



**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

**Refer to NMFS No: WCRO-2022-01042**

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July 29, 2022

Jacalen Printz  
Regulatory Branch Chief  
U.S. Army Corps of Engineers, Seattle District  
4735 East Marginal Way South, Bldg 1202  
Seattle, WA 98134-2388

Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Van Lith Mooring Buoy, Chelan County (HUC 170200100405).

Dear Ms. Printz:

This letter responds to your May 2, 2022 request for initiation of consultation with 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.

For purposes of this consultation, we considered whether the substantive analysis and its conclusions regarding the effects of the proposed actions articulated in the biological opinion and its incidental take statement would be any different under the 50 CFR part 402 regulations as they existed prior to the 2019 Rule vacated by the order of the United States District Court for the Northern District of California on July 5, 2022. We have determined that our analysis and conclusions would not be any different.

We reviewed the Van Lith Mooring Buoy 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 Van Lith Mooring Buoy Biological Assessment (BA): Section 2.2.1 (Project Description and Construction Description); Section 2.2.2 (Avoidance and Minimizing Measures); Section 3.2, 3.3 (Action Area), Section 3.4 (Environmental Baseline); Section 4.1, 4.2 (Status/Presence in the Action Area); and Section 5 (Effects Analysis and Cumulative Effects).

The U.S. Army Corps of Engineers (Corps) submitted a consultation initiation package, including a BA, to NMFS on May 2, 2022. After our review, we requested additional information by email on May 23 and May 31, 2022. The information requested in the emails was



the size of the applicants' boat and where the pontoon boat was going to be launched. The Corps responded promptly and we initiated consultation on June 2, 2022.

As described in the BA, a private land owner (applicant) proposes installing a mooring buoy in the Columbia River below Malaga, Washington. The project includes installing an 18-inch mooring buoy, stainless-steel chain with a middle float, and an anchor. The landowner will use a pontoon boat and a diver to install the anchor on the river bottom. The type of anchor will be selected based on substrate conditions. If substrate conditions prevent use of an in-ground anchor, a premade 4 foot by 4 foot by 0.8 foot cement block will be installed on the river bottom using a winch. The anchor will be installed 50 feet waterward from the ordinary high water mark on the right bank of the Columbia River at a depth of 20 feet. The project will occur during the in-water work window, July 16 through February 28. Project impact avoidance and minimization measures will be implemented (BA Section 2.2.2). The project is expected to take one day to complete with the project planned for 2022.

We examined the status of the Upper Columbia River (UCR) spring-run Chinook salmon evolutionary significant unit (ESU) and the UCR steelhead distinct population segment (DPS), 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 discussed the function of the physical and biological features essential to the conservation of the species that create the conservation value of that habitat. Section 4 (Description of Species and Habitat Use) and Section 6 (Critical Habitat Evaluation) of the BA describe the status of each species and their critical habitat, and are adopted here. Major risk factors that limit UCR spring-run Chinook salmon and UCR steelhead 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 applicant describes the action area in Sections 3.2 and 3.3 of the BA as being 425 square feet, 125 square feet for the shade created by the buoy and approximately 300 square feet for the barge used to install the buoy. NMFS also considers the applicant's boat which will be moored to the buoy, and the shade it creates (2,400 square feet), to be part of the action area. Therefore, NMFS considers the action area to encompass 2,825 square feet.

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 as described in Section 3.4 of the BA is adopted here.

The action area supports rearing and migration of the Wenatchee River, Entiat River, and Methow River populations of UCR spring-run Chinook salmon. The action area also supports rearing and migration of the Wenatchee River, Entiat River, Methow River, and Okanogan River steelhead, which comprise the North Cascade Major Population Group (MPG) of UCR steelhead.

Important physical and biological features (PBF) in the action area include water quantity and quality, forage, natural cover, floodplain connectivity, and free of artificial obstruction and excess predation.

Under the ESA, “effects of the action” means the direct and indirect effects 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.

An assessment of the proposed action’s effects is provided in Section 5 and 6 of the BA, and is adopted here. The identified project effect is decreased productivity in 125 square feet from shade created by the buoy. NMFS has evaluated Sections 5 and 6 and, after our independent science-based evaluation, determined these sections need the additional information included in the following paragraphs regarding project effects.

NMFS expects increased shade from the buoy (125 square feet) and moored boat (2,400 square feet) across 2,525 square feet. NMFS expects the increased shade from the buoy and boat, and the presence of the cement anchor, will increase the risk of predation. Shade provides a visual advantage for predators to see approaching prey (Helfman 1981) and predators may use the shade created by the buoy and moored boat to hide and ambush juvenile salmonids. The cement anchor will also provide hiding habitat for predatory fish, allowing them to ambush juveniles while they are foraging and migrating downstream. This will increase the risk of predation for juvenile UCR spring-run Chinook salmon and UCR steelhead. Therefore, we expect a few juvenile UCR spring-run Chinook salmon and UCR steelhead will be killed annually by predators using cover provided by the buoy, boat, and cement anchor. The killed juveniles will be spread out among the three UCR spring-run Chinook salmon and four UCR steelhead populations that migrate through the action area. We expect adults using the action area are too big for predatory fish hiding in the shadows, and will not be preyed upon.

The increased shade will also alter downstream migration behavior where juvenile fish move into deeper water to avoid the shaded area, increasing their risk of predation (Kemp et al. 2005). Therefore, we expect that increased shade from the buoy and moored boat will alter juvenile migration behavior and increase risk of predation of a few juvenile UCR Chinook salmon and UCR steelhead each year for the life of the buoy.

The proposed action is also expected to alter benthic invertebrate production by placement of the cement anchor (16 square feet) and decrease plant growth across the shaded area (2,525 square feet). We do not expect the loss of forage from the proposed action to impact growth or survival of UCR spring-run Chinook salmon or UCR steelhead. We expect invertebrate drift will be maintained and there is sufficient forage in adjacent habitat in the Columbia River.

The critical habitat forage PBF will be affected long term by the project. The proposed action will negatively affect the availability of benthic invertebrates by altering the stream substrate across 16 square feet of streambed and alter forage across 2,525 square feet of shaded area. Given the small area of permanent loss, the amount of available adjacent foraging habitat, and

the supply of forage from invertebrate drift, NMFS does not expect the project will change the conservation value of forage at the scale of the action area.

“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. Cumulative effects, which are likely to be minimal, are discussed in Section 5.5 of the BA, and incorporated by reference here. Cumulative effects may cause a slight degradation of habitat conditions in the action area over the coming decades.

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.

Each year for the life of the buoy, the proposed action is expected to result in changed migratory behavior and an increased risk of predation for a few juvenile UCR spring-run Chinook salmon from the Methow River, Entiat River, and Wenatchee River populations; and a few juvenile UCR steelhead from the Methow River, Okanogan River, Entiat River, and Wenatchee River populations due to the buoy, moored boat, and cement anchor creating shade and cover for predatory fish.

The status of UCR spring-run Chinook salmon and UCR steelhead is generally poor, and both species are at high risk (Ford 2022). All three UCR spring-run Chinook salmon populations are well below the abundance and productivity viability thresholds called for in the Upper Columbia Salmon Recovery Plan, and at high risk for diversity. Average natural-origin returns remain well below minimum threshold levels (Table 1).

Table 1: Five-year natural spawner counts in the North Cascades major population group of the Upper Columbia River spring-run Chinook salmon Evolutionary Significant Unit. The percent change between the two most recent 5-year periods is shown on the far right.

Population	Natural Spawner Goal	1990–94	1995–99	2000–04	2005–09	2010–14	2015–19	Percent Change
Wenatchee River	2,000	380	99	668	379	874	443	-49
Entiat River	500	153	37	148	129	256	137	-46
Methow River	2,000	726	44	292	379	448	232	-48

All four steelhead populations in the Northern Cascades MPG are rated at high risk for abundance, productivity, and diversity, and below natural-origin spawner goals (Table 2).

Table 2: Five-year natural spawner counts in the North Cascades major population group of the Upper Columbia River summer steelhead Distinct Population Segment. Percent change between the two most recent 5-year periods is shown on the far right.

Population	Natural Spawner Goal	1990–94	1995–99	2000–04	2005–09	2010–14	2015–19	Percent Change
Wenatchee River	1,000	527	264	774	684	1,497	554	-63
Entiat River	500	68	38	110	102	203	92	-55
Methow River	1,000	210	97	435	523	829	595	-28
Okanogan River	500	65	25	124	184	404	223	-45

The proposed action will result in the long-term loss of a few juvenile UCR spring-run Chinook salmon and UCR steelhead each year. These losses will be spread out among the populations comprising each ESU and DPS. We do not expect the loss of a few juveniles from any of these populations will decrease adult returns. Therefore, the loss of a few juveniles annually will not meaningfully affect the abundance or productivity of the three UCR spring-run Chinook salmon populations or the four UCR steelhead DPS populations present in the action area, nor will it affect the diversity or spatial structure of any of these populations. Therefore, the likelihood of persistence and recovery potential of the UCR spring-run Chinook salmon will not be affected because none of the component populations will meaningfully be affected. Similarly, the likelihood of persistence and recovery potential of the North Cascade MPG will not be affected because none of the component populations will be meaningfully affected. Therefore, the likelihood of persistence and recovery potential of UCR steelhead as a whole will not be affected.

Shade produced by the buoy and moored boat and presence of the cement anchor will reduce the function of the forage PBF in a very small area (2,525 square feet of shade and 16 square feet of cement anchor) of the Columbia River for the life of the project. This effect will not meaningfully reduce the conservation value of critical habitat in the action area due to its very small extent.

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 or UCR steelhead, or their critical habitat.

## INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. “Harm” is further defined by regulation to include significant habitat modification or degradation that actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102). “Harass” is further defined by interim guidance as to “create the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering.” “Incidental take” is defined by regulation as takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant (50 CFR 402.02). Section 7(b)(4) and section 7(o)(2) provide that taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA if that action is performed in compliance with the terms and conditions of this incidental take statement (ITS).

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

In the opinion, NMFS determined that incidental take of juvenile UCR spring-run Chinook salmon and UCR steelhead is reasonably certain to occur and will include harm and harassment from: (1) increased predation of juveniles from increased shade and instream structure that provides ambush opportunities for predators of salmonids, and (2) behavioral/migratory changes which result in moving into deeper water to avoid shade, increasing risk of predation.

Estimating the specific number of animals injured or killed is not possible because of the range of responses that individual fish will have, the numbers of fish present at any time is highly variable, and it is not possible to observe all fish being affected. In circumstances where NMFS cannot numerically predict the amount of take, we estimate the extent of take by describing the extent of habitat modified by the proposed action (51 FR 19926). The extent of modified habitat represents an observable metric of the extent of take, which if exceeded, would trigger consultation. The total extent of modified habitat is 2,541 square feet. This is equivalent to 2,525 square feet of increased shade from the buoy and moored boat and 16 square feet of substrate covered by the cement anchor. NMFS will consider the extent of take exceeded if the proposed action results in more than 2,525 square feet of shade created in the action area from the buoy and boat, and if the cement anchor covers more than 16 square feet of substrate.

### **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 of UCR spring-run Chinook salmon or UCR steelhead, or destruction or adverse modification of their critical habitat.

## Reasonable and Prudent Measures

“Reasonable and prudent measures” 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:

- Track, monitor, and report on the project to ensure that the project is implemented as proposed, and the amount and 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.

The following terms and conditions implement RPM1:

1. Submit a completion of project report to NMFS by January 31 the year after the project is completed. The completion report shall include, at a minimum, the following:
  - a. Project identification:
    - i. Project name: Van Lith Mooring Buoy (WCRO-2022-01042).
    - ii. U.S. Army Corps of Engineers contact person.
  - b. Construction details:
    - i. Description of action, including starting and ending dates for work completed, with in-water work period specified.
    - ii. A description of any elements of the project that were constructed differently than depicted in the BA or this opinion.
    - iii. Location of buoy and type and size of anchor installed.
2. If the amount of take is exceeded, stop project activities and contact NMFS immediately.
3. All reports should be delivered to: [crbo.consultationrequest.wcr@noaa.gov](mailto: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 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)]. The aquatic zone of impact includes habitats that have been designated as EFH for coho and Chinook salmon.

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

- There will be 2,525 square feet of habitat altered by increased shade from the proposed action, affecting forage production and availability to juvenile salmon for the lifetime of the buoy and moored boat.



- 16 square feet of stream substrate will be covered by a cement anchor, which will eliminate forage production and availability to juvenile salmon for the lifetime of the anchor.

NMFS determined that the conservation measures included in the BA 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(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 NOAA Institutional Repository at <https://repository.library.noaa.gov/welcome>. A complete record of this consultation is on file at NMFS' Ellensburg, Columbia Basin Branch.

Please direct questions regarding this letter to Steven Hughes, Columbia Basin Branch, at (509) 312-2043 or [steven.hughes@noaa.gov](mailto:steven.hughes@noaa.gov).

Sincerely,



Michael P. Tehan  
Assistant Regional Administrator  
Interior Columbia Basin Office

cc: Jenae Churchill – USACE

**REFERENCES**

- Ford, M. J. 2022. Biological Viability Assessment Update for Pacific Salmon and Steelhead Listed Under the Endangered Species Act: Pacific Northwest. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-171.
- Helfman, G. S. 1981. The advantage to fishes of hovering in shade. *Copeia*. 1981(2):392–400.
- Kemp, P. S., M. H. Gessel, and J. G. Williams. 2005. Seaward migration subyearling chinook salmon avoid overhead cover. *Journal of Fish Biology*. 67(5):1381–1391.