



**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-2024-01917

August 29, 2024

Michael S. Erickson  
Chief, Environmental Compliance Section  
Walla Walla District  
U.S. Army Corps of Engineers  
201 North 3<sup>rd</sup> Avenue  
Walla Walla, WA 99362-1876

Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson–Stevens  
Fishery Conservation and Management Act Essential Fish Habitat Response for the  
Yakima River Delta Ecosystem Restoration Project

Dear Mr. Erickson:

This letter responds to your August 6, 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 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, related initiation package, and subsequent information provided by the Corps. 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. In our biological opinion below, we indicate what parts of your document we have incorporated by reference and where that information is being incorporated. In summary, we adopt by reference the following sections of the BA (Corps 2024): Section 1.2 Project Action Area; Section 1.3 Proposed Action (including the Conservation Measures listed in the Summary on pp. iv–v); Section 2 Listed Species; Section 3 Environmental Baseline, Section 4.1 Effects of Listed Species; Section 4.2 Effects on Critical Habitat; Section 4.3 Cumulative Effects; Section 4.4 Impact Minimization Measures; and Section 5 Magnuson–Stevens Act – Essential Fish Habitat.

The Corps requested initiation of consultation on August 6, 2024, via letter and included an attached Biological Assessment (BA). The NMFS provided comments on the BA to the Corps on August 9. The Corps provided an updated BA on August 16 and a sediment analysis on August 20, 2024. We received sufficient information to initiate consultation on August 16, 2024.

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 ESA (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 1.3 of the BA, the Corps proposes to remove the 560-foot-long Bateman Island causeway to restore ecosystem structure and processes in the Yakima River Delta in central Washington State. The causeway impairs fish passage between the Yakima and Columbia Rivers, impairs water quality in the delta, and increases predation on salmonids by non-native fish. The causeway will be excavated to reconnect the south channel of the Yakima River to the Columbia River. Work will begin in December and continue over 13 weeks in the winter to reduce short-term impacts to water quality. The Yakama Nation and/or Washington Department of Fish and Wildlife will be local co-sponsors of the project.

### **BIOLOGICAL OPINION**

We examined the status of each species that would be adversely affected by the proposed action to inform the description of the species' "reproduction, numbers, or distribution" as described in 50 CFR 402.02. 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. The status of the species and critical habitat is adopted here from Section 2 of the BA, and supplemented with the most updated status of the species summary information found at: <https://www.fisheries.noaa.gov/west-coast/consultations/esa-section-7-consultations-west-coast#columbia-river-middle-and-upper>. We believe the proposed action is likely to adversely effect Upper Columbia River (UCR) steelhead, UCR spring-run Chinook salmon, and Middle Columbia River (MCR) steelhead.

Finally, we examined the likely effects on any listed species and critical habitats that your agency made "not likely to adversely affect" determinations for. Our conclusions regarding the effects of the action on Snake River (SR) Sockeye, SR spring/summer-run Chinook salmon, SR fall-run Chinook salmon, SR Basin steelhead, and their critical habitats are presented below under the heading: NLAA determinations.

"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 is described in Section 1.2 of the BA. The action area is the Yakima River from the WA-240 bridge downstream to the mouth and the Columbia River from the I-182 bridge downstream to the confluence of the Columbia and Walla Walla Rivers.

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). Section 3 of the BA describes the environmental baseline and is adopted here.

Every individual UCR steelhead and UCR spring-run Chinook salmon that survives to the smolting life stage uses the action area. Every individual from the following populations of MCR steelhead that survives to the smolting life stage uses the action area: Upper Yakima, Naches, Satus, and Toppenish. Adequate function of the action area is important for survival and recovery of all of these species because many or all of the component populations of each ESU and DPS are dependent on survival through the action area. In addition, all components of the freshwater migration corridors and freshwater rearing sites physical and biological features (PBFs) are of high importance to the conservation of critical habitat in the action area.

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.

The Corps proposes to remove the Bateman Island causeway. The temporary and long-term effects of this proposed action are:

- Temporary increase in suspended sediment during construction that is likely to injure juvenile salmon and steelhead
- Crushing or other trauma to juvenile salmon and steelhead from excavation and fill activities in the construction area
- Minor changes to shading and habitat complexity from removing riparian vegetation on the causeway and island
- Predation risk along newly stabilized banks upon completion of the project and into the foreseeable future
- Restoration of more natural flow and sediment regimes, including suspension of sediments in the delta and settling in the Columbia River during high flow events for several years after construction
- Reduced predation across at least 400 acres of delta upon completion of the project and into the foreseeable future
- Improved quality of rearing habitat across at least 400 acres of delta upon completion of the project and into the foreseeable future
- Improved passage for adults and juveniles between the Columbia and Yakima Rivers upon completion of the project and into the foreseeable future

Individuals from all populations of UCR steelhead and UCR spring-run Chinook salmon and the Upper Yakima, Naches, Satus, and Toppenish populations of MCR steelhead will be meaningfully affected by the proposed action. The effects of construction will be temporary and will not impact more than a small number of individuals of one cohort of any population. A small number of individuals of each population will be killed in future years by a new predation

opportunity that will be created by stabilizing shoreline habitat in the action area with riprap or similar materials. Ultimately, the long-term changes to flow routing will have a beneficial effect on the abundance and productivity of the affected populations by improving habitat structure and temperature, and decreasing predator populations, across at least 400 acres of the Yakima River Delta. These changes will increase smolt survival through the action area, reduce delays to adult migration, and improve rearing habitat quality. Additionally, the action will increase opportunities for expression of more life history diversity for MCR steelhead by allowing earlier adult migration into the Yakima river, which has been increasingly limited by high temperatures in the delta.

The freshwater rearing sites PBF of critical habitat will be temporarily adversely affected during construction because the critical habitat within the construction area will be inhospitable. We do not expect adverse effects to the freshwater migration corridor PBF. The action will meaningfully improve the conservation value of critical habitat with respect to the freshwater rearing sites and freshwater migration corridors PBFs via long-term changes to flow and sediment routing. These changes will have a beneficial effect on both PBFs by improving habitat structure and temperature, and decreasing predator populations, across at least 400 acres of the delta, resulting in increasing the ability of the critical habitat to better support both rearing and migration into the foreseeable future.

“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). 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. Section 4.3 of the BA is adopted here and describes climate change and “daily stressors” as causing cumulative effects in the action area. NMFS’ understanding of “daily stressors” in this context is minor ongoing effects of boating and other recreation that have minor adverse effects. Cumulative effects of climate change in the action area are likely to be adverse and consequential because the delta area is subject to high water temperatures that increasingly impair migration of MCR steelhead between the Columbia and Yakima Rivers, and contribute to predation on juvenile UCR and MCR steelhead and UCR spring-run Chinook salmon. The primary purpose of the proposed action is to restore natural flow in the delta in order to lower temperatures and attenuate cumulative effects of climate change.

The Integration and Synthesis section is the final step in our assessment of the risk posed to species and critical habitat as a result of implementing the proposed action. In this section, we add the effects of the action to the environmental baseline and the cumulative effects, taking into account the status of the species and critical habitat, to formulate the agency’s biological opinion as to whether the proposed action is likely to: (1) Reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing its numbers, reproduction, or distribution; or (2) appreciably diminish the value of designated or proposed critical habitat as a whole for the conservation of the species.

The environmental baseline is highly degraded, primarily as a result of operation of the Columbia River hydropower system that has transformed the action area from a free-flowing river into a reservoir with warm, slow-moving water and an abundance of native and non-native predators of juvenile salmonids. The Yakima River Delta is further impaired by operation of the

Yakima Irrigation Project that alters Yakima River flows and contributes to poor water quality, and by the Bateman Island causeway that blocks flow south of the island, increases temperatures and sediment deposition, impairs migration, and increases predation on juveniles.

The status of UCR steelhead, UCR spring-run Chinook salmon, and MCR steelhead is generally poor relative to recovery needs. Within the action area, abundance and productivity have been reduced by a combination of high smolt mortality rates and pre-spawn mortality that is likely higher than historical levels. In addition, life history diversity for adult MCR steelhead has been reduced by high temperatures in the Yakima River Delta that prevent them from migrating up the Yakima during much of July and August, squeezing the migration window into a narrower period such that expression of migration timing diversity is limited.

Critical habitat, particularly the freshwater migration corridors PBF, in the action area is important for recovery because all populations of UCR steelhead and UCR spring-run Chinook salmon, and four populations of MCR steelhead, must migrate through the action area to complete their life cycle. The conservation value of critical habitat is degraded as described above by the Columbia River hydropower system, Yakima Irrigation Project, and the Bateman Island causeway.

The proposed action will cause injury and perhaps death to a few juveniles that are rearing in the construction area when work commences in December. Specifically, fish trapped within the silt curtain containment system will be subject to high suspended sediment concentrations for up to 13 weeks, and have a chance of being directly crushed by excavation and fill activities. A small number of juveniles from a single cohort of each UCR steelhead and UCR spring-run Chinook salmon population and a small number of juveniles from the Upper Yakima, Satus, Naches, and Toppenish populations of MCR steelhead will be affected. In the long term, a small number of juveniles from these same populations may be killed annually by predacious fish that use the proposed stabilized shoreline to ambush juvenile salmonids.

The proposed action will also result in redistributing sediments stored in the delta over several years. Removal of the causeway will result in deepening of some parts of the delta via erosion and deposition of the sediments in the Columbia River as the delta adjusts to partially restored ecosystem function; full restoration of ecosystem function is not possible because the Columbia River is impounded by McNary Dam. Most of the sediments will be transported during high flow events and contribute to a small increase in suspended sediment load relative to the Columbia River sediment load. Deposition will be distributed over a broad area and is not expected to meaningfully change the character or function of downstream habitats. The proposed action will also have beneficial effects across over 400 acres by restoring flow through the southern channel of the delta, reducing high summer temperatures, reducing predation, and increasing passage conditions between the Yakima and Columbia Rivers for adults and juveniles.

Cumulative effects are largely a result of ongoing climate change that increases water temperature, which can limit migration periods, increase pre-spawn mortality, increase predation risk, and alter foodwebs. The proposed action will attenuate effects of climate change within the Yakima River Delta by reducing the temperature anomaly caused by water backing up from the causeway into the delta.

A small number of juveniles from each affected population are expected to be injured or killed during construction. Given typical smolt-to-adult return rates for the relevant populations, construction impacts are expected to reduce the population by much less than one adult return equivalent. Therefore, construction effects are likely to result in a one-time reduction of adult returns of no more than one fish per population; the number is likely to be zero for UCR steelhead and UCR spring-run Chinook salmon populations because even fewer juveniles will be injured or killed due to very low density in the action area. Therefore, although it is important that each population persist or increase to maintained, viable, or highly viable levels to meet recovery objectives, the short-term negative effects of the proposed action will not meaningfully affect the survival or recovery of any affected population.

The proposed action will have beneficial effects across the delta and improve over 400 acres of habitat such that the abundance and productivity of each population should benefit via reduced predation risk and improved rearing habitat. A small number of juveniles will likely be killed annually via predation at the localized shoreline stabilization structures but this negative effect will be outweighed by decreased predation across a much larger area. Benefits will be even greater for the Yakima basin populations of MCR steelhead because reducing the thermal migration barrier in the delta will allow a wider migration window than currently exists, allowing expression of more diverse life histories for adults.

The conservation value of critical habitat will be temporarily reduced during construction because the freshwater rearing sites PBF will be significantly impaired within the silt curtains. In the long-term, the conservation value of critical habitat across the delta area will improve with respect to the freshwater rearing sites and freshwater migration corridors PBFs.

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, and UCR spring-run Chinook salmon or destroy or adversely modify its designated critical habitat.

#### **INCIDENTAL TAKE STATEMENT**

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined by regulation to include significant habitat modification or degradation that actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102). "Harass" is further defined by 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 ITS.

### **Amount or Extent of Take**

In the biological opinion, NMFS determined that incidental take is reasonably certain to occur as follows:

#### *Construction Effects*

The Corps will install silt curtains to contain suspended sediments in a 78,000 square-foot containment area extending upstream and downstream from the causeway before commencing in-water excavation and fill activities. Those juvenile fish that do not flee the containment area during deployment of the silt curtains will be trapped within the containment area for the 13-week duration of construction. Those juveniles will be subject to incidental take via two mechanisms: increased suspended sediment and mechanical trauma. The magnitude and duration of increased suspended sediment concentration within the containment area is expected to injure most or all juvenile fish. Those same fish will additionally be at risk of injury or death via mechanical trauma during excavation and fill if they are contacted by moving excavator buckets, or crushed by riprap or other fill dumped along the shoreline as bank stabilization.

#### *Predation at Stabilized Shoreline*

Construction of riprap or cribwall bank stabilization along 208 linear feet of shoreline (combining the island and mainland shoreline) will create simplified bank habitat that facilitates predation on juvenile fish during rearing and migration. A small number of juvenile fish are expected to be killed annually as a result of creating predation opportunity at this location.

It is difficult if not impossible to predict and/or observe the number of fish harmed, injured, and/or killed from construction effects and predation at the stabilized shoreline. Therefore, NMFS uses surrogate measures for incidental take associated with these take pathways. The surrogates are causally linked to the take pathways and are readily measured indicators of the potential for and intensity of adverse impacts to ESA-listed species. The amount and extent of take will be exceeded if any of the following surrogates are exceeded:

- 78,000 square feet of aquatic habitat will be enclosed within the containment area bounded by the silt curtains.
- 208 linear feet of shoreline will be armored with riprap, cribwall, or other measures for the foreseeable future.

Although the surrogates are largely coextensive with the proposed action, they nevertheless function as effective reinitiation triggers because they are readily observable. If at any time the level or method of take exempted from take prohibitions and quantified in this opinion is exceeded, reinitiation of consultation will 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” refer to those actions the Director considers necessary or appropriate to minimize the impact of the incidental take on the species (50 CFR 402.02).

The Corps shall:

1. Minimize incidental take resulting from construction effects.
2. Minimize incidental take resulting from shoreline stabilization.
3. Minimize incidental take by developing and implementing a monitoring and reporting program to confirm that the terms and conditions in this ITS are effective in avoiding and minimizing incidental take from proposed activities and that the amount and extent of take is not exceeded.

NMFS believes that full application of project minimization measures included as part of the proposed action, together with 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. Minimize the number of fish affected within the containment area by locating silt curtains as close to the construction area as feasible without compromising the function of the curtains.
2. The following terms and conditions implement RPM 2:
  - a. Share design alternatives for shoreline stabilization with NMFS and other relevant fisheries agencies to seek specific design recommendations to reduce impacts. This should occur soon after the Corps commences the design process.



3. The following terms and conditions implement RPM 3:
  - a. Within 90 days after construction is completed, the Corps shall provide NMFS a post-project monitoring report including, at a minimum, the following information:
    - i. Project name and NMFS Tracking Number: Yakima River Delta Ecosystem Restoration Project, WCRO-2024-01917.
    - ii. Total square footage of aquatic habitat enclosed within silt curtains.
    - iii. Total length of shoreline stabilization constructed.
  - b. The monitoring report should be sent to: [crbo.consultationrequest.wcr@noaa.gov](mailto:crbo.consultationrequest.wcr@noaa.gov).

### **Conservation Recommendations**

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Specifically, conservation recommendations are suggestions regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information (50 CFR 402.02).

The proposed action is expected to meaningfully improve the conservation value of habitat in the delta by reducing temperatures and otherwise improving conditions. The project is urgent, as demonstrated by the 2024 fish kill in the action area. Therefore, we recommend carrying out the action as expeditiously as possible.

### **Reinitiation of Consultation**

Under 50 CFR 402.16(a): “Reinitiation of consultation is required and shall be requested by the Federal agency where discretionary Federal 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.”

### **NLAA DETERMINATIONS**

We reviewed the Corps’ consultation request document and related materials. Based on our knowledge, expertise, and your action agency’s materials, we concur with the action agency’s conclusions that the proposed action is not likely to adversely affect the following NMFS ESA-listed species and/or designated critical habitat: SR Sockeye, SR spring/summer-run Chinook salmon, SR fall-run Chinook salmon, SR Basin steelhead, and their critical habitats. The only effects that will manifest in that portion of the action area occupied by these species or their CH (approximately 10 miles downstream of the construction area) are slightly changed turbidity and sedimentation patterns in the Columbia River, which will be insignificant.

## ESSENTIAL FISH HABITAT RESPONSE

Thank you also for your request for essential fish habitat (EFH) consultation. NMFS reviewed the proposed action for potential effects on EFH pursuant to section 305(b) of the Magnuson–Stevens Fishery Conservation and Management Act (MSA), implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation. We have concluded that the action would adversely affect EFH designated under the Pacific Salmon Fisheries Management Plan. No conservation recommendations are provided.

### MAGNUSON–STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

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 600.905(b)).

The proposed project occurs within EFH for various Federally managed fish species within the Pacific Salmon Fishery Management Plan.

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

1. Temporarily degraded water quality during construction activities that increase suspended sediment concentration.
2. Constructing shoreline stabilization that provides predation opportunities for non-native fish.

The action as a whole will greatly improve EFH in the long term. NMFS has no additional EFH conservation recommendations to provide at this time. This concludes the EFH consultation.


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 the NOAA Institutional Repository: <https://repository.library.noaa.gov>. A complete record of this consultation is on file at NMFS' Columbia Basin Branch in Ellensburg, Washington.

Please direct questions regarding this letter to Sean Gross, Columbia Basin Branch, [sean.gross@noaa.gov](mailto:sean.gross@noaa.gov), (509) 856-5442.

Sincerely,

A handwritten signature in blue ink that reads "Nancy L. Munn". The signature is written in a cursive style with a large initial "N".

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

cc: David Dayan, U.S. Fish and Wildlife Service  
Katherine Herzog, U.S. Army Corps of Engineers

## REFERENCES

Corps. (U.S. Army Corps of Engineers). 2024. Biological Assessment Yakima River Delta Ecosystem Restoration. Richland, Washington. 81 pp.