



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

VIA ELECTRONIC FILING

October 27, 2021

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

Re: Lewis River Project (FERC Nos.: P-935-140, P-2071-082, P-2111-080, P-2213-043)
Cowlitz, Clark, and Skamania Counties, Washington; Determination on Appropriateness
of Passage at Yale Lake

Dear Ms. Bose:

On October 27, 2021, the National Marine Fisheries Service and the U.S. Fish and Wildlife Service (together, the Services) completed their process for determining the appropriateness of fish passage measures into a portion of the above-captioned Lewis River Hydro Project. By letter to the Licensees for the Lewis River Project, PacifiCorp and Cowlitz County Public Utility District No. 1, and to the parties to the Settlement Agreement on file for this license, we have determined that fish passage into Yale Lake remains appropriate. Please see the attached letter for further details.

With respect to passage into Yale Lake, this determination completes the provisions of section 4.1.9 of the Settlement, whereby the Services could respond to new information presented to them by the Licensees, and determine that fishways for passing salmon and steelhead into Yale Lake should not be built. In making this determination that the fishway prescriptions in the Project licenses should remain in effect, the Services have completed this action and will proceed to working with the parties to the Settlement Agreement toward completion of fish passage into Yale Lake. Because of the protracted nature of our consideration, the Services support an extension of the deadline for completion of the fishways providing passage into Yale Lake by no later than June 26, 2026.

Please note, the Services have not yet completed the equivalent “appropriateness” determination for fish passage into Lake Merwin, though we expect to do so shortly and will inform the Commission upon making this determination. Please contact me at kim.kratz@noaa.gov if you have any further questions.

Sincerely,

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

Enclosure: Final Determination Letter on New Information supplied by PacifiCorp and
Cowlitz Public Utility District on Appropriateness of Passage at Yale Lake

cc: Service List
Chief, NMFS Habitat Protection Division, Office of Habitat Conservation





U.S. Fish and Wildlife Service
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Portland, Oregon 97232

United States Department of the Interior
United States Fish and Wildlife Service
United States Department of Commerce
National Marine Fisheries Service



National Marine Fisheries Service
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October 27, 2021

Mr. Mark Sturtevant
Managing Director, Renewable Resources
PacifiCorp
825 NE Multnomah Street, Suite 1800
Portland, Oregon 97232

Mr. Gary Huhta
General Manager
Public Utility District No. 1 of Cowlitz County
961 12th Avenue
Longview, Washington 98632

Dear Mr. Sturtevant and Mr. Huhta:

Subject: Final Determination on New Information supplied by PacifiCorp and Cowlitz Public Utility District on Appropriateness of Passage at Yale Lake (FERC No. P-2071)

Pursuant to section 4.1.9 of the Settlement Agreement for the Lewis River Hydroelectric Project, the project licensees are required to construct passage facilities to pass fish into the reservoirs behind Yale and Merwin Dams unless new information is presented to the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) (collectively, the Services) which leads the Services to determine that one or more fish passage facilities should not be constructed. This provision was incorporated into the license issued for the Project by the Federal Energy Regulatory Commission (Commission). On June 24, 2016, PacifiCorp and Public Utility District No. 1 of Cowlitz County (Cowlitz PUD), hereafter the "Licensees," presented new information to the Services which they stated warranted reconsideration of fish passage.

By this letter, the Services are informing the Licensees and the Commission that the information supplied, along with additional information previously available to the Services, does not support a determination that fish passage into Yale Lake is inappropriate. The Services are continuing to engage in further evaluation and discussion with the parties to inform our consideration of whether passage into Lake Merwin has been shown to be inappropriate. We hope to conclude our evaluation of appropriateness of passage into Lake Merwin shortly, and will inform the Settlement Parties and the Commission as soon as possible.

Background

On November 30, 2004, the Services, the Licensees, and numerous other parties signed a Settlement Agreement for licensing of the project which reflected the parties' interest in terms for licensing and operation of the project such as fish passage, wildlife, recreation, flood control, cultural and economic resource development, and other matters. In light of the broad range of measures included in the Agreement, the parties supported the Licensees' request for a 50-year license term, pursuant to section 1.4.

Among those measures is section 4.1.9 of the Settlement Agreement, which describes how the Services may decide, prior to construction of fish passage facilities for salmonids to access Lake Merwin or Yale Lake, that the construction of such facilities is no longer appropriate based on new information received by the Services. Under this and related provisions of the Settlement Agreement, if the Services determined that passage into one or both reservoirs was inappropriate, the Licensees would conduct habitat restoration activities in lieu of fish passage to benefit salmonids.

On February 4, 2005, NMFS submitted its preliminary fishway prescriptions, along with other terms and conditions, recommendations, and comments. These prescriptions were finalized in February 2006, a biological opinion was prepared based on the prescriptions in August 2007, and the prescriptions were incorporated into the current Project licenses upon issuance by the Commission on June 26, 2008. The license contains the requirement to construct fish passage into Lake Merwin and Yale Lake, and the Commission adopted the Settlement Agreement such that the project licenses also recognize the potential for a change to requirements under section 4.1.9.

As previously mentioned, the Licensees submitted to the Services what they consider to be new information on June 24, 2016. This information was reviewed by parties included in the Aquatics Coordinating Committee pursuant to the Settlement Agreement. There was not general agreement as to whether the submission constituted "new information" and there was broad disagreement among the parties that the information rendered fish passage at Merwin or Yale "inappropriate." However, pursuant to the Settlement Agreement, this determination was left to the Services to make.

On April 11 and 12, 2019, the Services contacted the Licensees to advise them that they had made a preliminary determination that fish passage into Lake Merwin was no longer appropriate, and that they would prefer to extend the deadline for constructing passage into Yale Lake in order to review the results of habitat restoration activities conducted in lieu of passage into Lake Merwin before making a determination on passage at Yale Lake. In those letters, the Services cautioned that the determinations were "preliminary in nature." Because the preliminary determinations included elements beyond those set forth in section 4.1.9 of the Settlement Agreement as incorporated into the Project licenses, those preliminary determinations could not be finalized without amending the existing fishway prescriptions. Following the filing of preliminary amended prescriptions with the Commission on December 1 and 2, 2020, the Services engaged in further discussions with parties under the trial-type hearing process in the Services' regulations, and continued analyzing effects of the preliminary determination pursuant to section 7 of the Endangered Species Act (ESA). On July 26, 2021, the Services contacted the

settlement parties to inform them that as a result of this further consideration, it could no longer support moving forward with the preliminary determinations, and through a letter to the Commission dated July 27, 2021, the Services withdrew their preliminary amended fishway prescriptions.

In these communications, the Services pledged to complete their deliberations with respect to any new information regarding the fishway prescriptions for Yale Lake, in order to clarify the Licensees' responsibilities with respect to constructing fish passage under the 2008 licenses. As discussed in detail below, our conclusion is that fish passage at Yale Lake (downstream passage at Yale Dam and upstream passage at the Swift Projects as described in the license) remains appropriate and the Services have now completed any potential consideration pursuant to section 4.1.9 of the Settlement with regards to Yale Lake. The Services will follow in a subsequent letter with considerations to be included in the passage design.

Discussion

Section 4.1.9 of the Settlement Agreement provides that the Services will review new information relevant to anadromous fish introduction and may make a determination that based on the new information, passage for anadromous fish into Lake Merwin or Yale Lake is inappropriate. It is not clear on the face of the provision what "inappropriate" means, but the Services view it as in line with the standard in section 18 of the Federal Power Act which authorizes the Services to exercise their discretion to prescribe fishways "as appropriate" 16 U.S.C. § 811. The Services previously determined that fish passage into Lake Merwin and Yale Lake was "appropriate" at the time they issued fishway prescriptions to be included in the 2008 Project licenses. Under section 4.1.9 of the Settlement Agreement, the Services would look to see if new information or circumstances has subsequently rendered passage "inappropriate." Regarding passage into Yale Lake, the Services' review of the new information supplied by the Licensees supports a finding that fish passage as required by the project licenses has not been rendered "inappropriate." The case for constructing passage for salmonids into Yale Lake from 2006 is not altered by the new information. It is in fact strengthened as we consider emerging science since 2006 regarding climate change impacts and the continued decline of anadromous fish species listed as threatened under the ESA, which further weigh in favor of fish passage.

Original Prescriptions and 2007 Biological Opinion

In the 2006 fishway prescriptions, the Services noted that passage was blocked in 1929, when construction of Merwin Dam began, dramatically reducing fish access to habitat by steelhead, coho, spring and fall Chinook salmon, chum, and sturgeon, and resulting in mainstem habitat impacts downstream of Merwin Dam as well. They identified the primary factory for decline in Lewis River fish populations as the blockage of passage. The prescriptions describe the reintroduction goals, along with the sequence of reintroduction measures, passage construction, monitoring, and adjustments to meet the reintroduction goals to fully utilize available habitat, and production capability. Of these, we highlight and summarize the salient elements for this discussion:

Article 1: Prescription for Anadromous Fish Reintroduction Outcome Goals. Regarding the stocks of Chinook salmon, steelhead, and coho that are being transported under the Settlement Agreement, the Licensee must implement the relevant PM&E measures that are

the Licensee's obligation in the Settlement Agreement, and the Licensee, together with the licensees for the Yale, Swift No. 1, and Swift No. 2 projects, must implement the relevant PM&E measures that are shared obligations of the Licensee in the Settlement Agreement to achieve the Reintroduction Outcome Goal as described in the Settlement Agreement. The "Reintroduction Outcome Goal" is to achieve genetically viable, self-sustaining, naturally reproducing, harvestable populations above Merwin Dam greater than minimum viable populations.

Article 3: Prescription for Permits and Time for Construction. Upon approval of passage facility designs by the Commission, the Licensee must diligently and expeditiously acquire all required Permits. The time by which each passage facility must be placed in operation is set forth in the Settlement Agreement.

Article 4: Prescription for Performance Standards for Fish Passage. The Licensee must provide for the safe, timely, and effective passage of salmonids being transported past the Project as described in the Settlement Agreement.

Article 5: Prescription for Species to be Transported. For purposes of all fish passage provisions contained herein, the Licensee must only provide for the transport of spring Chinook, winter steelhead, coho, bull trout, and sea-run cutthroat. Notwithstanding the preceding sentence, the Licensee, after Consultation with the ACC¹ (including at least the Services), and if directed by the Services, must also provide for the transport of fall Chinook or summer steelhead that enter the passage facilities.

These provisions were incorporated into the proposed action reviewed in the Services' 2006 and 2007 biological opinions.

Those biological reviews of that proposed action found that construction of passage and reintroduction of species in a phased approach would not jeopardize survival or recovery of the affected species listed as threatened under the ESA, nor adversely modify their designated critical habitat. In the NMFS biological opinion, NMFS further concluded that the proposed measures would benefit salmon and steelhead by "allowing these species to access more habitat, and to increase adult productivity, within-population diversity, and spatial structure (elements of population viability). Spatial structure (distribution throughout the area) is important because it aids a population's ability to withstand localized environmental perturbations. Also, the wider geographic distribution of reintroduced anadromous fish will provide the opportunity for genetic diversity and fitness to improve these populations." The opinion observed that up to 27.3 potentially accessible miles of tributary habitat was available above Yale Dam.

USFWS determined that bull trout would not be jeopardized by the reintroduction of coho, steelhead, or Chinook salmon. In the USFWS 2006 biological opinion, USFWS further concluded that bull trout, Chinook and coho salmon and steelhead have co-existed and evolved sympatrically in the Lewis River and throughout most of the bull trout range. As described in the USFWS's biological opinion, the reintroduction of salmon and steelhead will increase fish production and the available prey base for adult and sub-adult bull trout in the Lewis River basin.

¹ Aquatic Coordination Committee

The reintroduction effort will also indirectly increase the bull trout prey base by restoring marine-derived nutrients (MDNs) into the ecosystem. The USFWS carefully considered whether reintroduction would also create some level of interspecific competition between juvenile salmon, steelhead, and bull trout for food and space; competition for spawning sites; or the potential for juvenile bull trout predation by salmon and steelhead. The USFWS does not anticipate that interspecific competition or predation would result in a decline in the local populations of bull trout. Overall, the anadromous fish reintroduction program will likely be beneficial by providing MDNs and increasing the forage base for bull trout. As described in the license, monitoring will be implemented to determine impacts on bull trout, if any, from the anadromous salmon reintroduction program.

NMFS' Interim Regional Recovery Plan (LCFRB and NMFS 2006) for salmonids described creating access to this habitat as "one of the most substantial salmon recovery measures that can be implemented in the Lower Columbia region. This is especially true since Lewis River spring Chinook salmon and steelhead are considered core populations." While passage to Swift Reservoir has partly achieved reintroduction goals it has not completed them.

New Information Presented and 2019 Preliminary Determinations

The new information presented by the Licensees addressed the suitability of passage for salmon and steelhead between the dams. It included eight studies on the habitat values within Yale Lake and Lake Merwin and their tributaries, including prey availability for introduced salmonids, and the levels of piscivory which could occur on introduced salmonids. This was accompanied by a proposal for carrying out multiple habitat restoration projects upstream of Swift Reservoir, in which \$20 million² would be spent on improving juvenile rearing habitat in stream reaches identified using Environmental Diagnostic Treatment (EDT) modeling, and which the model predicted would provide gains in fish abundance comparable to that which would be achieved with passage. While the existence of an alternative plan does not factor into any finding of appropriateness, the Services understand that the In-Lieu Fund included in the settlement agreement would be activated in the event of an "inappropriateness" determination, and reviewed the new information accordingly. In doing so, the Services found flaws in the EDT model inputs, and working together with the Licensees' staff and EDT modelers, revised the inputs, which produced more modest projections in achievable abundance³ for the three salmonid species from the in-lieu restoration.

Biological Evaluation of the Proposed Changes in Passage and Reliance on Habitat Restoration

In the Services' biological review, we considered the effects of multiple elements associated with the new proposed action to forego passage at Lake Merwin and delay the passage determination at Yale Lake for 10 years. Within this review was the suitability of the habitat in Yale Reservoir and its tributaries, which now informs our determination on the appropriateness of passage. **Habitat Suitability:** The Services reviewed the 2016 new information (Al-Chokhachy et al. 2015) and the subsequent U.S. Geological Survey (USGS) report supplied by the Licensees, (Al-

² The In Lieu Fund provisions of the Settlement Agreement call for the Licensees to provide \$20 million for habitat in each event that passage is found "inappropriate," for a potential total contribution of \$40 million if both Yale and Merwin passage were not constructed.

³ Upon review of EDT analyses submitted by PacifiCorp in the New Information report, NMFS found discrepancies with respect to stream miles, spawning locations and juvenile survival parameters inputted into the analysis. NMFS and PacifiCorp, fixed these errors, and reran the EDT analysis. (NMFS Preliminary Decision Letter, April 11, 2019).

Chokhachy et al. 2018). These studies examined several potential conditions which would limit the suitability of habitat in Lake Merwin and Yale Lake for salmonid recolonization, ultimately concluding that none of the factors would pose a barrier to successfully restoring salmonid access.

Tributary Habitat: Within the 2016 new information, Al-Chokhachy et al. evaluated temperature, dissolved oxygen, sediment, and riparian conditions. They found little evidence of fine sediment in tributaries to either reservoir, interpreting this as not limiting, and when the data was taken together, “these data suggest habitat conditions, aside from some thermal constraints during the summer months and riparian degradation in some tributaries, do not appear to be limiting salmonid populations.” The USGS study identified the quantity and quality of tributary habitat and found that greater than 18 miles of tributary habitat are available for recolonization in Yale Reservoir before the first impassible barrier. The tributary habitat is considered good, and consistent with the 2016 information, “empirical habitat data suggest little evidence that habitat quality will limit salmon and steelhead introductions. Overall, stream temperatures vary extensively within the upper Lewis River Basin, but do not appear to be a limiting factor in the near term for anadromous species.” While some locations have summer temperature concerns, tributaries to Yale Lake are “generally robust with relatively high wood debris densities” (Al-Chokhachy 2018). Overall, we consider the Yale tributaries to provide very good habitat, supportive of salmonid viability.

Reservoir Habitat: Juvenile salmon are known to rear in, as well as migrate through, reservoir habitats. The 2016 new information found conflicting data about residence time and migration within the reservoirs (which relied primarily on data from Swift Lake), and attributed these conflicts to poor collector performance. That report indicated that prey availability was moderately dense throughout the growing season and that epilimnetic access to zooplankton was only somewhat limited in Yale Lake in late July to September. The 2018 USGS report provided similar reservoir information. Sorel et al. (2016) found that habitat conditions within Yale Lake were suitable for juvenile rearing due to the following reasons: 1) Yale Lake was found to have excess capacity of planktonic prey items to support both resident fish species and reintroduced salmonids during their reservoir occupancy. 2) Prey abundance is very high in spring, waning from July to October. We believe that both rearing and migrating juveniles would have adequate prey availability in Yale Lake.

Viability Benefits of Passage

Providing passages automatically addresses viability concerns observed by Northwest Fisheries Science Center (2021), that the dams’ obstruction of habitat access is the largest limiting factor in achieving population spatial structure for Lower Columbia River (LCR) coho, LCR Chinook salmon, and LCR steelhead. Reintroduction to blocked historical habitat is well documented to result in quickly colonized areas with prompt spawning and productivity gains. Meanwhile, perceived gains with instream habitat restoration may be attributable to abundance being associated with attraction rather than actual productivity gains, and gains appear to peak after about 2 years and wane subsequently. Gains in juvenile survival associated with the instream restoration work above Swift, if realized, may be undermined by the poor performance of the collectors, and further, are less likely to provide an array of habitats that insulate juvenile fish from climate change or other habitat perturbations. For these reasons, we consider reintroduction

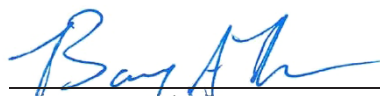
to Yale Lake and its tributaries to more reliably meet productivity and abundance Viable Salmonid Population (VSP) parameters than in lieu, and that Yale Lake passage provides spatial structure and diversity gains in VSP parameters that the in-lieu restoration would not.

Conclusion and Deadline

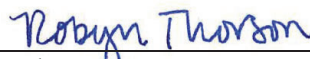
When all habitat information and VSP factors of passage at Yale Lake are considered, we do not find the new information provided by the Licensees indicates that passage is inappropriate. Stated another way, the Services find that upstream and downstream passage at Yale Lake (downstream passage at Yale Dam and upstream passage at the Swift Projects) as required in the current license remains appropriate. This passage will reliably provide access to additional habitat suitable for spawning and rearing, augments spatial structure, affords diversity within the population structure, and provides additional resiliency against climate change induced habitat perturbations.

In completing this step from the Settlement Agreement, the Services understand that the original deadline for constructing passage into Yale Lake has passed. Specifically, section 4.5 of the Settlement Agreement requires PacifiCorp to have completed downstream passage at the Yale Project by the 13th anniversary of license issuance, which fell on June 26, 2021. The Services have previously indicated to the Commission that our deliberations had caused this delay and that we would indicate our view of a reasonable extension for the current license requirement. We do so now and recommend that the Commission grant an extension for the Yale downstream passage article of an additional 5 years from the original deadline, so that construction would be completed by June 26, 2026.

Sincerely,



Barry A. Thom
Regional Administrator,
West Coast Region,
National Marine Fisheries Service



Robyn Thorson
Regional Director,
Columbia-Pacific Northwest and
Pacific Islands Regions,
U.S. Fish and Wildlife Service