UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
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PORTLAND, OR 97232-1274

Refer to NMFS No:
WCRO-2020-00438

May 4, 2021

Kelly Lawrence
Forest Supervisor
Olympic National Forest
1835 Black Lake Boulevard SW
Olympia, Washington 98512

Re: Endangered Species Act Section 7 Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Forest Service Road 24/Cushman Road Reconstruction Project, Mason County, Washington

Dear Ms. Lawrence:

This letter is in response to your February 28, 2020, request for Endangered Species Act (ESA) consultation with the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the ESA on the effects of Olympic National Forest's (ONF) proposed reconstruction of approximately four miles of Forest Service Road (FSR) 24 (also known as North Lake Cushman Road). 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 ONF's consultation request, and related initiation package, including a Biological Assessment (BA) dated February 24, 2020. Where relevant, we adopted the information and analyses provided in the BA, but only after our independent, science-based evaluation confirmed they meet our regulatory and scientific standards. We adopt by reference here the following sections of the BA:

- Project Description and Action Area;
- Environmental Baseline;
- Effects of the Proposed Action;
- ESA Effects Determination;
- Essential Fish Habitat Effects Determination; and
- Appendix A and Appendix B for addition detail on baseline conditions and details of the proposed action.

We also adopt by reference additional clarifying information for the description of the proposed action by ONF provided via email on July 30, 2020 and August 3, 2020. All consultation documents are available on file at the NMFS Oregon Washington Coastal Office in Lacey, Washington. NMFS determined that the BA and this additional information provided all necessary information to complete ESA Section 7 consultation and we initiated formal consultation for the proposed action on August 3, 2020.

"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 project site is located along the northern shore of Lake Cushman in Mason County, Washington (see BA Figures 1 and 2). The action area is determined by the greatest extent of effects stemming from the project. In this case, aquatic effects of the project would be in the areas at and adjacent to: 1) the proposed in-water work areas (below ordinary high water) of proposed bank stabilization (riprap revetment) near milepost (MP) 12.1, and 2) proposed in-water work areas for five proposed drain (culvert) improvements/upgrades in perennial streams MPs 11.7, 11.84, 11.86, 14.05 and 14.1) downstream to the stream outlets into Lake Cushman. Drain improvements are also proposed at 6 additional culverts in intermittent streams where water is not expected to be present during construction. If water is present at the time of construction, the action area would include those additional sites, downstream to Lake Cushman. The maximum extent of effects extends from these construction areas (at the bank stabilization area and at culvert sites where water is present) 150 feet out into Lake Cushman to account for the turbidity point of compliance for temporary mixing zones in lakes (WAC 173-201A-200).

Designated critical habitat for Puget Sound (PS) Chinook salmon (designated 9/2/2005; 70 FR 52630) occurs within the action area (BE, pages 13-14). We concur with ONF's determination that the proposed action is 'likely to adversely affect" (LAA) PS Chinook salmon critical habitat. Likely adverse effects of the proposed action on critical habitat result from the permanent habitat displacement by the footprint of bank stabilization (riprap revetment) below the ordinary high water mark (OHWM; 738 feet), reduced shallow water habitat waterward of the riprap revetment, and reduced riparian habitat quality (see description of effects below). Contrary to the ONF's determination that the proposed action is 'not likely to adversely affect' PS Chinook salmon (designated threatened on 6/28/2005; 70 FR 37160), we anticipate that the anticipated habitat effects would be LAA PS Chinook salmon occurring in the action area. Additionally, we anticipate that worksite isolation and removal of fish from in-water work areas in the nearshore of Lake Cushman for proposed construction of the riprap revetment would be LAA PS Chinook salmon.

ONF also made a determination of NLAA for PS steelhead (designated as threatened 5/11/2007; 72 FR 26722). Because of the expected effects of the proposed action on nearshore habitat availability and function, as described above, we expect that the proposed action would be LAA PS steelhead. PS steelhead do not currently occur in Lake Cushman, but are expected to occur in Lake Cushman and the action area in the near future, and during the life of the proposed permanent structures (50 years), based on fish supplementation and fish passage provisions for the Cushman Project (see Settlement Agreement for the Cushman Project, January 12, 2009[1]; and the NMFS' 2010 Supplemental Biological Opinion for the Settlement Agreement[2]). Due to the requirements of these agreements, the future presence of PS steelhead in Lake Cushman is reasonably certain to occur. There is no designated critical habitat for PS steelhead in the action area.

[1] Available at: https://www.mytpu.org/wp-content/uploads/cushman-dam-settlement-2009.pdf. Accessed September 13, 2020.
[2] NMFS Supplemental Biological Opinion and Essential Fish Habitat Consultation for the Cushman Hydroelectric Project, FERC Project Number 460, March 31, 2010.

We used information in the BA (pages 10-17) to examine the status of PS Chinook salmon and PS steelhead, and the condition of habitat for both species throughout the action area. This includes information on the function of the physical or biological features (PBFs) essential to the conservation of PS Chinook salmon that create the conservation value of their designated critical habitat. We also considered information in the recovery plans for PS Chinook salmon (Shared Strategy for PS 2007[3]) and PS steelhead (NMFS 2019[4]) describing the status, presence, abundance, density or periodic occurrence of listed species, and the condition and location of the species' habitat, including critical habitat.

We used information in BA to examine the "environmental baseline" (pages 19-22) and "cumulative effects" (pages 25-26), including the past and present impacts of Federal, State, or private actions, and other human activities in the action area, the anticipated impacts of proposed Federal actions 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 (50 CFR 402.02). 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 also part of the environmental baseline.

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 'Effects of the Proposed Action' and 'ESA Effects Determination' sections of the of the BA (pages 22-25 and 26-27, respectively) provide a detailed discussion and comprehensive assessment of the effects of the proposed action, and are adopted here pursuant to 50 CFR 402.14(h)(3)(i). NMFS evaluated these sections of the BA and after our independent, science-based evaluation, determined that it meets our regulatory and scientific standards. PS Chinook salmon are likely to be exposed to, and respond to, short-term construction effects, including elevated levels of turbidity during in-water construction for bank stabilization. PS steelhead would not be present during construction as Tacoma Power has not yet begun passing them past the dams. PS Chinook salmon and PS steelhead are expected to be exposed to, and respond to, long-term effects of the proposed permanent structures, including reduced large woody material, habitat displacement and reduced riparian vegetation, as discussed on pages 24 and 25 of the BA. PS Chinook salmon present in the action area at the time of construction may also be harmed by handling and dewatering of the nearshore during proposed worksite isolation, as described on page 24 and in Appendix A of the BA.

[3] Shared Strategy for Puget Sound. 2007. Puget Sound salmon recovery plan. Volume 1, recovery plan. Shared Strategy for Puget Sound. Seattle.
[4] NMFS. 2019. ESA Recovery Plan for the Puget Sound Steelhead Distinct Population Segment (*Oncorhynchus mykiss*). National Marine Fisheries Service. Seattle, WA.

We expect any elevated turbidity levels resulting from the proposed drain improvements to be minor and brief. As described on page 24 of the BA, pulses of turbidity are expected to occur with dewatering and isolation measures for in-water work at these sites. These pulses are expected to be of short duration and dissipate quickly. Proposed soil erosion and sediment control best management practices (page 8 of BA) would reduce sedimentation into streams. None of the streams with proposed drain upgrades are fish-bearing, and thus any exposure of fish to elevated turbidity levels would occur downstream in the lake. Because we expect any elevated turbidity to be minor, short-term and localized to the creek outlets at the lake, any exposure of fish would be brief, and we do not expect any measureable reduction in habitat quality or conditions harmful to PS Chinook salmon.

Likewise, the installation and removal of a physical barrier to isolate the shoreline stabilization in-water work area may release sediment into Lake Cushman. Any elevated levels of turbidity would be brief and localized, and as stated in the BA (page 24), turbidity would return to background levels almost immediately and an observable increase in turbidity within the main body of the lake is not anticipated. Therefore, we do not anticipate any measurable reduction in habitat quality or conditions harmful to PS Chinook salmon.

Currently, individuals of a landlocked Lake Cushman population of PS Chinook salmon (upstream of Dam Number 1) migrate and rear in the action area, spawning upstream of the lake in the North Fork Skokomish River. The landlocked population is not considered a viable independent population of the PS Chinook salmon evolutionarily significant unit (ESU)[5], and thus they do not contribute to ESU population viability. With upstream and downstream passage provided at the Cushman dams in the future[6] [7], we expect migratory PS Chinook salmon that are part of the ESU, as well as PS steelhead, to migrate and rear in the action area.

Both species have declined due to numerous factors. One factor for decline that these species share is degradation of freshwater and estuarine habitat. Human development in the Pacific Northwest has caused significant negative changes to stream and estuary habitat across the range of these species. The status review update for Pacific salmon and steelhead[8] identified the following limiting factors for the recovery of PS Chinook salmon:

- Degraded floodplain and in-river channel structure;
- Degraded estuarine conditions and loss of estuarine habitat;
- Riparian area degradation and loss of in-river large woody debris;
- Excessive fine-grained sediment in spawning gravel;
- Degraded water quality and temperature;
- Degraded nearshore conditions;

[5] Ruckelshaus, M.H., K.P. Currens, W.H. Graeber, R.R. Fuerstenberg, K. Rawson, N.J. Sands, J.B. Scott. 2006. Independent populations of Chinook salmon in Puget Sound. U.S. Dept. Commerce, NOAA Tech. Memo. NMFS-NWFSC-78, 125 p.
[6] Settle Agreement for the Cushman Project, January 12, 2009. Available at: https://www.mytpu.org/wp-content/uploads/cushman-dam-settlement-2009.pdf. Accessed September 13, 2020.
[7] NMFS Supplemental Biological Opinion and Essential Fish Habitat Consultation for the Cushman Hydroelectric Project, FERC Project Number 460, March 31, 2010.
[8] NWFSC (Northwest Fisheries Science Center). 2015. Status review update for Pacific salmon and steelhead listed under the Endangered Species Act: Pacific Northwest.

- Impaired passage for migrating fish; and
- Altered flow regime.

During the recovery planning process, NMFS identified 10 primary pressures that were associated with the listing decision for PS steelhead and subsequent affirmations of the listing[9]:

- Fish passage barriers at road crossings;
- Dams, including fish passage and flood control;
- Floodplain impairments, including agriculture;
- Residential, commercial, industrial development (including impervious runoff);
- Timber harvest management;
- Water withdrawals and altered flows;
- Ecological and genetic interactions between hatchery and natural-origin fish;
- Harvest pressures (including selective harvest) on natural-origin fish; and
- Juvenile mortality in estuary and marine waters of PS.

As described in the BA (Environmental Baseline and Effects of the Proposed Action sections), the environmental baseline within the North Fork Skokomish River Watershed, including the action area, is degraded by a host of anthropogenic changes. Because of the Cushman Dam Number 1, water levels in the lake can fluctuate up to 21 meters (69 feet), and periodically inundate up to 12 hectares (30 acres) of land surrounding the inlet to the reservoir (Lake Cushman). Additionally, as a result of fluctuating water levels exposing much of the shoreline during winter months, there is little to no aquatic vegetation in the nearshore, and the lakebed of the nearshore is steep and severely scoured. These conditions limit the productivity of the Lake Cushman nearshore.

As described on page 6 of the BA, proposed mitigation would be implemented to reduce effects of the proposed bank stabilization, including:

- Implement best management practices to prevent soil erosion and sediment running outside of the limits of construction;
- Rock will be added at the toe of the revetment to create an irregular edge. This is intended to increase habitat complexity and lessen the impact to fish habitat;
- Plant native vegetation and trees in the vicinity to the RSS site. The planting mitigation area will be 2:1 with respect to the area of riparian area impacted by the RSS, which totals approximately 0.15 acre. Locations would be identified by Forest Service botanist to ensure riparian function and value would benefit substantially from such plantings; and
- Perform work (including installation and removal of workplace isolation elements) during in-water work period July 15 through October 15.

The proposed permanent (estimated life of 50 years) bank stabilization (riprap revetment) would displace approximately 385 square feet of aquatic habitat (below the ordinary high water mark; OHWM).

[9] NMFS. 2019. ESA Recovery Plan for the Puget Sound Steelhead Distinct Population Segment (*Oncorhynchus mykiss*). National Marine Fisheries Service. Seattle, WA.

This results in a small, localized long-term reduction in available nearshore lake habitat for juvenile and adult PS Chinook salmon and steelhead for about half of the year, when water levels are high enough to inundate the project site. The loss/displacement of 385 square feet of benthic habitat would cause a small but permanent (50 years) reduction/ modification to available nearshore habitat for rearing and migration. This would also result in a slight reduction to forage where benthic and aquatic prey organisms are displaced.

The proposed riprap revetment is also expected to result in reduced shallow water habitat along the shoreline (see NMFS 2017[10]; NMFS 2020[11]), which juvenile salmonids use for rearing and migration, particularly juvenile PS Chinook salmon, which are nearshore oriented during their outward migration from natal streams to the Pacific Ocean. We anticipate reduced shallow water along the length of the proposed revetment (110 feet), thereby requiring juvenile salmonids to move through deeper water where they are more susceptible to encountering larger predatory fish. While the footprint of this habitat diminishment is small, due to the revetment's estimated 50-year life many PS Chinook salmon and PS steelhead would be exposed to it.

The riprap revetment would also result in the absence of riparian vegetation along the entire length of the structure (110 feet) for a distance of approximately 25 linear feet up slope from the lake edge (at OHW) to the road edge at the top of the bank. The existing vegetation would be cleared for construction and the proposed bank hardening (riprap) would preclude re-establishment of vegetation. Reduced riparian vegetation would reduce overwater cover for fish in the nearshore. It also reduces the recruitment of large woody debris that provides in-water cover. Although the proposed irregular edge at the base of the riprap revetment would provide some habitat complexity, we anticipate a net loss in cover.

A reduction in riparian vegetation would also result in reduced input of detritus and terrestrial insects, thereby causing a reduction to forage potential for juvenile PS Chinook salmon and steelhead (see Kahler et al. 2000[12]; Tabor et al. 2010[13]). Because the input of woody debris, detritus and terrestrial insects influences primary productivity and forage potential, effects are anticipated in the nearshore area immediately adjacent to the proposed riprap revetment, as well as further out into the lake. The proposed riparian planting plan should improve nearshore habitat quality elsewhere in the lake once it becomes established (typically several years after planting),

[10] NMFS. 2017. Endangered Species Act Section 7(a)(2) Biological Opinion and Letter of Concurrence and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Integrated Restoration and Permitting Program (IRPP) for Lakes Washington and Sammamish. WCR-2016-5278. February 17, 2017.

[11] NMFS. 2020. Endangered Species Act Section 7(a)(2) Biological Opinion and Letter of Concurrence and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Issuance of Permits for 39 Projects under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act for Actions Related to Structures in the Nearshore Environment of Puget Sound. WCRO-2020-01361. November 9, 2020.

[12] Kahler, T., M. Grassley and D. Beauchamp. 2000. A Summary of the Effects of Bulkheads, Piers and Other Artificial Structures and Shorezone Development on ESA-listed Salmonids in Lakes. Prepared for City of Bellevue. Final Report. July 13, 2000.

[13] Tabor, R.A., K.L. Fresh, R.M. Piaskowski, H.A. Gearns and D.B. Hayes. Habitat Use by Juvenile Chinook Salmon in the Nearshore Areas of Lake Washington: Effects of Depth, Lakeshore Development, Substrate, and Vegetation. *North American Journal of Fisheries Management*, 31(4), pp. 700-713.

providing forage and cover opportunities for PS Chinook salmon and steelhead rearing and migrating in the lake.

We anticipate reductions to forage and cover to be localized to the areas adjacent to the proposed riprap revetment. When PS Chinook salmon and PS steelhead are exposed over the life of the proposed riprap revetment to these reductions in available habitat and habitat quality, it could harm a small number of juveniles rearing or migrating through the action area. This harm would occur in the form of predation (injury or death) and reduced feeding success (forage availability).

The entire action area is designated as critical habitat for PS Chinook salmon. As described in Section 6.1 of the BE, the proposed bank stabilization structure (riprap revetment) itself would have long-term, direct effects on the quality and availability of habitat, including critical habitat for PS Chinook salmon. The Physical and Biological Features (PBFs) of PS Chinook salmon critical habitat in the action area include:

- Freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and mobility; water quality and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging large wood, log jams and beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks; and
- Freshwater migration corridors free of obstruction and excessive predation with water quantity and quality conditions and natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders, side channels, and undercut banks supporting juvenile and adult mobility and survival.

The direct long-term habitat effects of the proposed riprap revetment would slightly diminish the availability and function of critical habitat serving multiple generations of PS Chinook salmon over the estimated 50-year life of the structure. As described above, we expect reductions to the cover and forage PBFs of rearing and migration habitat. Therefore, we anticipate a minor but detrimental effect on critical habitat quality for PS Chinook salmon within Lake Cushman. We expect these effects to be measurable for critical habitat adjacent to the proposed riprap revetment, but very small relative to total critical habitat for PS Chinook salmon in the action area, and the broader area of Lake Cushman and the North Fork Skokomish River basin.

Direct harm of individual fish may also occur during the proposed action. The proposed work-site isolation and fish removal form an area (30 feet wide by 150 feet long; BA page 9) along the shoreline adjacent to the riprap revetment construction area is also expected to result in the harm of adult and juvenile PS Chinook salmon. Any fish in the area at the time of isolation may be captured and handled (exposure to hands, nets or electrofishing), which could harm or kill fish. PS steelhead would not be in the action area at the time of construction. Although the proposed procedures for removal are designed to minimize injury, the risk cannot be completely mitigated. However, we anticipate that most fish would leave the area due to the disturbance caused by staging of isolation structures and by initial installation. Furthermore, given the small number of

PS Chinook salmon that inhabit the lake (see BA pages 12-13; Brenkman et al. 2017[14]), we expect very few fish to be present within the action area at any time. It is difficult to determine the precise number of PS Chinook salmon that would be in the action area at the time of construction, but from recent data, we know the population is small. For example, annual peak spawners is chronically low (35 or less) upstream of the lake, and in 2016 738 juvenile Chinook were collected in the floating surface collector at the downstream end of Lake Cushman (Brenkman et al. 2017).

The in-water work-site isolation area is very small relative to available habitat in Lake Cushman and it is likely that only low numbers of fish would be present and handled. Given uncertainty around abundance numbers, we conservatively estimate that a maximum of 50 juvenile and 10 adult PS Chinook salmon would be captured and handled during the work-site isolation. With the proposed fish removal measures, we expect capture and handling to generally result in temporary responses that do not lead to injury or death, though a very small subset of the total number handled may be injured or killed.

"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. Section 6.9 of the BA discusses cumulative effects and identifies continued population growth and development, global warming and over fishing as non-Federal activities reasonably certain to occur within the action area. We also expected recreational use of the lake (e.g. boating) to continue, and increase with regional population growth and development within the Skokomish River basin.

Integration and synthesis of information for the status of species, environmental baseline, effects of the action, and cumulative effects is the final step in our assessment of the risk posed to species and critical habitat as a result of implementing the proposed action. Here, 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 our 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.

In summary, the proposed action would have minor, localized habitat effects that would affect a small of area of critical habitat negatively for 50 years, and expose multiple individual fish to those poor habitat conditions. During work-site isolation, a small number of PS Chinook salmon may be harmed by handling. However the increment of detriment, both temporary and permanent, is insufficient to alter the conservation role of the habitat. Also, the response of PS Chinook salmon and steelhead populations are expected to be minor and the number of fish injured or killed too small to meaningfully influence the VSP parameters of PS Chinook salmon

[14] Brenkman, S.J., Sutton, K.T. and Marshall, A.R., 2017. Life history observations of adfluvial Chinook Salmon prior to reintroduction of anadromous salmonids. *North American Journal of Fisheries Management*, *37*(6), pp.1220-1230.

or steelhead populations. The proposed action would not reduce the likelihood of survival and recovery of either species. The proposed action is also not likely to result in appreciable reduction in the value of designated PS Chinook salmon critical habitat for the conservation of the species. 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 PS Chinook salmon and PS steelhead, nor destroy or adversely modify PS Chinook salmon 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). "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. This ITS would be valid for PS steelhead if and when fish from this DPS are reintroduced to Lake Cushman.

Amount or Extent of Take

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

- Harm to juvenile PS Chinook salmon from increased predation risk as a result of fish being forced into deeper water where shallow-water habitat is reduced;
- Harm to juvenile PS Chinook salmon and PS steelhead from reduced habitat availability and forage;
- Harm to juvenile PS Chinook salmon and PS steelhead from increased predation risk as a result of reductions to in-water and over-water cover; and
- Capture, injury or death to juvenile and adult PS Chinook salmon from handling during worksite isolation and fish removal.

The distribution and abundance of fish that occur within an action area are affected by habitat quality, competition, predation, and the interaction of processes that influence genetic, population, and environmental characteristics. These biotic and environmental processes interact in ways that may be random or directional, and may operate across far broader temporal and spatial scales than are affected by the proposed action. Thus, the distribution and abundance of fish within the action area cannot be attributed entirely to habitat conditions, nor can NMFS

precisely predict the number of fish that are reasonably certain to be injured or killed if their habitat is modified or degraded by the proposed action. In such circumstances, NMFS cannot provide an amount of take that would be caused by the proposed action.

As all habitat pathways for harm are related to the presence of the proposed bank stabilization structure (riprap revetment), the best available indicator for the extent of take by reduced forage, rearing and migration habitat from the proposed action is the footprint of all riprap below the ordinary high water mark (OHWM; 738 feet), which can be observed and monitored by dimensions of the riprap revetment.

The total proposed footprint of riprap below OHWM is 385 square feet. The total length of the proposed revetment is 110 feet. These take indicators act as effective reinitiation triggers because it is reflective of the likely take pathways associated with the action, is proportional to the anticipated amount of take, and are the most practical and feasible indicators to measure. Any exceedance of these indicators (a structural footprint of the riprap revetment of more than 385 square feet and length of over 110 feet) for extent of take will trigger the reinitiation provisions of this opinion. Although this surrogate is somewhat coextensive with the proposed action, it nevertheless serves as an effective reinitiation trigger because it can be readily monitored and if exceeded, the ONF can seek compliance post construction.

Capture, injury, or death of fish for worksite isolation is directly related to the number of fish handled. The proposed area of in-water work-site isolation along the riprap revetment is 4,500 square feet (30 feet wide by 150 feet long). As described above, we conservatively estimate that 50 juvenile PS Chinook salmon and 10 adult PS Chinook salmon may be handled during worksite isolation, dewatering and fish removal. Any exceedance of this take indicator (50 juvenile and 10 adult PS Chinook salmon) will trigger the reinitiation provisions of this opinion. The total number of fish handled serves as an effective reinitiation trigger because it can be readily monitored and if exceeded, the ONF can seek compliance.

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” are nondiscretionary measures that are necessary or appropriate to minimize the impact of the amount or extent of incidental take (50 CFR 402.02).

The ONF shall:

1. Monitor the construction to ensure that it conforms to all design specifications and implements best management practices, including all proposed mitigation measures; and
2. Minimize incidental take from removal of fish from the in-water work-site isolation area adjacent to the proposed bank stabilization (riprap revetment).

Terms and Conditions

The terms and conditions described below are non-discretionary, and the ONF must comply with them in order to implement the RPMs (50 CFR 402.14). The ONF 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 term and condition implements reasonable and prudent measure 1:
    a. The applicant must report to jeff.vanderpham@noaa.gov and projectreports.wcr@noaa.gov all monitoring items within 60 days of project completion, including:
        i. As-built documentation of the bank stabilization structures (riprap revetment) to demonstrate that the footprint below OHWM and the length of the revetment do not exceed the proposed design; and
        ii. Verification (photo or other reporting) that all proposed BMPs and conservation measures, including all proposed mitigation measures were implemented.

2. The following terms and conditions implement reasonable and prudent measure 2:
    a. Minimize dewatered areas to the extent possible (no larger than as proposed in the BA);
    b. Adhere to the fish exclusion and removal protocols and standards provided in USFWS (2012[15]) and NMFS (2000[16]);
    c. As practicable, allow all PS Chinook salmon to migrate out of the work area, or remove fish before dewatering. Otherwise remove fish from the exclusion area as it is slowly dewatered with methods such as hand or dip-nets or seining;
    d. A qualified fisheries biologist, with experience in work area isolation, shall supervise work area isolation to ensure safe handling of all fish;

[15] USFWS. 2012. Recommended Fish Exclusion, Capture, Handling, and Electroshocking Protocols and Standards. Prepared by Nancy Brennan-Dubbs, U.S. Fish and Wildlife Service, Washington Fish and Wildlife Office, Lacey, WA. June 19, 2012. Information available at http://www.fws.gov/wafwo/pdf/FishExclusionProtocolsandStandards6222012%20DR.pd f.

[16] NMFS. 2000. Guidelines for electrofishing waters containing salmonids listed under the Endangered Species Act. NMFS Northwest Region, June 2000, 5p. http://www.nwr.noaa.gov/ESASalmon- Regulations-Permits/4d Rules/upload/electro2000.pdf >>.

e. Inspect the integrity of the isolation structure daily to prevent a failure and the possible entrainment of fish into the dewatered area; and
f. Document all fish encountered (by species and life-stage), and any observed injury or mortality during work-site isolation and dewatering by submitting a fish salvage report to NMFS (projectreports.wcr@noaa.gov and jeff.vanderpham@noaa.gov), within 60 days of work area isolation and complete dewatering.

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 ONF should identify and implement nearshore habitat enhancement or restoration activities in the Lake Cushman Basin, including the action area, or elsewhere in the North Fork Skokomish River watershed that:

1. Improve the quality of riparian habitat to increase cover and forage for juvenile migration and rearing; and
2. Remove existing in-water structures such as docks, piles and bulkheads that are no longer in use.

Please notify NMFS if the ONF carries out this recommendation so that we will be kept informed of actions that are intended to improve the conservation of listed species or their designated critical habitats.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by [name of action agency] or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) The amount or extent of incidental taking specified in the ITS is exceeded, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) 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 this biological opinion; or if (4) a new species is listed or critical habitat designated that may be affected by the identified action.

MAGNUSON STEVENS ACT ESSENTIAL FISH HABITAT CONSULTATION

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. The proposed action and action area for this consultation are described in this document. The action area includes areas designated as EFH for various life-history stages of Pacific Coast salmon. Based on information provided by the action agency and the analysis of effects presented in the ESA portion of this document, NMFS concludes that proposed action would have adverse effects on EFH designated for Chinook, coho and pink salmon. These effects include a long-term reduction in habitat availability, reduced cover and forage, and increased predation risk as a result of proposed permanent structure below the OHWM of Lake Cushman.

EFH conservation recommendations include:

1. Habitat Enhancement: The ONF should implement nearshore habitat enhancement and restoration activities in the Lake Cushman Basin or elsewhere in the North Fork Skokomish River watershed that:
    a. Improve the quality of riparian habitat to increase overwater cover and forage for juvenile migration and rearing; and
    b. Remove old in-water structures such as docks, piles and bulkheads that are no longer in use.

Fully implementing these EFH conservation recommendations would protect, by avoiding or minimizing the adverse effects described previously, designated EFH for Pacific Coast salmon.

As required by section 305(b)(4)(B) of the MSA, the ONF must provide a detailed response in writing to NMFS within 30 days after receiving an ONF Conservation Recommendation. Such a response must be provided at least 10 days prior to final approval of the action if the response is inconsistent with any of NMFS' EFH Conservation Recommendations unless NMFS and the Federal agency have agreed to use alternative time frames for the Federal agency response. The response must include a description of measures proposed by the agency for avoiding, minimizing, mitigating, or otherwise offsetting the impact of the activity on EFH.

In the case of a response that is inconsistent with the Conservation Recommendations, the Federal agency must explain its reasons for not following the recommendations, including the scientific justification for any disagreements with NMFS over the anticipated effects of the action and the measures needed to avoid, minimize, mitigate, or offset such effects (50 CFR 600.920(k)(1)).

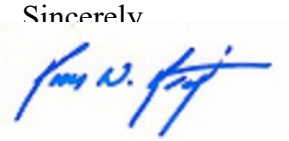
In response to increased oversight of overall EFH program effectiveness by the Office of Management and Budget, NMFS established a quarterly reporting requirement to determine how many conservation recommendations are provided as part of each EFH consultation and how many are adopted by the action agency. Therefore, we ask that in your statutory reply to the EFH portion of this consultation, you clearly identify the number of conservation recommendations accepted.

The ONF 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/. A complete record of this consultation is on file at the Oregon Washington Coastal Office in Lacey, Washington.

Please direct questions regarding this letter to Dr. Jeff Vanderpham, jeff.vanderpham@noaa.gov, (360) 999-8060, in the Oregon Washington Coastal Office in Lacey, Washington.

Sincerely



Kim W. Kratz, Ph.D
Assistant Regional Administrator
Oregon Washington Coastal Office

cc: Marc McHenry
Leisa Cook
Tammy Hoem
Mary Spear