



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
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June 13, 2024

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Re: Endangered Species Act Section 7(a)(2) Biological Opinion for the Bridge Creek Ranch Diversion, Wheeler County, Oregon.

Dear Mr. Abadie:

This letter responds to your February 14, 2024, 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, including information submitted subsequent to that 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 listed species and designated critical habitat.

We reviewed the U.S. Army Corps of Engineers (Corps) consultation request and 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. We adopt by reference the following sections of the BA (Corps 2024): Section II.3, Proposed Action (pp. 6–9); Section III, Description of the Species and their Habitats (pp. 10–13); Section IV, Environmental Baseline (pp. 14); Section V, Effect of the Action (pp. 15–16); and Section VI, Determination of Effect (pp. 17).

The U.S. Army Corps of Engineers (Corps) submitted a request for informal consultation on December 12, 2023. In their request, the Corps requested concurrence from NMFS on its determination that the project is not likely to adversely affect Middle Columbia River (MCR) steelhead (*Oncorhynchus tshawytscha*) and its designated critical habitat. NMFS sent the Corps a letter on January 23, 2024, requesting additional information, including: a complete description of the proposed action, a description of MCR steelhead and their critical habitat in the action area, and a description of effects to MCR steelhead and their critical habitat. The Corps provided some of the requested information to NMFS on January 26, 2024, including a biological assessment (BA) and engineered construction plans prepared by Resource Specialists Inc. (RSI).



Following discussions with NMFS, the Corps submitted a request for formal consultation and initiation package, including a BA prepared by RSI, to NMFS on February 14, 2024. The Corps and RSI concluded the proposed action was likely to adversely affect MCR steelhead and their critical habitat. NMFS reviewed the initiation package and sent an email to the Corps on March 26, 2024, requesting additional information on the existing diversion structure, work area isolation, turbidity monitoring, best management practices (BMP), bank stabilization extent and methodology, and affects to riparian vegetation. The response to the additional information request was received by NMFS on April 4, 2024, and consultation was initiated on this date.

Updates to the regulations governing interagency consultation (50 CFR part 402) were effective on May 6, 2024 (89 FR 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 FR 24268; 84 FR 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.

As described in Section II.3 (Proposed Action) of the BA, additional submitted information, and the engineered plans, which are all incorporated here by reference, the Corps proposes to authorize the Bridge Creek Ranch landowner to: (1) replace an existing channel spanning diversion on Bridge Creek with a new water diversion comprised of a concrete diversion on the streambank, steel control box, fish screen with return pipe, and pipeline; and (2) install 75 feet of bio-engineered bank stabilization comprised of a matrix of rootwads and willow clumps. The landowner will also plant willows, red-osier dogwood, and black cottonwood. The new diversion will be located 2,100 feet downstream from the existing structure, with no change to the amount of water diverted (maximum diversion rate of 3 cubic feet per second), resulting in water remaining in-stream longer during the late summer months when the stream becomes flow-limited. The project will occur during the in-stream work window of July 15–September 30. Installation of the concrete diversion and bank stabilization structures will take approximately 2 weeks. Installation of the pipeline and fish screen will take an additional 2 weeks. The existing diversion structure, which is located on Bureau of Land Management (BLM) land, is a partial fish passage barrier with debris plugging issues, and it will be removed by the BLM once the new diversion is operational. The timing and methodology of removal and rehabilitation of the site of the existing diversion is currently in the planning phase. The new diversion will be located on private land, with easy access for the landowner to operate and maintain the structure. The fish screen will be a paddle-wheel-driven drum screen designed and installed by Oregon Department of Fish and Wildlife's (ODFW) John Day Screen Shop. The screen will meet all Oregon and NMFS fish screen requirements for areas where fry are present, and the ODFW will maintain the screen.

BIOLOGICAL OPINION

We examined the status of MCR steelhead, the species which 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. Section III (Description of the Species and their Habitats) and Section IV (Environmental Baseline) of the BA include descriptions of the species and critical habitat in the action area, which are adopted here. NMFS' status of the species summary for MCR steelhead, the species that may be impacted by the proposed action, is available on the NOAA Fisheries website at <https://www.fisheries.noaa.gov/west-coast/consultations/esa-section-7-consultations-west-coast>, and incorporated by reference. NMFS also incorporates by reference the most recent 5-year review of the species status (NMFS 2022).

“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). The action area includes the project area (diversion structure, bank stabilization structures, fish screen, bypass pipe, and pipeline) extending approximately 490 feet downriver from the diversion structure. This is the location where fish will be returned to Bridge Creek if diverted.

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 impacts to listed species or designated critical habitat from Federal agency activities or existing Federal agency facilities that are not within the agency's discretion to modify are part of the environmental baseline (50 CFR 402.02). The species and habitat use, and environmental baseline, are described in Sections III and IV 4 of the BA, respectively, which are adopted here. The action area is in Bridge Creek, a tributary to the Lower John Day River. The primary land use in the area is irrigated agriculture on Big Creek Ranch. In the action area, Bridge Creek consists of a gravel and mud substrate, with vertical dirt banks and very little riparian vegetation.

Bridge Creek in the action area is designated critical habitat, and supports spawning, rearing, and migration of fish from the John Day River Lower Mainstem Tributaries population of MCR steelhead. The John Day River Lower Mainstem Tributaries population is considered maintained, but needs to achieve at least viable status for the John Day River major population group to be considered viable.

The action area provides the PBFs of critical habitat for spawning, rearing, and migration, though these persist in a largely degraded condition. The ability of critical habitat in the action area to support recovery of MCR steelhead is primarily limited by low flows and high water temperatures resulting from irrigation and livestock grazing in the subbasin. Bridge Creek is on Oregon Department of Environmental Quality's 303(d) list for temperature.

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.

An assessment of the effects of the proposed action is provided in Section V of the BA and additional submitted information, and adopted here (50 CFR 402.14(h)(3)). Within the action area, rearing of juvenile MCR steelhead occurs year-round. Adult migration in the John Day Basin generally occurs October through April, with spawning and emergence completed by mid-June. Juvenile migration downstream can occur year round, with most occurring April through July. Because the in-water work will occur for approximately 2 weeks between July 15 and September 30, the project avoids upstream migration of adults, spawning, incubation, and peak downstream migration of juveniles. Because of low flows and high temperatures in the action area during the in-water work window, NMFS expects there will be few rearing juvenile steelhead in the action area during project construction. Therefore, NMFS expects no adult and a few juvenile MCR steelhead will be present in the action area during project construction.

The Corps proposes to authorize the landowner to construct a new water diversion on Bridge Creek, and to install 75 feet of bio-engineered bank stabilization. The temporary and long-term effects of this proposed action to MCR steelhead identified by the Corps and RSI are:

- Temporary and minor effects to juvenile steelhead from increased turbidity during installation and removal of the work area bypass. Visible sediment plumes will attenuate within 2,000 feet and persist for up to 2 hours.
- Blocked upstream fish passage of juvenile steelhead for approximately 14 days.
- Impacts to juvenile steelhead from fish salvage.
- Improved juvenile steelhead rearing and passage conditions in 2,100 feet, especially during period of low flow in mid to late summer, from 3 cubic feet per second remaining instream longer.

Potential adverse project effects to PBFs of MCR steelhead critical habitat identified by the Corps and RSI include:

- A minor, temporary degradation of water quality from turbidity plumes generated during installation and removal of coffer dams. Visible sediment plumes will attenuate within 2,000 feet and persist for up to 2 hours.
- Permanent loss of 35 square feet of habitat from the concrete diversion structure.
- Once the project is constructed, 3 cubic feet per second of currently diverted water will remain instream 2,100 feet longer, providing significant uplift to this area during periods of low flow in mid to late summer.

NMFS has evaluated the effects sections in the BA and additional submitted information, and after our independent, science-based evaluation, determined that the additional information provided below is needed to complete our analysis.

Effects to Juvenile Summer Steelhead/Species

Work Area Isolation and Fish Salvage

The project area will be isolated and fish salvage will occur prior to construction of the concrete diversion and installation of the bank stabilization structures. Work area isolation and fish salvage will occur during the in-water work window of July 15–September 30, with isolation expected to last for 2 weeks.

Approximately 1,000 square feet of Bridge Creek will be isolated and dewatered. The work area (100 feet long by 10 feet wide) will be isolated using sandbags and plastic sheeting/tarps to form coffer dams at the upstream and downstream extents of the project. All streamflow, estimated to be 2–4 cubic feet per second, will be routed around the work area in a 12- to 18-inch pipe, and returned to Bridge Creek below the lower coffer dam. Dewatering of the work area will occur slowly (1–2 inches per hour) and the site will be monitored during dewatering for stranded organisms. The lower coffer dam will not be installed until after fish have been given sufficient time to move downstream on their own volition. Fish salvage will then occur utilizing seining and dip netting, followed by electrofishing, if necessary, in compliance with NMFS' Electrofishing Guidelines (NMFS 2000).

Many factors influence the success of fish salvage efforts, including water depth, habitat complexity, temperature, salvage methods, crew experience, and care of fish after capture. At best, all fish are captured without injury and successfully released. However, in many cases some fish are difficult to capture, sustain injuries, and experience high stress after capture before they are released. As stated above, we expect few juvenile steelhead will be present in the action area during work area isolation and fish salvage because of low flows and high temperatures. Further, we expect most juvenile steelhead present in the area to be isolated will leave volitionally as dewatering progresses. However, seining, netting, capture, and handling may injure fish and can increase stress, resulting in harm or death to some individuals. Herded fish may experience increases in predation when moved out of their established areas. Additionally, a few fish, particularly age 0 steelhead that seek cover in existing substrate, may not be found by the fish capture crew and could end up stranded and die during dewatering. Therefore, we expect a few juveniles MCR steelhead will be injured or killed by work area isolation and fish salvage.

Physical Injury

Work involving the presence of equipment or vehicles in the active channel when ESA-listed fish are present can result in injury or death of some individuals as they come in contact with the equipment. Heavy equipment will be operated from the streambank. Therefore, we do not anticipate physical injury to juvenile MCR steelhead from operation of equipment in the active channel.

Temporary Blocked Upstream Passage

The coffer dams and a bypass pipe installed to isolate and dewater the in-water work area will be in place for 2 weeks during the July 15–September 30 in-water work window. While the coffer

dams and bypass pipe are in place, downstream passage of juvenile MCR steelhead will be maintained through the bypass pipe. However, upstream passage will be blocked in 100 linear feet of stream channel. Due to the timing of in-water work, low flows, and high water temperatures, we expect few juvenile steelhead in the action area during project construction, and no adult steelhead. Therefore, we expect a few juvenile steelhead will have their upstream passage blocked in 100 linear feet of stream for 2 weeks from the presence of coffer dams and dewatering.

Water Quality

The proposed action will affect water quality during installation and removal of the coffer dams and bypass pipe, by temporarily increasing delivery of sediment to the waterway and increasing total suspended sediments and turbidity in the water column. Low to moderate levels of turbidity can provide cover from predation (Gregory and Levings 1998). However, increased fine sediment can be detrimental to juvenile salmon and steelhead in several ways including avoidance of the area, abandonment of cover, stress, and reduced growth rates (Newcombe and Jensen 1996). Turbidity from increased fine sediment may disrupt steelhead feeding and territorial behavior, and may displace fish from preferred feeding and resting areas. It can also delay adult migration to spawning habitat. Direct mortality can occur at very high concentrations or extended exposure to suspended solids. The severity of effect of suspended sediment increases as a function of the sediment concentration and exposure time (Bash et al. 2001; Newcombe and Jensen 1996).

In the BA, RSI indicates visible sediment plumes will attenuate within 2,000 feet and persist for up to 2 hours. However, erosion control measures and BMPs will be implemented and monitored during construction, and turbidity monitoring will occur every 2 hours according to protocols in the Oregon Department of Environmental Quality 401 water quality certificate. Therefore, we expect very little sediment will be released from the project site. We expect localized resuspension of sediment during installation and removal of coffer dams will result in pulses of increased turbidity and suspended sediment concentration. Because of the low summer stream flows in the action area, we expect turbidity plumes and fine sediments to disperse and settle within 300 feet downstream, not the 2,000 feet indicated by RSI, and be indistinguishable from background levels. We also expect the settled sediment to flush out with the next high flows. Because the substrate in and around the work areas consists primarily of gravel and mud, we expect the pulses of elevated suspended sediment to be large and last up to 2 hours. We also expect juvenile steelhead migrating or rearing nearby will be disturbed by the increased turbidity and flee the area, which will increase the risk of predation to a few juveniles (Berg and Northcote 1985). Installation and removal of the coffer dams and bypass pipe will each take 1 day. Therefore, we expect pulses of turbidity for 2 days will cause short term (2 hours) behavioral changes, including fleeing and avoidance of turbidity plumes, to a few juvenile MCR steelhead within 300 feet downstream. We also expect an increased risk of predation to some juveniles fleeing the areas of higher turbidity.

Impingement

The fish screen will be a paddle-wheel-driven drum screen designed and installed by ODFW's John Day Screen Shop. The screen will meet all Oregon and NMFS fish screen requirements for areas where fry are present, including: maximum approach velocity of 0.4 feet per second, a sweeping velocity in excess of the approach velocity, maximum screen hole size of 3/32 inch, and drum submergence of 65 to 85 percent of drum diameter. A fish bypass system will also be installed. Fish that enter the diversion will be guided to enter a 12-inch fish return pipe that empties in a pool approximately 490 feet downstream of the diversion intake. The fish return pipe will be approximately 50 feet long. Although the screen will meet NMFS standards and criteria, including a 0.4-foot-per-second approach velocity, we still expect that a very small proportion of the smolts that are diverted and pass by the screen will occasionally be impinged. Therefore, each year the fish screen is in operation, we expect a few fish to be injured and killed by impingement.

Effects to Critical Habitat

Water Quality

Water quality will be reduced within the project area for 2 days from increased suspended sediment and turbidity, and for approximately 2 weeks from leaks and spills from heavy machinery. The proposed action is expected to temporarily increase delivery of sediment to the waterway and suspend fine sediment during installation (1 day) and removal (1 day) of the coffer dams and bypass pipe. Because erosion control measures and BMPs will be implemented during construction, very little sediment is expected to be released from the project site. Localized resuspension of sediment during installation and removal of the coffer dams and bypass pipe will result in pulses of increased turbidity and suspended sediment concentration up to 300 feet downstream of the in-water work area. We expect the pulses of elevated suspended sediment to last up to 2 hours because the substrate in and around the work areas consists primarily of gravel and mud. Heavy equipment will be operated from the streambank for 2 weeks to install the concrete diversion and bank stabilization structures. NMFS expects minor leaks and spills of petroleum-based fluids (not more than ounces) from the use of heavy equipment, that will be contained on site in secondary containment basins. Therefore, NMFS expects small, temporary, negative effects to the water quality PBF from increased turbidity and suspended sediment concentration for 2 days from the installation and removal of the coffer dams, and for 2 weeks from minor leaks and spills from heavy equipment.

Forage

Work area isolation and dewatering will negatively affect the short-term availability of benthic invertebrates by crushing, displacing, and desiccation within 1,000 square feet. An additional 3,000 square feet of river bottom (300 feet long by 10 feet wide) will be disturbed by resuspension and settling of suspended sediment up to 300 feet downstream of all turbidity generating activities. There will also be a permanent loss in 35 square feet from construction of the concrete diversion.

Removal of riparian vegetation consisting of grass and willows along 84 feet of streambank will cause some loss of allochthonous input, such as leaf litter and terrestrial invertebrates. However, willows clumps will be installed in bank protection structures and, after project construction, a mixture of native riparian species including willow, red-osier dogwood, and black cottonwood will be planted. Installation of willow clumps, and the riparian plantings, will help minimize the loss of allochthonous input in the short term and provide better riparian function over time as they become established and grow. Terrestrial macroinvertebrate inputs and invertebrate drift will continue to contribute to salmonid forage, and will also recolonize disturbed substrate once project construction is complete. We expect recolonization to occur within a few days to a few months after project completion (Fowler 2004; Griffith and Andrews 1981; Yount and Nemi 1990). Given the small area of temporary impacts, and the supply of forage from terrestrial inputs and invertebrate drift, NMFS expects this project to have a small, temporary (a few months) negative effect on the forage PBF from work area isolation and dewatering, removal of riparian vegetation, and resuspension and settling of suspended sediments.

Long term, there will be a permanent loss of 35 square feet of streambed from installation of the concrete diversion. Therefore, we expect the project to have a small, permanent effect on the forage PBF from habitat loss.

Substrate

Approximately 35 square feet of substrate below the ordinary high water mark will be permanently altered from installation of the new concrete diversion structure. An additional 4,000 square feet of substrate will be temporarily affected by sediment deposition (3,000 square feet) as the turbidity plumes settle out within 300 feet downstream, and from dewatering of 1,000 square feet for 2 weeks. Accumulated sediment is expected to flush out with the first high flows. Therefore, NMFS expects very small permanent (35 square feet) and temporary (4,000 square feet) impacts to the function and conservation value of the substrate PBF from construction of the diversion structure, resuspension and settling of suspended sediment, and work area isolation.

Free of Artificial Obstruction

Coffer dams and a bypass pipe will be installed to isolate and dewater 100 linear feet of stream channel (1,000 square feet), and will remain in place for 2 weeks. While the work area is isolated, downstream passage of juvenile steelhead will be maintained through the bypass pipe. However, upstream passage of juvenile steelhead will be blocked in 100 linear feet. Therefore, NMFS expects a very small, temporary impact to the function and conservation value of the free of artificial obstruction PBF from work area isolation due to coffer dams and dewatering.

“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. NMFS is not aware of any future non-Federal activities within the action area that could adversely affect MCR steelhead or their critical habitat. Bridge Creek Ranch owns the shoreline and further development is not planned. Therefore, NMFS assumes

that future State and private actions and land uses will continue within the action area at roughly their current rate.

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.

Adults and juveniles from the John Day River Lower Mainstem Tributaries population of MCR steelhead use the action area for rearing and migration. NMFS recently reaffirmed that MCR steelhead have not achieved viable status and are at a continuing risk of extinction. Major threats include, but are not limited to: climate change, regulation of the Columbia River, and impairment of tributary habitat. Middle Columbia River steelhead are listed as threatened under the ESA, and the John Day River Lower Mainstem Tributaries population is considered maintained, but needs to achieve at least viable status for species recovery.

Based on the species life stages and the activities described in the submitted BA, supplemental information, and engineering plans, the proposed action is expected to result in harm, harassment, injury or death of a few juvenile MCR steelhead within the action area from work area isolation and fish salvage, blocked upstream passage, turbidity, and impingement. These adverse effects would be to the John Day River Lower Mainstem Tributaries population of MCR steelhead.

We expect a few juvenile MCR steelhead will be injured and killed during fish salvage and dewatering of 1,000 square feet of Bridge Creek. Additional juvenile steelhead will be affected by impacts to water quality, blocked fish passage, and impingement on the fish screen. Fish will be salvaged before installation of the concrete diversion and bank stabilization structures, but temporary increases in turbidity generated during installation and removal of the coffer dams (2 days total), will cause short term (up to 2 hours) behavioral changes, including fleeing and avoidance of turbidity plumes, to a few juvenile MCR steelhead within 300 feet downstream. We expect some juveniles will flee the areas of higher turbidity, which will increase the risk of predation. We also expect coffer dams to block upstream passage of a few juvenile MCR steelhead in 100 linear feet for 2 weeks. Long term, we expect operation of the new screen to cause the injury or death of a few smolts annually over the operational life of the screen due to the trauma of impingement. We do not expect any effects to adult MCR steelhead from this project or screen operation in the future.

NMFS has determined that the loss of a few juvenile steelhead in Bridge Creek caused by the proposed action, and annually from impingement, is not substantial enough to appreciably alter the abundance, productivity, spatial structure, or diversity of the John Day River Lower Mainstem Tributaries population of MCR steelhead. It is NMFS' opinion that when the effects of the action and cumulative effects are added to the environmental baseline, and in light of the

status of the species, the effects of the action will not cause reductions in reproduction, numbers, or distribution that would reasonably be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of MCR steelhead.

Critical habitat in the action area is degraded due to grazing and irrigation withdrawals. In addition, the cumulative effects of State and private actions within the action area are anticipated to continue to have negative effects on ESA-listed salmonids. Climate change is likely to further impact designated critical habitat by increasing water temperatures and changes to the hydrological regime.

The proposed action will temporarily reduce the function of critical habitat PBFs for water quality (turbidity and chemical contamination), forage, substrate, and free of artificial obstruction/safe passage. It will also have a very small permanent impact on the function of the forage and substrate PBFs.

A small, negative effect to the water quality PBF will result from turbidity and leaks and spills of petroleum-based fluids. Localized increases in turbidity are expected to last up to 2 hours each for 2 days, and extend up to 300 feet downstream of turbidity generating activities (coffer dam and bypass pipe installation and removal). NMFS also expects minor leaks and spills of petroleum-based fluids (not more than ounces) from heavy equipment that will be contained on site.

A small, negative effect to the forage and substrate PBFs will result from work area isolation and dewatering, and resuspension and settling of sediment. The proposed action will have a short-term negative effect on benthic macroinvertebrates by desiccating, covering, or displacing them by dewatering 1,000 square feet, and by settling of suspended sediment up to 300 feet downstream of turbidity generating activities (coffer dam and bypass pipe installation and removal), causing a temporary change to prey availability. We expect benthic macroinvertebrates will start to recolonize the action area as soon as the project is complete, and benthic communities to be reestablished in a few months. Permanent loss will occur in 35 feet from installation of the concrete diversion structure.

Small, temporary (2 weeks to a few months) negative effects to the substrate PBF will occur from dewatering, and from minor levels of sediment deposition as turbidity plumes settle out within 300 feet downstream of turbidity generating activities. Substrate will be permanently lost in 35 square feet from the concrete diversion structure.

A small, negative effect to the free of artificial obstruction/safe passage PBF will occur from work area isolation (installation of coffer dams and dewatering) of 100 linear feet of stream channel (1,000 square feet) for 2 weeks.

Based on our analysis that considers the current status of PBFs, adverse effects from the proposed action will cause a temporary and localized decline in the quality and function of PBFs in the action area. It will also cause a very small permanent impact to the forage and substrate PBFs. Because of the small scale and extent of the effects to PBFs, we do not expect a reduction in the conservation value of critical habitat in the action area. As we scale up from the action

area to the designation area of critical habitat for MCR steelhead, the proposed action is not expected to appreciably reduce the conservation value of the designated critical habitat.

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 MCR steelhead, or destroy or adversely modify their 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 biological opinion, NMFS determined that incidental take of juveniles from the John Day River Lower Mainstem Tributaries population of MCR steelhead is reasonably certain to occur as follows: (1) injury and death from work area isolation and fish salvage, (2) short-term changes in behavior, and increased exposure to predation of juveniles displaced by turbidity plumes, (3) blocked upstream migration for 2 weeks, and (4) impingement during operation of the new fish screen. We expect a few juveniles from the John Day River Lower Mainstem Tributaries population MCR steelhead to alter their behavior and a few to be injured or killed during project construction. We also expect a few will be killed each year the fish screen is operational from impingement.

Incidental Take from Work Area Isolation and Fish Salvage

Installation of coffer dams and diversion of water around the work area in a bypass pipe will isolate and dewater 1,000 square feet. Fish salvage in this area before and during isolation and dewatering will include seining (herding), netting, and electrofishing. NMFS anticipates the

proposed action will result in capture, injury, and death of a few juvenile steelhead from work area isolation and fish salvage. Estimating the specific number of animals captured, injured or killed is not possible because of the range of responses that individual fish will have, and because the numbers of fish present at any time is highly variable. Although captured fish can be counted, it is difficult to identify and quantify the number of fish with internal injuries, or the number of fish herded out of the work area that may be killed by predation. Therefore, NMFS uses a surrogate for incidental take caused by the work area isolation and fish salvage. The surrogate is the areal extent of the work area isolated. The surrogate is causally linked to the take pathways because the scale of the effect is related to the size of the area isolated. Thus, the extent of take will be exceeded if more than 1,000 square feet of Bridge Creek is isolated and dewatered. While this surrogate is coextensive with the proposed action, it functions as an effective reinitiation trigger because the amount of Bridge Creek isolated is readily discernible and presents a reliable measure of the extent of take that can be monitored and tracked as the action is occurring.

Incidental Take from Turbidity and Increased Risk of Predation

NMFS anticipates the proposed action will result in harm to fish by increasing turbidity from installation and removal of coffer dams and the bypass pipe. Take in the form of harm caused by the temporary increases in turbidity will be manifested in altered behaviors including avoidance of the area, abandonment of cover, and increased exposure to predators. We expect turbidity plumes to extend no further than 300 feet and persist for no more than 2 hours. It is not possible to determine the number of fish killed by the turbidity plumes because of the range of responses that individual fish will have, and because the numbers of steelhead and predators present at any time is highly variable. Therefore, NMFS uses a surrogate for incidental take caused by the turbidity. The surrogate is the areal extent of the turbidity plume. The surrogate is causally linked to the take pathways because the scale of the effect is related to the size of the turbidity plume. Thus, the extent of take will be exceeded if turbidity plumes extend further than 300 feet below the work area. While this surrogate is coextensive with the proposed action, it functions as an effective reinitiation trigger because turbidity plumes will be monitored and reported daily.

Incidental Take from Blocked Upstream Passage

Take in the form of blocked juvenile upstream fish passage will occur in 100 linear feet of Bridge Creek for 14 days, from the presence of coffer dams and dewatering. NMFS is unable to estimate the number of fish that will be blocked because the numbers of fish present at any time is highly variable, and because it is not possible to observe fish being affected. Therefore, we will use the duration and extent of modified habitat as a surrogate for the amount of take from blocked passage. The surrogate is causally linked to the take pathways because the scale of the effect is related to the length of riverbed that will be isolated and dewatered, and the duration of isolation barriers in the stream. Thus, the extent of take will be exceeded if upstream passage of juvenile steelhead is blocked in more than 100 linear feet of Bridge Creek for more than 14 days. While this surrogate is coextensive with the proposed action, it functions as an effective reinitiation trigger because the length and duration of blocked passage is discernible and presents a reliable measure of the extent of take that can be monitored and tracked as the action is occurring.

Incidental Take from Impingement

NMFS anticipates the proposed action will result in harm to a few juvenile steelhead over the life of the screen due to impingement. Estimating the specific number of animals harmed is not possible because of the range of responses that individual fish will have, because the numbers of fish present at any time is highly variable, and because it is not possible to observe fish being affected. Therefore, we will use the average approach velocity of water diverted through the screen. The surrogate is causally linked to the take pathway because the scale of the effect is related to the velocity of water approaching the screen. Thus, the extent of take will be exceeded if the approach velocity exceeds 0.4 feet per second. While this surrogate is coextensive with the proposed action, it functions as an effective reinitiation trigger because the approach velocity at the screen is discernible and presents a reliable measure of the extent of take that can be monitored and tracked.

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 MCR steelhead, or destruction or adverse modification of their 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 Corps shall:

1. Track, monitor, and report on the proposed action to ensure that the project is implemented as proposed, and the amount and extent of take is not exceeded.

NMFS believes that full application of conservation measures included as part of the proposed action, together with the use of the RPMs and terms and conditions described below, are necessary and appropriate to minimize the likelihood of incidental take of listed species due to completion of the proposed action.

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 Corps 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. Track and monitor construction activities to ensure that the conservation measures are meeting the objective of minimizing take.
 - b. Track and monitor the installation of coffer dams and the diversion of water around the work area, and ensure that the isolated work area does not exceed 1,000 square feet, and isolation does not occur for more than 14 days.
 - c. Conduct turbidity monitoring as follows:
 - i. Monitoring will be conducted daily, every 4 hours during daylight hours, when in-water work is conducted.
 - ii. Observations shall occur daily before, during, and after commencement of in-water work and compared to observable background sediment load upstream of the action area.
 - iii. Monitor the return of bypass water daily for visible turbidity plumes.
 - iv. Measure or observe background turbidity levels at an undisturbed site approximately 100 feet upstream of the project area.
 - v. Measure or observe background turbidity levels approximately 300 feet downstream from the project area, or within any visible turbidity plume.
 - vi. If a visible plume is observed at 300 feet downstream, measurements should not exceed above 10 percent of the background measurements. If there is exceedance, BMPs will be modified to minimize downstream increase of turbidity and fine sediments. Monitoring will be continued every 2 hours until plume is less than 10 percent of background. If plume is observed after 8 hours, work shall be stopped for the remainder of the 24-hour day.
 - d. Track and monitor blocked juvenile upstream fish passage in Bridge Creek, and ensure that blocked passage does not exceed 100 linear feet or 14 days.
 - e. Track and monitor approach velocities to minimize impingement.
 - f. Submit a completion of project report to NMFS two months after project completion. The completion report shall reference NMFS consultation number WCRO-2024-01136, be sent to crbo.consultationrequest.wcr@noaa.gov, and include, at a minimum, the following:
 - i. Starting and ending dates for work completed, with in-water work period specified.
 - ii. Summary and details of turbidity monitoring.
 - iii. Total area of in-water work, including the area isolated.
 - iv. Any daily observed sediment plume from the in-channel work area to 300 feet downstream during the in-water construction period.
 - v. A summary of pollution and erosion control inspection results, including results of implementing required BMPs, and including a description of any erosion control failure, contaminant release, and efforts to correct such incidences.

- vi. Total amount and area of riparian vegetation removed.
- vii. Number and species of fish observed injured or killed.
- viii. Date, and number and species of vegetation planted.
- g. If the amount or extent of take is exceeded, stop project activities and notify NMFS immediately.

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 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.”

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 Institutional Repository <https://repository.library.noaa.gov/welcome>. A complete record of this consultation is on file at NMFS’ Columba Basin Branch.

Please direct questions regarding this letter to Colleen Fagan, Columbia Basin Branch, at (541) 962-8512 or colleen.fagan@noaa.gov.

Sincerely,



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

cc: Danielle Erb, U.S. Army Corps of Engineers
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Gabriel Williams, Resource Specialists Inc.

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