



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
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Refer to NMFS No: **WCRO-2023-00684**

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Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson–Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Wallula Lake Maintenance Dredge Project, Benton County, Washington.

Dear Mr. Tillinger:

This letter responds to your May 15, 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, 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.

NMFS also reviewed the likely effects of the proposed action on essential fish habitat (EFH), pursuant to section 305(b) of the Magnuson–Stevens Fishery Conservation and Management Act (6 U.S.C. 1855(b)), and concluded that the action would adversely affect the EFH of Pacific coast salmon. Therefore, we have included the results of that review in this document.

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 U.S. Army Corps of Engineers (Corps) submitted a consultation initiation package, including a Biological Assessment prepared by Geosyntec Consultants, Inc. (GCI) for CHS Inc. (CHS), to NMFS on May 15, 2023. The Corps and GCI concluded the proposed action was not likely to adversely affect Upper Columbia River (UCR) spring-run Chinook salmon (*Oncorhynchus tshawytscha*), UCR steelhead (*O. mykiss*), Middle Columbia River (MCR) steelhead (*O. mykiss*), Snake River (SR) sockeye salmon (*O. nerka*), Snake River Basin (SRB) steelhead (*O. mykiss*), SR fall Chinook salmon (*O. tshawytscha*), SR spring/summer Chinook salmon (*O. tshawytscha*), or their critical habitat. We reviewed the initiation package and sent a letter to the Corps requesting additional information, in which we also indicated the project is likely to adversely affect all seven of these salmon and steelhead species, on June 2, 2023. Between June 2 and October 23, 2023, we requested additional information from the Corps four times, met with the Corps and CGI three times, received three revised drafts of the biological assessment (BA), and four responses to comments, including:

- Draft BA submitted to NMFS – May 15, 2023
- NMFS letter to Corps and GCI requesting additional information and indicating the project is likely to adversely affect all seven species covered in the consultation – June 2, 2023
- First revised draft BA and response to comment spreadsheet submitted to NMFS – July 21, 2023
- NMFS request for additional information via email to Corps and GCI – July 24, 2023
- Conference call with Steven Hughes (NMFS), Corps (David Moore), and GCI (Keith Kroeger) to discuss NMFS’ comments on the revised BA – July 31, 2023
- Second revised BA and response to comment spreadsheet submitted to NMFS – August 29, 2023
- NMFS request for additional information via email to the Corps and GCI – September 19, 2023
- Conference call with NMFS (Colleen Fagan), Corps (David Moore), and GCI (Keith Kroeger and Scott Walker) to discuss NMFS’ comments on second revised BA – September 27, 2023
- Third revised BA and response to comment spreadsheet submitted to NMFS – October 16, 2023
- NMFS request for additional information via email to the Corps and GCI – October 18, 2023

- Conference call with NMFS (Colleen Fagan), Corps (David Moore), and GCI (Keith Kroeger and Scott Walker) to discuss NMFS' questions and comments on second revised BA – October 23, 2023
- Response to additional information request received – October 27, 2023

The Corps and GCI revised their conclusion of project effects to likely to adversely affect all seven salmon and steelhead species, and their critical habitat, covered by the consultation. Consultation was initiated on October 27, 2023.

Where relevant, we have adopted the information and analyses you and GCI 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 2023): Section 2.3, Proposed Project and Construction (pp. 4–5); Section 2.4, Project Construction Details (pp. 5–7); Section 2.5, Project Timing (pp. 7–8); Section 2.6, Best Management Practices and Conservation Measures (pp. 8–9); Section 2.7, Dredge Project Area Turbidity Monitoring (pp. 9–10); Section 2.8, Disposal Area Turbidity Monitoring (p. 10); Section 2.9, Threshold Criteria and Actions (pp. 11–12); Section 2.10, Scope of this BA (pp. 12–13), including Section 2.10.2, Action Area (p. 12); Section 3, Environmental Baseline Conditions (pp. 14–15); Section 4, Description of the Species and Habitat Use (pp. 17–27), including Section 4.10, Effects Analysis (pp. 27–34); Section 5, Critical Habitat Evaluation (pp. 35–38); and Section 6, Effects Determinations (pp. 39–42).

As described in the BA, the Corps proposes to authorize CHS to undertake maintenance dredging adjacent to its loading terminal and dock for grain in Wallula Lake of the Columbia River, under Section 401 of the Clean Water Act. CHS proposes to dredge approximately 5,000 cubic yards of sediment from a 17,400 square foot (0.4 acre) area to maintain a 16-foot berthing depth at its grain dock facility. The dredge footprint will extend approximately 50 feet waterward from the dock face and 243 feet in either direction from the midpoint of the dock. A contractor will dredge from a floating barge with a crane and clamshell bucket positioned along the dock face. The floating barge will be tethered to the dock or anchored by lowering three hydraulically controlled spuds. Dredged materials will be loaded directly onto a material barge tied to the floating barge. One tug will be on site to maneuver the barges. The dredged material will be transported approximately 43 river miles by tug and barge and dumped at a depth of 26–37 feet at River Mile (RM) 284. The dumping location is a Corps-approved in-water site in Lake Umatilla in Benton County, Washington. CHS, in coordination with the Corps' Dredged Material Management Office, sampled the proposed dredge material for contaminants. On February 15, 2023, CHS received a Suitability Determination Memorandum from the Corps indicating that materials from the dredge location are suitable for in-water disposal. Dredging and disposal would occur for up to 7 days during the Washington Department of Fish and Wildlife and NMFS recommended in-water work window of December 1 to February 28.

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

We examined the status of UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook

salmon, 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 essential to the conservation of the species that create the conservation value of that habitat. Section 3 (Environmental Baseline Conditions) and Section 4 (Description of Species and Habitat Use) of the BA include descriptions of the species and critical habitat in the action area, which is adopted here. NMFS’ status of the species summaries for each of the seven salmon and steelhead species that may be impacted by the proposed action are 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 following 2022 5-year reviews:

- 2022 5-Year Review: Summary & Evaluation of Middle Columbia River Steelhead
- 2022 5-Year Review: Summary & Evaluation of Snake River Basin Steelhead
- 2022 5-Year Review: Summary & Evaluation of Upper Columbia River Spring-run Chinook Salmon and Upper Columbia River Steelhead
- 2022 5-Year Review: Summary & Evaluation of Snake River Fall-Run Chinook Salmon
- 2022 5-Year Review: Summary & Evaluation of Snake River Spring/Summer Chinook Salmon
- 2022 5-Year Review: Summary & Evaluation of Snake River Sockeye Salmon

“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). A description of the action area is included on page 12 in Section 2.10.2 of the BA, which is adopted here. As described in the BA, the action area includes the dredge prism (0.4 acres) and disposal boundary (42 acres) in the Columbia River, and up to 300 feet downriver of each of these areas, which is the expected extent of turbidity plumes.

The “environmental baseline” refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultations, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency’s discretion to modify are part of the environmental baseline (50 CFR 402.02). The environmental baseline, and species and habitat use, are described in Sections 3 and 4 of the BA, respectively, which are adopted here. The action area is in impounded sections of the Columbia River. The dredge area is in a heavily utilized industrial port area with substantial docking facilities and associated infrastructure, where significant alteration to salmonid habitat

has occurred. The disposal area is a deep water, pre-approved Corps site, specifically selected for sediment disposal activities. In addition to the information provided in the BA, the action area baseline includes altered habitats and flow regimes caused by Columbia River hydrosystem development, that creates more favorable habitat conditions for invasive, non-native species that may compete with or prey upon juvenile salmonids.

The Columbia River in the action area is designated critical habitat, and supports rearing and migration of fish from all populations of UCR spring-run Chinook salmon, UCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon; and from the Satus Creek, Toppenish Creek, Naches River, and Yakima River Upper Mainstem populations of the Yakima River major population group (MPG) of MCR steelhead. The action area provides physical and biological features (PBFs) of critical habitat for rearing and migration, though these persist in a largely degraded condition. The ability of critical habitat in the action area to support recovery of these seven species is primarily limited by impacts of hydropower development and operation.

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

The BA (Section 4.10) and additional submitted information includes a detailed discussion and assessment of the effects of the proposed action, and is adopted here (50 CFR 402.14(h)(3)). Rearing of juvenile UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon occurs year round. Juvenile migration downstream can occur year round, with most occurring March through August. Adult migration of UCR spring-run Chinook salmon, SR sockeye salmon, SR fall Chinook salmon, and SR spring/summer Chinook salmon occurs March through September, and will be complete prior to dredging. Adult migration of UCR steelhead, MCR steelhead, SRB steelhead migration occurs year round, and peaks April through October. Because the work window is December 1 to February 28 and avoids migration periods for most species, the Corps and GCI concluded, and NMFS agrees, that very few juvenile UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon; and very few adult UCR, MCR, and SRB steelhead, will be present in the action area during the project.

Potential adverse project effects identified by the Corps and GCI include:

1. Injury and death of a few juvenile UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon by entrainment/impingement in the clamshell bucket and material barge during dredging.

2. Short-term behavioral changes (e.g., avoidance or fleeing of the area and discontinued feeding), physiological stress (e.g., coughing), gill abrasion, and pauses in migration of a few juvenile UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon avoiding turbidity plumes.
3. Increased predation of a few UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon displaced by turbidity plumes lasting from a few minutes to several hours for 7 days and extending 300 feet downstream from dredging and disposal activities.
4. Migration behavior modification resulting in increased predation of a few juvenile UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon, caused by the presence and use of temporary over-water structure (barges and tug) and in-water (clamshell bucket and spuds) equipment for 7 days.
5. Modification of migration behavior, including fleeing and delay or pausing of upstream migration, of a few adult UCR, MCR, and SRB steelhead as they navigate around turbidity plumes, temporary over-water structure (barges and tug), and in-water equipment (clamshell bucket and spuds) for up to 12 hours per day for 7 days.

These adverse effects would be distributed among juveniles from each population of UCR spring-run Chinook salmon, SR sockeye salmon, SR fall Chinook salmon, and SR spring/summer Chinook salmon; juvenile and adults from each of the four populations of the Yakima River MPG of MCR steelhead; and adults of each population of UCR steelhead and SRB steelhead.

Potential adverse effects to PBFs of critical habitat identified by GCI include:

1. Temporary, localized water quality impact from elevated turbidity from dredging and releasing of dredged sediment. Turbidity plumes could occur for 7 days and last from a few minutes to several hours and extend 300 feet downstream from dredging and disposal activities.
2. Changes in bathymetry and topography due to dredging of sediment (0.4 acres) and placement of sediment at deposit location (42 acres).
3. Short-term (several months), negative effects on forage by crushing, covering, or displacing benthic macroinvertebrates during dredging an area of approximately 17,400 square feet, depositing dredged sediment up to 10 inches deep within a 42-acre area.
4. Short-term (12 hours per day for 7 days), negative effect to safe passage from the presence of temporary in-water structure (clamshell bucket and three spuds).

NMFS has evaluated the effects sections in the BA and additional submitted information, and after our independent, science-based evaluation, determined that it meets our regulatory and scientific standards.

“Cumulative effects” are those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR 402.02 and 402.17(a)). Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA. The Cumulative Effects section of the BA includes a description of cumulative effects and is adopted here. The Corps and GCI determined that the project will not contribute significantly to cumulative adverse effects on habitat. NMFS is not aware of any future non-Federal activities within the action area that could adversely affect UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, SR spring/summer Chinook, or their critical habitat. 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 each population of UCR spring-run Chinook salmon, UCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, SR spring/summer Chinook salmon; and from the Satus Creek, Toppenish Creek, Naches River, and Yakima River Upper Mainstem populations of the Yakima River MPG of MCR steelhead use the action area as a migration corridor. Juveniles of these species all rear in the action area. NMFS recently reaffirmed that UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook have not achieved viable status and are at continuing risk of extinction. Major threats include, but are not limited to: climate change, regulation of the Columbia River, and impairment of tributary habitat. Upper Columbia River spring-run Chinook salmon and SR sockeye salmon are listed as endangered; and UCR steelhead, MCR steelhead, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook are listed as threatened under the ESA. While some populations are viable, most populations within these Evolutionarily Significant Units (ESUs)/Distinct Population Segments (DPSs) remain at moderate or high risk.

Based on the species life stages and the activities described in the submitted BA and supplemental information, the proposed action is expected to result in harm, harassment, injury or death of a few juvenile UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, SR spring/summer Chinook salmon; and harassment of a few adult UCR, MCR, and SRB steelhead within the action area from

entrainment/impingement; increased turbidity; increased predation; and migration obstruction from turbidity, over-water structure (barges and tug), and in-water equipment (clamshell bucket and spuds). These adverse effects would be distributed among juveniles from each population of UCR spring-run Chinook salmon, SR sockeye salmon, SR fall Chinook salmon, and SR spring/summer Chinook salmon; juveniles and adults from each of the four populations of the Yakima River MPG of MCR steelhead; and adults of each population of UCR steelhead and SRB steelhead.

A clamshell bucket will be used to dredge up to 5,000 cubic yards of sediment over a 17,400 square foot (0.4 acres) area in 7 days. Smaller juvenile fish that are less likely to flee when exposed to in-water equipment will be picked up and entrained/impinged in the dredging clamshell bucket and in the material barge. Given the proposed timing of in-water work, use of an open clamshell bucket, and relatively slow speed of dredging, it is reasonably certain that the risk of injury or lethal take of juvenile ESA-listed fish species from proposed dredging activities will be small, involving only a few juvenile fish. We estimate the proposed action will injure or kill a few juvenile UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon, from entrainment/impingement during dredging.

Very few additional juvenile salmon and steelhead from all seven salmon and steelhead species will be affected by temporary (lasting a few minutes to a few hours per day for 7 days) increases in turbidity, and the temporary (7 days) presence of over-water structures and in-water equipment. Effects from temporary increases in turbidity are likely to be short-term behavioral changes (e.g., avoidance or fleeing of the area and discontinued feeding), physiological stress (e.g., coughing), and gill abrasion. We expect these effects to juvenile salmon and steelhead from dredging and dumping 5,000 cubic yards of sediment in 43.37 acres, including: the area of dredging (0.4 acres), the potential area of dumping (42 acres), and area of turbidity plumes generated up to 300 feet downstream and 50–55 feet across the channel during dredging and dumping (0.97 acres). Behavioral changes could increase the risk of predation. The temporary increase in over-water structures and in-water equipment will lead to juveniles changing their natural migration patterns in the area of dredging (0.4 acres). We expect behavioral changes will cause increased predation on juveniles as they move into deeper water and away from cover.

Adult UCR, MCR, and SRB steelhead may be migrating through, or holding in, the action area during the proposed action. Adult fish present in the action area will also modify their migration behavior during active dredging and disposal (12 hours per day for 7 days) due to presence of over-water structure and equipment in the water column, and due to increased turbidity. The presence of over-water structures and in-water equipment will lead to adults changing their natural migration patterns. Turbidity created from dredging and depositing of sediment will likely cause adult steelhead to avoid or flee the immediate area near where the two actions are occurring. The proposed action is expected to delay or pause migration of a few adult UCR, MCR, and SRB steelhead for up to 12 hours per day for 7 days. The delay or pause in migration for up to 12 hours per day for 7 days is not expected to reduce the success of spawning.

NMFS has determined that the loss of a few juvenile salmon and steelhead caused by the proposed action is not substantial enough to negatively influence the viable salmonid population (VSP) criteria at the population scale for any populations of these seven species, and will not

appreciably reduce the likelihood of any population maintaining its current status. The effects will be distributed among fish from all populations of these species except MCR steelhead, for which the effects will be distributed among all populations of the Yakima River MPG.

Because the effects of the proposed action will not be substantial enough to negatively influence VSP criteria at the population scale, the viability of major population groups, ESUs, and DPSs are also not expected to be reduced. Therefore, the effects of proposed action are not likely to appreciably reduce survival of any of the seven species considered in this opinion, nor is the proposed action likely to reduce the likelihood of recovery of these species.

The proposed action will temporarily reduce the function of critical habitat PBFs for water quality (turbidity), forage/food, and free of artificial obstruction/safe passage. Short-term, localized increases in turbidity are expected to last a few minutes to a few hours per day for 7 days in the area of dredging (0.4 acres), disposal (42 acres), and turbidity plumes (0.97 acres). The proposed action will have a short-term negative effect on benthic macroinvertebrates by crushing, covering, or displacing them during the removal and dumping of approximately 5,000 cubic yards of sediment, causing a temporary change to prey availability. We expect benthic macroinvertebrates will start to recolonize the action area as soon as the 7-day project is complete, and benthic communities to be reestablished in a few months. The disturbed area is only a small portion of the overall critical habitat in the Columbia River. Adult and juvenile migration will be affected by the presence of over-water structures (two barges and one tug boat) and in-water equipment (one clamshell bucket and three 24-inch-diameter spuds during the 7-day project, and by turbidity plumes generated during dredging and dumping. Fish migration in the action area will likely be delayed and/or fish will modify their behavior (e.g., flee the area) during times of the active dredging (12 hours per day for 7 days). The function of these PBFs will return once dredging is completed and benthic macroinvertebrates recolonize dredge and disposal locations. It is reasonably certain that the proposed actions will not result in long-term adverse effects to water quality, forage/food, or safe passage, or other PBFs within the action area. Thus, the effects will not influence the conservation value of the critical habitat at the scale of the designation.

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 UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon, 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 juvenile UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon; and adult UCR, MCR, and SRB steelhead, is reasonably certain to occur as follows: (1) injury and death of juveniles from entrainment/impingement in the clamshell bucket, (2) short-term changes in behavior, physiological stress, gill abrasion, and increased predation of juveniles displaced by turbidity plumes; (3) increased predation of juveniles from changes to migration behavior caused by the presence of over-water structures and in-water equipment, and (4) altered migration behavior of adult UCR, MCR, and SRB from the presence of over-water structure and in-water equipment. We expect a few juveniles of each population of UCR spring-run Chinook salmon, UCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, SR spring/summer Chinook salmon, and each of the four populations (Satus Creek, Toppenish Creek, Naches River, and Yakima River Upper Mainstem) of the Yakima River MPG of MCR steelhead to be injured or killed; and a few adult UCR, MCR, and SRB steelhead from each population to alter their migration behavior.

Incidental Take from Entrainment/Impingement

NMFS anticipates the proposed action will result in injury and death of a few UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon as result of entrainment/impingement in the clamshell bucket and material barge. Estimating the specific number of animals 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. While this uncertainty makes it impossible to quantify take in terms of numbers of animals injured or killed, the extent of habitat altered by dredging is readily discernible and presents a reliable measure of the extent of take that can be monitored and tracked. Therefore, the estimated area of dredging represents the extent of take associated with injury and death from entrainment/impingement. The proposed surrogate is causally linked to anticipated take because it describes conditions that will cause take due to entrainment/impingement. Specifically, NMFS will consider the extent of take exceeded if the proposed action results in dredging of more than 17,400 square feet at the loading terminal and dock for grain.

Incidental Take from Turbidity and Increased Predation

NMFS anticipates the proposed action will result in harm to fish by increasing turbidity from dredging and turbidity plumes and disposal of sediment and turbidity plumes in 43.37 acres. The specific number of fish harmed from turbidity is not possible because of the range of responses that individual fish will have, and the number of fish present at any time is highly variable. While this uncertainty makes it impossible to quantify take in terms of numbers of fish injured or killed, the linear extent of the turbidity plume is readily discernible and presents a reliable surrogate measure of the extent of take that can be monitored and tracked. Therefore, the downstream extent of a turbidity plume represents the extent of take associated with turbidity. Specifically, NMFS will consider the extent of take exceeded if a visible turbidity plume created during dredging or disposal extends beyond 300 feet of the dredging or disposal activity.

Incidental Take from Changes to Migration

NMFS expects harm, harassment, injury, or death to a few juvenile salmon and steelhead from all seven ESUs and DPSs covered in this opinion from the presence of over-water structure (barges and tug) and in-water equipment (clamshell bucket and spuds) at the dredge site, which result in behavior modification and increased exposure to predators. NMFS expects harassment of a few adult UCR, MCR, and SRB steelhead by over-water structure and in-water equipment (clamshell bucket and spuds), causing migration behavior modification and delay. It is not possible to determine the number of juvenile or adult fish that will be harmed or harassed by the presence of over-water structure and in-water equipment. While this uncertainty makes it impossible to quantify take in terms of numbers of fish harassed or killed, the amount of sediment being dredged and deposited, and the size and duration of over-water structures and in-water equipment, is readily discernible and presents a reliable surrogate measure of the extent of take that can be monitored and tracked. The surrogate is causally linked to the take pathways because the risk of harm and harassment manifested in behavior changes, migration delay, and increased predation is related to the amount of sediment removed and deposited and the amount of time barges and the tug with clamshell bucket and spuds are present at the work site. Therefore, the extent of take will be exceeded if more than 5,000 cubic yards of sediment is dredged and deposited, or the barges and tug are present for longer than 7 days.

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 UCR spring-run Chinook salmon, UCR steelhead, MCR steelhead, SR sockeye salmon, SRB steelhead, SR fall Chinook salmon, and SR spring/summer Chinook salmon, 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 RPM 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 dredging and disposal activities to ensure that the conservation measures are meeting the objective of minimizing take. Monitoring shall be conducted by the Corps or a contractor.
 - b. Submit a completion of project report to NMFS two months after project completion. The completion report shall include, at a minimum, the following:
 - i. Starting and ending dates for work completed, with in-water work period specified.
 - ii. Methods used to dredge and dispose of sediment.
 - iii. Total area of in-water work, including areas of sediment dredging and disposal.
 - iv. Total amount of sediment dredged and disposed.
 - v. Any daily observed sediment plume from the in-channel work area to 300 feet downstream during the 7 day in-water dredging and disposal period.
 - vi. 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.
 - vii. Number and species of fish observed injured or killed at the dredging and disposal sites during project operations.
 - viii. Reference to NMFS consultation number WCRO-2023-00684.

- c. All reports will be sent to: crbo.consultationrequest.wcr@noaa.gov.
- d. 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.”

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 and loss of (or injury to) benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects may result from actions occurring within EFH or outside of it and may include direct, indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) of the MSA also requires NMFS to recommend measures that can be taken by the action agency to conserve EFH. Such recommendations may include measures to avoid, minimize, mitigate, or otherwise offset the adverse effects of the action on EFH (50 CFR 600.0-5(b)).

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

- Short-term elevation of turbidity up to 300 feet downstream from dredging and dumping locations.

- Short-term (several months) negative effects on forage by crushing, covering, or displacing benthic macroinvertebrates during dredging an area of approximately 17,400 square feet (0.4 acres), and depositing dredged sediment up to 10 inches deep within a 42-acre area.
- Short-term increased risk of predation from the presence of temporary over-water structures (barges and tug) and in-water equipment (clamshell bucket and spuds).

NMFS determined that measures included in the BA and supplemental information are sufficient to avoid, minimize, mitigate, or otherwise offset the impact of the proposed action on EFH. The Corps 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 Institutional Repository <https://repository.library.noaa.gov/welcome>. A complete record of this consultation is on file at NMFS' La Grande, Oregon, office.

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, PhD
Acting Assistant Regional Administrator
Interior Columbia Basin Office

cc: David Moore, U.S. Army Corps of Engineers
Keith Kroger, Geosyntec
Scott Walker, Geosyntec

REFERENCES

- Corps (U.S. Army Corps of Engineers). 2023. Biological Assessment Wallula Lake Maintenance Dredge Project. Prepared by Geosyntec Consultants for CHS Inc. 63 pp.
- NMFS (National Marine Fisheries Service). 2022. 2022 5-year Review: Summary and Evaluation of Middle Columbia River Steelhead. July 26, 2022. 87 pp.
- NMFS. 2022. 2022 5-Year Review: Summary & Evaluation of Snake River Basin Steelhead. July 26, 2022. 95 pp.
- NMFS 2022. 2022 5-Year Review: Summary & Evaluation of Snake River Fall-Run Chinook Salmon. July 26, 2022. 87 pp.
- NMFS 2022. 2022 5-Year Review: Summary & Evaluation of Snake River Sockeye Salmon. July 26, 2022. 93 pp.
- NMFS 2022. 2022 5-Year Review: Summary & Evaluation of Snake River Spring/Summer Chinook Salmon. 101 pp.
- NMFS. 2022. 2022 5-year Review: Summary and Evaluation of Upper Columbia River Spring-run Chinook Salmon and Upper Columbia River Steelhead. 95 pp.