposed action will not result in long-term adverse effects to water quality, substrate, cover, or forage within the action area.

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 MCR 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 Incidental Take Statement (ITS).

Amount or Extent of Take

In the opinion, NMFS determined that incidental take of juvenile MCR steelhead from the Umatilla population is reasonably certain to occur as follows: (1) injury or death resulting from fish salvage activities including electrofishing; (2) effects from short-term sediment plumes; (3) injury or death from crushing of stranded fish by working equipment; and (4) harm from the permanent loss of 1.65 acres of rearing habitat within an area designated as critical for the conservation of the species.

Due to the highly variable number of individual juveniles that will be present in the action area at any given time during construction activities, we cannot determine the number of ESA-listed fish that will be injured or killed by salvage or crushed by equipment. Therefore, NMFS uses a surrogate for incidental take. The surrogate is causally linked to the take pathways because the number of fish killed and injured will be proportional to the stream channel area that is isolated during construction. Therefore, the extent of take will be exceeded if greater than 2.66 acres of stream channel is isolated, salvaged for fish, and/or dewatered.

Permanent impacts are expected in areas of the stream channel and thalweg currently occupied by the river that will be reclaimed by reconstructing the road prism and streambank. The estimated area of permanent impacts is 1.65 acres. Monitoring or measuring the number of steelhead actually harmed by the loss of 1.65 acres of critical habitat and modification of 2,600 linear feet of stream channel is not feasible. The harm associated with the loss of habitat is likely to be sublethal; therefore, the number of affected fish is difficult to quantify. Due to the difficulty in quantifying the number of fish that could be affected by the loss of rearing habitat, a surrogate measure of take is necessary to establish a limit to the take exempted by this incidental take statement. For this action, the total area to be affected, or 1.65 acres and 2,600 linear feet of stream channel, is both measurable and quantifiable. Therefore, the extent of take allowed is the modification of 1.65 acres of rearing habitat and no more than 2,600 linear feet of stream channel.

If at any time the level or method of take exempted from take prohibitions and quantified in this opinion is exceeded, re-initiation of consultation may be required.

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

"Reasonable and prudent measures" (RPMs) are measures that are necessary or appropriate to minimize the impact of the amount or extent of incidental take (50 CFR 402.02).
The FHWA shall minimize incidental take by:

1. Monitoring the project to ensure that the measures are meeting the objective of minimizing take and that the amount or extent of take is not exceeded.

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

1) The following terms and conditions implement RPM 1:
   a) By the end of the calendar year following construction, the FHWA shall report monitoring items to include, at a minimum, the following:
      i) Project identification:
         (1) Project name: Walla Walla South–Umatilla Repairs 2020 Phase 1 (WCRO-2023-00143).
         (2) FHWA contact person.
      ii) Construction details:
         (1) Total number of acres isolated, fish salvaged, and dewatered.
         (2) Total number of pieces of large wood incorporated into bank reconstruction.
         (3) Total number of pieces of large wood with rootwads incorporated into bank reconstruction.
         (4) A description of any elements of the project that were constructed differently than depicted in the BA or considered in this opinion.
      iii) Riparian establishment:
         (1) To ensure the success of the planting areas, a ten-year monitoring plan will be implemented to ensure adequate survival of installed mitigation. During the first two years after planting, 100% survival (meaning any plants that die will be

replaced in-kind) will be required for all species. After two years, 80% survival of shrubs and trees will be maintained.

b) If take is exceeded, contact NMFS promptly to determine a course of action.
c) All reports will be sent to NMFS at crbo.consultationrequest.wcr@noaa.gov.

Reinitiation of Consultation

Under 50 CFR 402.16(a): "Reinitiation of consultation is required and shall be requested by the Federal agency or by the Service where 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."

Essential Fish Habitat

NMFS also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson–Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was conducted pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.

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, 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 600.0-5(b)).

NMFS determined the proposed action would adversely affect EFH of Pacific salmon as follows:

1. The temporary alteration of substrate, which will temporarily (during construction) affect juvenile rearing and the quality of habitat.

2. Permanent loss of rearing habitat where the new road prisms, banks, and floodplains are constructed.
3. Temporary reduction in prey availability within the isolated acres from removal and disturbance of the macroinvertebrate community and as a result of increased fine sediment settling into substrates within and just outside the work areas.
4. Short-term elevation of turbidity and sedimentation within and immediately downstream from the project area from construction activities.

NMFS determined that measures included in the BA, including the addition of over 400 pieces of wood and the construction of small floodplains, are sufficient to avoid, minimize, mitigate, or otherwise offset the impact of the proposed action on EFH.

The FHWA 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 through NOAA's Institutional Repository (https://repository.library.noaa.gov/welcome). A complete record of this consultation is on file at NMFS' Columbia Basin Branch.

Please direct questions regarding this letter to Todd Andersen, Snake Basin Office, (208) 366-9586, todd.andersen@noaa.gov.

Sincerely,

Nancy L Munn

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

cc: Matt Miller, FHWA WFLHD
Steve Morrow, FHWA WFLHD
Aaron Gagnon, USFS
Laura Navarette, USFWS

REFERENCES

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