

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

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October 26, 2022

Todd N. Tillinger Chief, Regulatory Branch Seattle District, U.S. Army Corps of Engineers P.O. Box 3755 Seattle, WA 98124-3755

Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson–Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Howard Amon Park Dolphin Replacement, Columbia River, Benton County, Washington.

Dear Mr. Tillinger:

This letter responds to your March 15, 2022, request for initiation of consultation with the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act (ESA) for the Howard Amon Park Dolphin Replacement Project. 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.

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. As a result, the 2019 regulations are once again in effect, and we are applying the 2019 regulations here. For purposes of this consultation, 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.

We reviewed the U.S. Army Corps of Engineers' (Corps) consultation request and related initiation package. Where relevant, we have adopted the information and analyses you have provided and/or referenced, but only after our independent, science-based evaluation confirmed they meet our regulatory and scientific standards. We adopt by reference the following sections of the Corps' Biological Assessment (BA): Project Description (i.e., Proposed Action;



Section 1.3), Conservation Measures (Section 1.4), Action Area (Section 1.5), Species and Critical Habitat Information (Sections 2.3, 2.4, and 2.5), Environmental Baseline (Section 3), and Effects of the Action (Section 4).

The Corps submitted a consultation initiation package, including a BA, to NMFS on March 15, 2022. The BA and consultation request included all information necessary to initiate consultation; therefore, consultation was initiated on March 15, 2022. The BA concluded that the action would likely adversely affect (LAA) Snake River (SR) spring/summer Chinook salmon and SR sockeye salmon; however, after discussions between NMFS and the Corps, it was determined that the proposed action would result in no effects to either of those species. On October 17, 2022, the Corps emailed NMFS changing their effects determination for SR spring/summer Chinook salmon and SR sockeye salmon and SR sockeye salmon from LAA to no effect.

As described in the BA, the Corps proposes to permit the removal of two steel dolphins (comprising three 24-inch-diameter steel piles per dolphin) and install two new mooring dolphins (comprised of a single 36-inch-diameter steel pile, fender, and mooring rings) adjacent to the Howard Amon Dock on the Columbia River in the City of Richland, Washington. The replacement piles will provide safe, reliable berthing and moorage for cruise vessels and provide safer mooring conditions for crew. We considered, under the ESA, whether or not the proposed action would cause any other activities and determined that it would not.

We examined the status of: (1) Upper Columbia River (UCR) spring-run Chinook salmon (Oncorhynchus tshawytscha); (2) SR fall Chinook salmon; (3) Middle Columbia River (MCR) steelhead (O. mykiss); (4) UCR steelhead; and (5) Snake River Basin (SRB) steelhead, which may 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 the function of the physical and biological features (PBFs) essential to the conservation of the species that create the conservation value of that habitat. Section 2 of the BA describes the status of the species and critical habitat; however, since the submission of the BA more recent information has become available. The 2022 5-year reviews for each of the seven Upper Columbia and Snake River species were published in August, 2022 (NMFS 2022a, NMFS 2022b, NMFS 2022c, NMFS 2022d, NMFS 2022e, NMFS 2022f) and the Biological Viability Assessment Update for Pacific Salmon and Steelhead Listed under the Endangered Species Act: Pacific Northwest (Ford 2022) was published in January of 2022. These documents are adopted here to describe the status of the seven affected species and their critical habitat. Major risk factors that limit recovery include reduced quality and quantity of freshwater habitat, predation, regulatory mechanisms that fail to adequately protect habitat, ocean conditions, hatchery fish, and climate change.

"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 BA identifies the inwater action area as a 5-mile radius extending from the proposed project footprint and is based on the extent of noise from pile driving. The action area includes the Columbia River 5 miles upstream and downstream from the project site.

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 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process (50 CFR 402.02). The Environmental Baseline (Section 3) of the BA describes the environmental baseline and is adopted here.

Adult MCR steelhead, UCR steelhead, and UCR spring-run Chinook salmon migrate through the action area to access upstream tributary spawning streams. Juveniles also use the action area as a migration corridor and utilize the area for resting and foraging during their migration to the ocean. Snake River Basin steelhead exhibit a wide range of life history strategies, including varying times and locations of freshwater rearing, and SR fall Chinook salmon often overwinter in Snake and Columbia River reservoirs. Therefore, the action area may provide rearing habitat for overwintering SRB steelhead and SR fall Chinook salmon.

Under the ESA, "effects of the action" means the direct and indirect effect of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline (50 CFR 402.02). Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur.

The BA provides a detailed discussion and comprehensive assessment of the effects of the proposed action in the Analysis of Effects (Section 4), and is adopted here. NMFS has evaluated this section and, after our independent, science-based evaluation, determined it meets our regulatory and scientific standards. The work window is November 1 to February 28, and avoids migration periods for most species; however, the BA concluded that small numbers of MCR steelhead, UCR steelhead, UCR spring-run Chinook salmon, SRB steelhead and SR fall-run Chinook salmon may be negatively affected by project actions. The BA found potential adverse effects to Chinook salmon and steelhead to include:

- Increases in underwater sound pressure levels may cause behavioral effects, injury, or mortality during impact hammer use and behavioral effects during vibratory hammer use.
- Short-term increases in turbidity up to 150 feet downstream of the in-water work site.
- Changes in juvenile fish movement and increased predation due to changes in overwater shading from temporary barge use.
- Potential release of contaminants from sediment.

NMFS has evaluated this chapter and, after our independent science-based evaluation, determined it needs the additional information. NMFS reviewed the information in the BA about the potential release of contaminated sediments that could be released. After discussions with the Corps, we determined that there are no known contaminated sediments in or around the existing dock. Therefore, we do not believe it likely there will be any potential release of contaminated sediments from pile driving activities and will not analyze them any further.

Based on the species life stages and the activities described in the BA, the proposed action is likely to result in short-term adverse effects to ESA-listed fish species within the action area from hydroacoustic impacts, increased cover for predators created by work barges, and increases in sedimentation and turbidity. Vibratory pile driving while extracting the old dolphins is expected to occur up to 1 hour per day and last for 2 days. Installation of each new dolphin (two total) requires up to 45 minutes of both vibratory and impact pile driving and is expected to take up to 2 days. In addition, the existing dolphins are each comprised of three 24-inch pilings which provide water velocity shadows and cover for predators. Each new dolphin will be constructed using one 36-inch piling; therefore, removing and replacing the pilings will result in a long-term reduction of instream cover utilized by predators.

During construction, the proposed action will have effects on substrate, water quality, forage, and safe passage and will likely result in adverse effects to critical habitat within the action area. Pile removal and installation activities could result in temporary and localized increased levels of turbidity within 150 feet of a pile being removed or installed. Increased turbidity from project activities will result in sediment deposition downstream of the in-water work area, which has the potential to adversely affect primary and secondary productivity. Turbidity and suspended sediments will have temporary effects and are expected to return to background levels within hours. The proposed action will have a short-term negative effect on benthic macroinvertebrates by crushing, covering, or displacing them during removal and installation of the dolphins in an area approximately 100 square feet. The proposed action will alter PBFs for passage during the 2 to 3-week period (which includes pile driving) when the barges and work vessels are present. This construction will occur at a time when very few fish of any species will be migrating either upstream or downstream. Fish present in the action area will likely be impeded from migrating through or modify their behavior (e.g., disrupt feeding, flee the area) during times of active pile driving (up to 90 minutes a day). When construction activities are ceased (e.g., during the night), predators may use the barges and vessels as cover posing a risk of injury or death to juvenile salmonids present near the work site. The function of these PBFs will return following construction.

"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 describes cumulative effects and is adopted here.

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.

#### **Species**

The action area is used primarily as a migration corridor by adult and juvenile MCR steelhead, UCR steelhead, and UCR spring-run Chinook salmon. Since the action area is close to the confluence of the Snake River (7 miles), it is also possible that a small number of juvenile SRB steelhead and SR fall Chinook salmon utilize the action area for winter rearing. The five evolutionarily significant units (ESU)/distinct population segments (DPS) are all listed as threatened except UCR spring-run Chinook salmon which are endangered, and while some populations are viable, most populations within these ESU/DPSs remain at moderate or high risk.

The proposed work window is not within the primary migration period for juvenile steelhead and spring-run Chinook salmon. However, the action area in the Columbia River is relatively large (10 river miles) and it is possible that juvenile fish would be present and affected by the action.

Adult steelhead may be migrating through the action area and be exposed to the effects of the action. Impact pile-driving will likely cause adult steelhead to avoid or flee the immediate area near pile being driven, or seek cover nearby. Since impact pile-driving will be limited to 45 minutes per day over 2 days, the avoidance behaviors are not expected to reduce adult steelhead fitness.

NMFS anticipates the proposed action will primarily affect steelhead and Chinook salmon juveniles within a smaller area adjacent to the pile driving activity. Near the work area, smaller juvenile fish that are less likely to flee will be exposed to sound pressure levels produced by pile driving and/or increased turbidity created by pile driving. Also, cover from the barges and work vessels may attract predators for the 2 to 3 week period they are present.

When actively pile driving with an impact hammer, the peak decibel injury radius is 59 feet, the cumulative sound exposure level injury radius is 2,818 feet, and the behavioral response zone is 24,134 feet. Because the work will be conducted outside of juvenile migration periods, very few juvenile fish are expected to be present within the 59-foot injury radius. If fish are present, the soft-start procedures should cause fish to flee to areas of similar or better quality habitat. However, this avoidance behavior may increase risk of predation; therefore, we expect a few individual fish will be injured or killed by predators.

Turbidity could adversely affect adults and juveniles of listed fish species and their prey, if present, during pile extraction and installation activities. The turbidity plume is expected to extend to 150 feet and soft-start procedures should cause fish to flee prior to exposure to any turbidity. Effects from turbidity may result in behavioral avoidance or disorientation, physiological stress (e.g., coughing), and gill abrasion. Mortality resulting from turbidity is not anticipated because the anticipated increase above background levels is expected to be relatively small and of short duration. Implementation of best management practices should minimize or avoid these effects.

Increased predation due to an increase in cover created by the barges and work vessels is expected to be limited to a few individual fish. Juvenile steelhead and salmon movement is

minimal in the winter; therefore, we expect that few, if any, juveniles would move into the work area when the barges and vessels are present and be exposed to predators.

In addition to these short-term effects, the new structures could provide long-term refuge for salmonid predators due to an increase in overhead cover. However, instream cover for predators will be reduced by removing six 24-inch pilings (three for each dolphin) and replacing them with two 36-inch pilings. Although the structures are located in marginal habitat and located away from near-shore migratory routes, some juvenile salmonids are likely to encounter predators, resulting in injury or death.

Considering the effects of the action in conjunction with the existing condition of the environmental baseline and the timing of implementation, we expect a small number of adult and juvenile UCR and MCR steelhead; a very small number of adult and juvenile SRB steelhead; and a very small number of juvenile SR fall Chinook salmon and UCR spring Chinook salmon to experience harm, harassment, injury, or death. These effects will manifest themselves across each of the five ESUs and DPSs and are expected to be proportional to the size of the population. NMFS has determined that the loss of a very small number of juvenile salmon and steelhead that may be caused by the proposed action will not be substantial enough to negatively influence viable salmonid population (VSP) criteria at the population scale and will not appreciably reduce the likelihood of any population maintaining its current status. Because the effects will not be substantial enough to negatively influence VSP criteria at the population scale, the viability of each major population group, ESU, and DPS are also not expected to be reduced. The effects of the proposed action are not likely to appreciably reduce survival of any of the five species considered in this opinion, nor is the action likely to reduce the likelihood of recovery of these species.

#### Critical Habitat

The proposed action has the potential to affect several PBFs within the action area. Those PBFs include water quality (turbidity, and chemical contamination), substrate, safe passage, and forage. The primary effects of the action will be short-term, localized increases in background turbidity and minor alterations of the substrate. Benthic disturbance in the excavation area will reduce prey availability. The invertebrates will start to recolonize as soon as construction is completed. Recolonization is expected to occur over a couple of months. The disturbed area is a small fraction of shallow habitat area available for use in the McNary pool. NMFS expects insignificant effects to the above PBFs from the reduced water quality, temporary disturbance of the substrate and shallow-water benthic habitat, which will cause a temporary change to prey availability in the disturbed area. It is reasonably certain that these actions will not result in long-term adverse effects to substrates, water quality, migratory habitat, food base, or other PBFs within the action area given the proposed conservation and mitigation measures described in the BA.

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. 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 of critical for each species, the proposed action is not expected to appreciably reduce the conservation value of the designated critical habitat.

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, UCR steelhead, UCR spring-run Chinook salmon, SRB steelhead or SR fall Chinook or destroy or adversely modify their respective 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 MCR steelhead, UCR steelhead, UCR spring-run Chinook salmon, SRB steelhead, and SR fall Chinook is reasonably certain to occur as follows: injury and death resulting from underwater sound/pressure and predation. A small number of juvenile steelhead and Chinook salmon are anticipated to be injured or killed.

NMFS expects harm, harassment, injury, or death to juvenile salmon and steelhead from all five ESUs and DPSs covered in this opinion; and harm and harassment of adult UCR, MCR, and SRB steelhead by exposure to hydroacoustic sound pressure levels during vibratory and impact pile-driving activities and behavioral modifications that increase exposure to predators. It is not possible to determine the number of fish that will be harmed or harassed by vibratory pile driving or by the cumulative effects of sound pressure waves from repeated pile strikes. Therefore, NMFS uses a surrogate for incidental take. The surrogate is causally linked to the take pathways because the risk of injury and severity of injury from sound pressure waves increase with additional pile strikes and piles, and more fish are exposed to possible injury and predation when the time period or number of piles increases.

The best available indicators to measure the extent of incidental take caused by pile driving and predation are:

- The number of piles installed.
- The number of pile strikes from an impact driver performed with a bubble curtain over the course of a single day.
- The duration of pile driving.
- The duration of vessels and barges present at the work site.

The extent of take will be exceeded if:

- More than two 36-inch steel piles are installed.
- More than 2,000 pile strikes from an impact pile driver occur in a single day.
- Pile driving occurs for more than 2 days.
- Vessels and barges are present at the work site for more than 21 days.

If at any time the level or method of take exempted from take prohibitions and quantified in this opinion is exceeded, reinitiation 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" (RPM) 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 minimize incidental take by:

• 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 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) By the end of the calendar year following construction, the Corps shall report monitoring items to include, at a minimum, the following:
    - i) Project identification:
      - (1) Project name: Howard Amon Park Dolphin Replacement (WCRO-2022-00707).
      - (2) Corps contact person.
    - ii) Construction details:
      - (1) Number of piles installed.
      - (2) Number of impact pile strikes.
      - (3) Total time of impact pile-driving (hours).
      - (4) Total time of barges and vessels on site (days).
      - (5) A description of any elements of the project that were constructed differently than depicted in the BA or this opinion.
  - 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**

As 50 CFR 402.16 states, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and if: (1) The amount or extent of incidental taking specified in the ITS is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect on the listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the 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 the 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:

- Increased turbidity from pile driving activities.
- Potential contamination from the construction equipment during work.

NMFS determined that measures included in the BA are sufficient to avoid, minimize, mitigate, or otherwise offsets 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(1)).

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 the NOAA Institutional Repository at 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. Assistant Regional Administrator Interior Columbia Basin Office

cc: David Moore, U.S. Army Corps of Engineers

#### REFERENCES

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