



Electronically filed November 6, 2023

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, DC 20426

**Subject: PacifiCorp's Merwin, Yale, and Swift No. 1 Hydroelectric Projects (FERC Project Nos. P-935, P-2071, and P-2111), and Cowlitz PUD's Swift No. 2 Hydroelectric Project (FERC Project No. P-2213) Fish Passage Implementation and Withdrawal of License Amendment Application**

Dear Ms. Bose:

Through this letter, PacifiCorp and Public Utility District No. 1 of Cowlitz County, Washington (the Utilities) submit for the Federal Energy Regulatory Commission's (Commission) review and approval, the document entitled "Elements of Lewis River Future Fish Passage" which has been prepared to implement the National Marine Fisheries Service (NMFS) and U.S. Fish & Wildlife Service (USFWS) (collectively, the Services) decisions regarding timing and construction of anadromous fish and bull trout passage facilities at the Merwin, Yale, and Swift No. 1 hydroelectric projects located on the Lewis River (**Exhibit A**). The Services have reviewed and approved the fish passage recommendations and construction schedule. Their consultation letter is enclosed for the Commission's consideration (**Exhibit B**).

On July 2, 2020, the Utilities filed applications for a Non-Capacity License Amendments with the Commission to incorporate fish passage measures initially proposed by the Services. Through this letter, the Utilities hereby withdraw those license amendment applications.

### **Background**

On April 12, 2019, the Services issued preliminary decisions regarding construction of anadromous fish and bull trout passage facilities at the Merwin, Yale, and Swift No. 1 hydroelectric projects located on the Lewis River.

On April 22, 2019, the Utilities submitted to the Commission a schedule of actions for implementing the Services' fish passage determinations. Thereafter, on May 13, 2019, the Commission accepted the Utilities' proposed April 22, 2019, schedule and directed the Utilities to submit quarterly progress reports on this matter to the Commission.

On October 27, 2021, the Services filed with the Commission a notice that the Services had completed their final determination regarding fish passage into Yale Reservoir, and that fish passage remains appropriate in this reservoir. On December 23, 2021, the Services notified the

Kimberly D. Bose, Secretary, FERC-DC

Merwin, Yale, and Swift No. 1 Hydroelectric Projects (FERC No. P-935, P-2071, and P-2111), and Cowlitz PUD's Swift No. 2 Hydroelectric Project (FERC No. P-2213); Fish Passage Implementation and Withdrawal of License Amendment Application

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Utilities that the Services had completed their final determinations regarding fish passage into Merwin Reservoir, and that fish passage into this reservoir remains appropriate.

In response to these notices, on March 8, 2022, the Utilities provided a draft letter to the Services outlining a Draft Fish Passage Proposal (Proposal) for the Lewis River Hydroelectric Projects to resolve disputes under the Lewis River Settlement Agreement. On March 9, 2022, the Services responded to the Utilities' Proposal, noting the Services' support for many aspects of the proposed passage framework, and providing comments to help guide further discussions with the Lewis River Aquatics Coordination Committee (ACC.)

Since receipt of the Services' comments, the Utilities have engaged in a series of meetings with the ACC and its Fish Passage Subcommittee to address remaining comments on the Proposal. In September 2023, the ACC recommended approval of the Elements of Lewis River Future Fish Passage. This document outlines in detail the specific fish passage measures and facilities to be constructed and operated on the Lewis River and provides an updated schedule to implement these measures and facilities.

On September 28, 2023, the Utilities provided the document to the Services for review and approval consistent with Section 4 of the Lewis River Settlement Agreement. On October 27, 2023, the Services responded, indicating their concurrence and approval of the document.

The Utilities now request that the Commission approve the fish passage measures and revised construction schedule as outlined in the Elements of Lewis River Future Fish Passage attached as **Exhibit A**.

### **Withdrawal of License Amendment Application and Cessation of Quarterly Reporting**

On July 2, 2020, the Utilities filed applications for Non-Capacity License Amendments with the Commission to incorporate fish passage measures initially proposed by the Services. Through this letter, the Utilities hereby withdraw these license amendment applications, and instead request that the Commission approve the fish passage measures and revised construction schedule as identified in **Exhibit A**.

The Elements of Lewis River Future Fish Passage incorporates additional comments and feedback received from the Services, Tribes, and ACC representatives and reflects the consensus of all settlement parties involved. Consequently, the Utilities withdraw their prior license amendment applications, and request Commission's approval of the Elements of Lewis River Future Fish Passage. The Utilities also respectfully request that the Commission no longer require the Utilities to submit a quarterly progress report concerning these matters.

Kimberly D. Bose, Secretary, FERC-DC

Merwin, Yale, and Swift No. 1 Hydroelectric Projects (FERC No. P-935, P-2071, and P-2111), and Cowlitz PUD's Swift No. 2 Hydroelectric Project (FERC No. P-2213); Fish Passage Implementation and Withdrawal of License Amendment Application

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This letter and its enclosures have been filed electronically. The security classification of each component in this submittal is shown in the enclosure table below. Please contact Todd Olson at 503-347-6251 or [todd.olson@pacificorp.com](mailto:todd.olson@pacificorp.com) if you have any questions concerning this matter.

Sincerely,



William C. Shallenberger  
Vice President, Renewable Resources  
PacifiCorp

Sincerely,

DocuSigned by:  
  
FE941B6F0FBF4D5...

Gary Huhta  
General Manager  
Cowlitz PUD

<b>Encl:</b>	Letter – Public
	Exhibit A (Elements of Lewis River Future Fish Passage; ACC Decision Document) – Public
	Exhibit B (October 27, 2023 Letter from National Marine Fisheries Service and U.S. Fish and Wildlife Service) – Public

<b>eFile:</b>	Kimberly D. Bose, Secretary Via eFile at <a href="http://www.ferc.gov">www.ferc.gov</a>	<b>Email:</b>	Erich Gaedeke, DHAC Federal Energy Regulatory Commission
<b>Email:</b>	Parties to the Lewis River Settlement Agreement	<b>Email:</b>	Representatives of the Lewis River ACC

**Exhibit A**

**Elements of Lewis River Future Fish Passage;  
ACC Decision Document**

**September 14, 2023**

# Lewis River Hydroelectric Projects

FERC Project Nos. 935, 2071, 2111, 2213



## Elements of Lewis River Future Fish Passage

*Prepared in Consultation with the Lewis River  
Aquatic Coordination Committee*



September 14, 2023

## **ELEMENTS OF LEWIS RIVER FUTURE FISH PASSAGE**

### **1. Introduction**

In accordance with the Lewis River Hydroelectric Projects Settlement Agreement dated November 30, 2004 (Settlement Agreement; SA) and subsequent Federal Energy Regulatory Commission (FERC) licenses issued June 26, 2008 for the Merwin, Yale Swift No. 1 and Swift No. 2 Hydroelectric projects, PacifiCorp and Cowlitz PUD (together, the Utilities), constructed anadromous fish passage to provide truck transport of spring Chinook, coho, winter steelhead and bull trout on the Lewis River between areas downstream of Merwin Dam and areas upstream of Swift Dam.

On October 27 and December 23, 2021, the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS; together, the Services) issued final letters of determination requiring the Utilities to provide passage for anadromous fish and bull trout into and out of Yale and Merwin Reservoirs (Attachments A and B respectively); however, certain details about the method of fish passage were left for further discussion by the Aquatic Coordination Committee (ACC).

The Utilities, in Consultation with the ACC, have now prepared this fish passage document to clarify certain process steps and details of the Lewis River Future Fish Passage Program.<sup>1</sup> The intent of this document is to provide guidance to the Utilities' engineering design team, the Fish Passage team, and Monitoring and Evaluation team to enable further planning and design actions to occur in a timely way. This document does not modify the Settlement Agreement; rather, this document is intended to identify specific design elements of fish passage facilities. In preparing this document, the ACC have considered requirements of the Settlement Agreement, the time needed to design, permit and construct new fish passage facilities, adaptive management for fish transportation and release, and mitigation for potential impacts and delays.

*Elements of Lewis River Future Fish Passage* documents the ACC's Consultation on the formulation of the design and fish passage criteria and will inform the implementation of passage prescriptions. By approving this document, the ACC will recognize and support the Services' decision for approval. Upon approval by the Services, the Utilities will submit to FERC a request for an extension of time for the construction completion schedules and will attach the final document, along with the Services' approval. The Utilities will also request FERC approval for the revised fish passage construction schedule.

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<sup>1</sup> This document is intended to be the Parties' good faith effort to ensure timely construction of fish passage facilities. This document does not establish rights for judicial remedy, nor does it alter whatever rights exist under applicable laws and the 2004 Settlement Agreement Concerning the Relicensing of the Lewis River Hydroelectric Projects. Any dispute regarding implementation of these Protocols is subject to the dispute resolution procedure and other remedies outlined in the Settlement Agreement.

## **2. Anadromous Fish Reintroduction Outcome Goal**

Consistent with the Settlement Agreement, this document is based upon the Anadromous Fish Reintroduction Outcome Goal as defined in SA Section 3.1:

*“...to achieve genetically viable, self-sustaining, naturally reproducing, harvestable populations above Merwin Dam greater than minimum viable populations (“Reintroduction Outcome Goal”).*

## **3. Studies to Inform Design Decisions**

Consistent with SA Sections 4.1.1 (Studies to Inform Design Decisions) and 4.1.2 (Design Review), PacifiCorp will, in Consultation with the ACC, and subject to the final approval of the Services, develop and implement studies to inform the design of upstream and downstream fish passage facilities. Such studies include, but are not limited to, studies to determine the hydraulic characteristics of the forebays and tailrace (e.g., a three-dimensional numerical flow-field analysis) and the behavior/movement of migrating juvenile and adult salmonids. Utilities will identify and develop study plans for ACC Fish Passage Subcommittee and Aquatic Technical Subcommittee review. Subcommittees will consider and provide recommendation to the ACC. Final approvals are granted by the ACC. However, given aggressive project schedules, early studies (in calendar years 2022 and 2023) may be identified and proceed without prior subcommittee input (in years thereafter process to adhere to related terms of the Settlement Agreement). Parties to the Settlement Agreement may identify additional study/information needs, and such should be brought to the attention of the Fish Passage Subcommittee and/or Aquatic Technical Subcommittee for discussion and consideration. Study results will be provided to the subcommittees through presentations and reported via Technical memos.

## **4. Design Review**

As facility designs are developed, the ACC, WDFW, and Services will be provided 30%, 60% and 90% preliminary designs for review and comment (see Attachment C for initial project schedules). Fish passage facility designs will adhere to the standards contained in NOAA Fisheries guidance documents (NOAA Fisheries Anadromous Salmonid Passage Facility Design 2022). Prior to submittal of final designs to FERC, the Utilities will obtain approval of designs from the Services. Designs will be prepared consistent with the requirements of SA Section 4 (Fish Passage Measures).

## **5. Evaluation of Alternative Fish Transport Technologies**

Section 4.1.8(b) of the Settlement Agreement requires an evaluation of alternative adult fish upstream transport technologies. Section 4.1.8(d) of the Settlement Agreement notes that PacifiCorp shall Consult with the ACC regarding a possible change in methods for downstream fish passage. In response to these items, the ACC Fish Passage Subcommittee has evaluated several fish passage facility technologies and transport alternatives against several wide-ranging considerations (Attachment D). This evaluation was completed with the intent of identifying the best technologies and transport alternatives given the site-specific constraints and design criteria of each location. The preferred alternatives are as follows:

<b>Description</b>	<b>Facility Type</b>
Downstream passage at Yale Dam (Yale Downstream Facility; SA Section 4.5)	Floating Style Surface Collector with Truck Transport
Upstream passage at Yale Dam (Yale Upstream Facility; SA Section 4.7)	Trap and Truck Transport
Upstream Passage at the Swift Projects (Swift Upstream Facility; SA Section 4.8)	Trap and Truck Transport
Downstream passage at Merwin Dam (Merwin Downstream Facility; SA Section 4.6 and Section 8 of this document)	To Be Determined at a Later Date

Upstream fish passage facilities will be designed to allow for future facility expansion as described below (see Section 9 of this document - Expansion of Upstream Fish Passage Facilities).

## **6. Timing of Fish Passage Measures**

Fish passage facilities will be constructed consistent with the attached schedule to achieve the following “substantially complete” deadlines. The term “substantially complete” means facility is operational and able to collect and transport fish in accordance with the Lewis River Settlement Agreement, however other minor construction activities (e.g., posting of signs, installation of security cameras, etc.) can be completed after this date.

### *Yale Reservoir Fish Passage Completion Schedule*

Upstream Passage (at Swift Dam) Substantially completed:	June 26, 2026
Downstream Passage Substantially completed:	June 26, 2026

### *Merwin Reservoir Fish Passage Completion Schedule*

Upstream Passage (at Yale Dam) Substantially completed:	June 26, 2026
Downstream Passage Substantially completed:	June 26, 2032

The Utilities have developed proposed fish passage schedules incorporating key milestones and Consultation requirements under SA Sections 4.1.1 and 4.1.2 (see Attachment C). Additional schedule details will be provided for each project throughout the design process as designs are finalized.



The schedules for Yale and Swift Upstream facilities and the Yale Downstream Facility will provide reservoir fish passage in a timely manner. The Merwin Downstream Facility schedule aligns with major Merwin Dam safety improvements planned, budgeted and required to be operational in 2032.

The Utilities will work in good faith to achieve the fish passage schedule and milestones. Achieving this fish passage schedule may, in part, depend on the timely issuance of permits and approvals by the FERC and other parties, as well as the Utilities' ability to acquire required materials from vendors. The Utilities will inform the ACC of any schedule delays and will work diligently and in good faith to obtain all required permits and materials. In the event of prolonged delays, remedies under SA Section 2.2 may be exercised.

## **7. Integration of Salmonid and Bull Trout Passage Facilities**

New fish passage facilities will be developed to integrate bull trout fish passage with anadromous salmonid fish passage resulting in the construction of a single integrated upstream collector in Merwin Reservoir at Yale dam, and a single integrated upstream collector in Yale Reservoir at the base of Swift No. 1 Dam.

The Yale Downstream Facility and the Merwin Downstream Facility will be designed to provide safe downstream passage for both juvenile and adult anadromous salmonids and bull trout. Final designs will meet the most recent criteria established for bull trout and anadromous salmonids and be approved by the Services prior to submittal to the FERC.

## **8. Downstream Fish Passage Facilities**

### **A. Yale**

For the Yale Downstream Facility, a floating surface collector (FSC)-style facility will be designed and constructed for both anadromous salmon and bull trout fish passage. The facility's period of operation will be determined based upon water temperature, numbers of fish collected and survivability; and will likely be consistent with the operational period of the existing Swift Reservoir FSC. The Utilities will require a minimum of one month each year to conduct facility inspection and maintenance actions.

The Yale Downstream Facility will be designed to allow for the sorting of fish and marking of all collected Transport Species juvenile anadromous salmonids and bull trout, and to accommodate the transport of anadromous fish downstream.

### **B. Merwin**

Consistent with SA Section 4.0 Fish Passage Measures, the Utilities will design and construct the Merwin Downstream Facility. As noted in Section 6 of this document, the construction completion schedule for this facility has been modified. This delay is to accommodate a large FERC dam safety project which will impact the design and placement of the Merwin Downstream Facility. Studies, design, consultation (ACC for fish passage and FERC Dam Safety

for the dam safety project), permitting and construction will generally follow a similar timeframe so that both projects are compatible with the other (see Attachment C, Merwin Downstream Project Schedule).

Prior to initiating the fish passage facility designs, the Utilities, ACC and Services will complete a facilities alternatives evaluation comparing truck transport and passage systems and selecting a preferred alternative. To provide adequate time for evaluation of system alternatives, engagement with the ACC Fish Passage Subcommittee shall be initiated by March 1, 2025. The subcommittee and ACC shall strive to select the preferred alternative for Merwin downstream passage by December 31, 2026, to support the design, permitting and substantially complete construction of the facility by June 26, 2032.

Consistent with SA Section 4.1.8(d), if the Services determine that a salmonid bypass passage system would provide equal or greater biological benefit and would not have unacceptable impacts on fish between Merwin Dam and the Release Ponds, then PacifiCorp shall construct and provide for the operation of such bypass facility in lieu of trapping and transporting fish by truck.

The Merwin Downstream Facility will operate during the juvenile fish spring and fall outmigration periods (estimated to be March through June and mid-October through November) unless otherwise agreed to by the ACC. The Utilities will use the non-operational period to conduct facility inspections and maintenance.

Both downstream facilities will be designed and operated consistent with the performance standards contained in SA Section 4.1.4. Once constructed, future adjustments or modifications to the passage facilities will occur in accordance with SA Section 4.1.6.

## **9. Expansion of Upstream Fish Passage Facilities**

Existing fish passage facilities at the Merwin and Swift projects currently support natural fish production upstream of Swift Dam and will continue to operate during the term of the license. Initial design and construction of the Yale Dam and Swift Dam's upstream trap/transport facilities will accommodate bull trout migration and the strategic distribution of adult coho, spring Chinook and winter steelhead into Yale and Swift Reservoirs.

Fish passage facility designs shall account for an adult fish holding capacity based on adult coho averaging seven pounds per fish. Facilities shall be designed to accommodate future expansion based on adaptive management of the reintroduction program. The facilities shall be designed to adequately process and transport 1,800 adult salmonids per an eight-hour operation cycle. If on a given day the collective adult fish count is expected to be greater than this or exceeds this number (determined by Merwin or Yale upstream fish passage and/or actually handled at the facility), additional operational cycles will be implemented to daily collect and transport the expected or actual number of adult salmonids arriving in a single day. Current modeling suggests daily peak arrival could range from 1,800 to 6,300 adult fish. The intent is for the facilities to be designed to accommodate the "Swim Through" (see Section 10 of this document. Determination for Upstream "Swim Through" Fish Passage Operations) fish passage scenario from the entrance in which fish voluntarily approach the facility to the holding area just before where fish are sorted for transport. The key features associated with this design aspect include, but are not

limited to, trap entrance, entrance/diffuser pool, ladder leg pools, and holding pool. Once the fish are sorted, the facilities shall be designed to expand the number of individual fish holding tanks and truck transport accommodations to accommodate the “Swim Through” fish passage scenario. All physical attributes of the facilities shall be designed to meet the NMFS criteria that was updated in 2022 for upstream passage and transport of adult fish.

### **10. Determination for Upstream “Swim Through” Fish Passage Operations**

As described above in Section 9 (Expansion of Upstream Fish Passage Facilities), Yale Dam and Swift Dam’s upstream fish passage facilities will be designed to adequately process and transport 1,800 adult fish per an eight-hour operation cycle with the ability to increase operational cycles to collect and transport several times that number of adult salmonids. Initially, the facilities will operate per a Selective Reservoir Release strategy – a scenario whereby certain numbers of returning adults to the Merwin Upstream Fish Collection Facility (both natural and hatchery origin) are released into the Yale and Merwin reservoirs.

Under a future “Swim-Through” passage scenario, natural origin return (NOR) adult bull trout, coho, spring Chinook and winter steelhead captured at the Merwin Upstream Fish Collection Facility at Merwin Dam would be truck transported and released into Merwin Reservoir, enabling the fish to access area tributaries or swim through the reservoir. As fish enter subsequent upstream transport facilities at Yale and Swift Dams they would be transported into the respective upstream reservoirs. That is, if a fish entered the Yale Upstream Facility (at the base of Yale Dam), it would be collected, transported, and released into Yale Reservoir where it could access area tributaries or swim through that reservoir as well.

Fish entering the Swift Upstream Facility (at the base of Swift Dam) will be collected, transported, and released into Swift Reservoir. It is also possible that in the future, the ACC, through an adaptive management approach, may elect to implement a hybrid of the two fish passage operations; passage facilities should be designed to accommodate both the “Selective Reservoir Release” and “Swim-Through” scenarios.

### **11. Process for Selecting and Implementing “Swim Through” Option**

Implementation of the “Swim Through” option or hybrid option, would commence if the following actions occur:

- a) The ACC (with administration by Utilities) will develop a fish passage scenario alternatives analysis for both natural and hatchery origin fish and bull trout, including, but not limited to, Select Reservoir Release and “Swim Through” passage or a hybrid (e.g., Selective Reservoir Release for bull trout and “Swim Through” for salmon and steelhead or some alternative thereof) of the two;
- b) The ACC will identify the biological criteria or “trigger points” for when the “Swim Through” option or a hybrid fish passage alternative would provide greater benefit than solely the Select Reservoir Release option, towards achieving the Lewis River

Settlement Agreement Outcome Goal. At a minimum, the following should be considered when developing “trigger points:”

- 1) NOR abundance by species
  - 2) Current Recovery Phase and triggers for moving between phases
  - 3) Collection efficiency and passage survival of upstream collection/transport facilities
  - 4) Purpose of HOR fish transport (i.e., reintroduction vs harvest)
- c) The ACC will recommend to the Services the preferred fish passage alternatives when such alternatives have met biological criteria identified in (b); and
- d) The Services will evaluate ACC recommendations, confirm such recommendations remain consistent with Section 7 of the ESA and Section 18 of the Federal Power Act, and notify the ACC of their further decision regarding such fish passage alternatives.

## **12. Anadromous Fish Marking**

Juvenile spring Chinook, coho, and winter steelhead collected from Yale Reservoir will be uniquely marked so that upon return as adults they can be released into Yale Reservoir. All collected bull trout of sufficient fork length will be marked with a uniquely coded Passive Integrated Transponder (PIT) tag unless otherwise directed by USFWS.

It is expected that some number of juvenile spring Chinook, coho, and winter steelhead outmigrants leaving Merwin Reservoir will be uniquely marked. The final marking strategy for Merwin fish will be developed by the ACC during preparation of the Merwin Downstream Transportation Plan prior to operation of the Merwin Downstream Facility.

## **13. Habitat Preparation Plans**

To support the success of anadromous fish introduction to Yale and Merwin Reservoirs, Habitat Preparation Plans (HPP) will be prepared as described in SA Section 7.4. An HPP for Yale Reservoir was completed and approved by the ACC for implementation in 2022. Draft HPPs will be provided to the ACC Aquatic Technical Subcommittee (ATS) and ACC for review, comment and approval annually, prior to implementation.

## **14. Fish Transportation Plans**

Consistent with SA Sections 4.1.8(c) and 4.1.8(d), upstream and downstream fish transportation plans will be prepared in Consultation with the ACC. Final transportation plans will be approved by the Services.

For the Yale Downstream Fish Passage Facility, all collected juvenile spring Chinook, coho and steelhead and steelhead kelts, will be transported by truck for release at the Woodland

Release Ponds. The disposition of fish entering the Merwin downstream fish passage facility will be determined during selection of the preferred alternative for the Merwin Downstream Facility.

The upstream/downstream release destinations of bull trout, adult salmon/steelhead, and resident fish along with fish of hatchery origin will be determined during the development of transportation plans. Under the Selective Reservoir Release strategy, upstream fish passage facilities will be designed to provide truck transport to the expected reservoir of origin as identified in the Fish Transport Plan. That is, under a Selective Reservoir Release strategy, fish will be returned to the individual reservoir watersheds in which they likely originated.

### **15. Monitoring and Evaluation Plans**

Consistent with SA Section 4.1.5, the Utilities will develop fish passage Monitoring and Evaluation plans prior to the initial operation of all Yale and Merwin Reservoir Fish Passage Facilities. The Utilities will prepare Monitoring and Evaluation plans for each of the four new fish passage facilities in Consultation with the ACC and Services.

Monitoring plans will include operational monitoring strategies to determine if performance standards outlined in SA Section 4.1.4 are met. Studies and monitoring activities will include, but are not limited to, assessing collection efficiency, injury and survival, and determining migration timing and abundance of passed fish. Additional actions associated with the new passage facilities will be incorporated into the current Aquatics Monitoring and Evaluation Plan.

### **16. Lewis River Habitat Enhancement Fund**

This document contains the ACC's agreed elements for implementing future fish passage on the Lewis River. This document contains specific guidance for fish passage facility designs the ACC agrees to implement for timely implementation of Settlement Agreement requirements.

In consideration of the agreements contained in this document, PacifiCorp agrees to contribute an additional \$3,511,516 to the Lewis River Aquatics Fund. PacifiCorp will provide the first payment of \$877,879 within six months of FERC's approval of the Utilities' request for extension of the construction completion schedules (see Section 6 of this document above). A second contribution of \$2,633,637 to the Fund will be provided the following calendar year. Contribution will be administered consistent with the procedures outlined in SA Section 7.5.

## Attachment A – Services Letter, October 27, 2021



**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](mailto:kim.kratz@noaa.gov) if you have any further questions.

Sincerely,

A handwritten signature in blue ink that reads "Kim W. Kratz".

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  
911 NE 11<sup>th</sup> Ave  
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  
1201 NE Lloyd Blvd., Suite 1100  
Portland, Oregon 97232

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 12<sup>th</sup> 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 ACC<sup>1</sup> (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.

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<sup>1</sup> 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 million<sup>2</sup> 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 abundance<sup>3</sup> 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-

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<sup>2</sup> 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.

<sup>3</sup> 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

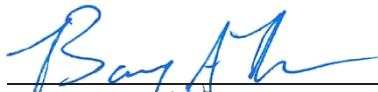
to Yale Lake and its tributaries to more reliably meet productivity and abundance Viable Salmonid Population (VSP) parameters than in lieu, and that Yale Lake passage provides spatial structure and diversity gains in VSP parameters that the in-lieu restoration would not.

#### 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.

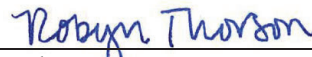
In completing this step from the Settlement Agreement, the Services understand that the original deadline for constructing passage into Yale Lake has passed. Specifically, section 4.5 of the Settlement Agreement requires PacifiCorp to have completed downstream passage at the Yale Project by the 13<sup>th</sup> 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,



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



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

## Attachment B – Services Letter, December 23, 2021



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



U.S. Fish and Wildlife Service  
911 NE 11<sup>th</sup> Avenue  
Portland, Oregon 97232

December 23, 2021

National Marine Fisheries Service  
1201 NE Lloyd Blvd., Suite 1100  
Portland, Oregon 97232

Via Electronic Mail

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

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

Dear Mr. Sturtevant and Mr. Kern:

Subject: Final Determination on New Information supplied by PacifiCorp and Cowlitz Public Utility District on Appropriateness of Passage at Lake Merwin (FERC No. P-935 and P-2071)

Pursuant to section 4.1.9 of the Settlement Agreement for the Lewis River Hydroelectric Projects, 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 licenses issued for the Projects 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.

On October 27, 2021, the Services determined that the available information does not support a determination that fish passage into Yale Lake is inappropriate. 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, also does not support a determination that fish passage into Lake Merwin is inappropriate.



## Background

On November 30, 2004, the Services, the Licensees, and numerous other parties signed a Settlement Agreement for licensing of the Projects, which reflected the parties' interest in terms for licensing and operation of the Projects 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 50-year license terms, 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 as part of pre-consultation 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 passage into Lake Merwin, 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 Lake Merwin (downstream passage at Merwin Dam and upstream passage at Yale Dam 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 Lake Merwin.

### 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 Lake Merwin, 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 Lake Merwin 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 factor 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 Services' prescriptions for the Merwin Project:

**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 Protection, Mitigation, and Enhancement (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 licensees 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 ACC<sup>1</sup> (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' 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 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, including anticipated impacts to freshwater habitat of climate change. Also, the wider geographic distribution of reintroduced anadromous fish will provide the opportunity for genetic diversity and fitness to improve these stocks." The opinion observed that tributaries to and waters of Lake Merwin considered together could provide as much as 29 miles of habitat.

Regarding the potential effects of reintroducing salmon to Lake Merwin on bull trout, in the USFWS 2006 biological opinion, USFWS determined that bull trout would not be jeopardized by the reintroduction of coho, steelhead, or Chinook salmon. The 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. 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.

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<sup>1</sup> Aquatic Coordination Committee

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 million<sup>2</sup> 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 abundance<sup>3</sup> for the three salmonid species from the in-lieu restoration. Relying on the revised EDT estimates, the Services' 2019 preliminary determination letters indicated roughly 6 miles of tributary habitat was likely to be made available by providing passage for salmonids into Lake Merwin.

#### 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 quality and suitability of the habitat in Lake Merwin 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-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:** The USGS study identified the quantity of tributary habitat and found that approximately 6 miles of tributary habitat are available for recolonization in Lake Merwin. While this extent of accessible habitat is several miles less than estimated in NMFS's 2007

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<sup>2</sup> 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.

<sup>3</sup> 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).

biological opinion (due to blockages which may or may not be resolvable), the quality of the habitat is considered good in the six miles that remain available by providing passage. Within the 2016 information, Al-Chokhachy et al. (2015) evaluated temperature, dissolved oxygen, sediment, and riparian conditions. Some thermal constraints during summer months were noted, they found little evidence of fine sediment in tributaries to either reservoir, and moderate-to-high riparian degradation was found in lower Speelyai Creek, a tributary to Lake Merwin. When taken together, data concerning habitat quality was interpreted as not limiting: “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 final report by Al-Chokhachy et al. (2018) stated that “empirical habitat data suggest little evidence that habitat quality will limit salmon and steelhead introductions.”

To further evaluate potential productivity of the habitat, both the 2016 and 2018 reports relied on 2014 field testing of coho spawning potential in tributaries above Merwin by introducing spawners and monitoring juvenile production. Coho were considered a proxy for other salmonids’ potential success. The “results suggest coho salmon adults will be capable of finding and accessing a range of habitats in tributaries to Lake Merwin...” While the study observed low densities of juvenile coho salmon in tributary surveys in Lake Merwin (Al-Chokhachy et al. 2018), it also states that the low densities “do not necessarily indicate that habitat is limiting juvenile production,” because the “relatively small amount of habitat may also influence habitat use and emigration patterns for juvenile salmon, as juveniles more proximate to large water bodies can exhibit earlier emigration.” In other words, the limited amount of tributary habitat may cause juvenile salmonids to seek rearing habitat instead within the reservoir.

Reservoir Habitat: As juvenile salmonids may rear in, as well as migrate through, the reservoir habitat, the report also assessed reservoir conditions. Extended use of reservoir environments for rearing is common in anadromous juveniles (Hegg and others, 2013; Bourret and others, 2014) and can result in pronounced growth (as cited in Al-Chokhachy et al. 2018). Lake Merwin itself is 14.5 miles long with a surface area of approximately 4,000 acres.

While the 2016 new information found conflicting data about residence time and migration within the reservoirs (which relied primarily on data from Swift Lake), these conflicts were attributed to poor collector performance. Residency periods were not evaluated in Lake Merwin, but piscine predation in Lake Merwin was assessed. Al-Chokhachy et al. (2018) evaluated the abundance, diet, growth, and temporal-spatial distribution of northern pikeminnow, kokanee salmon, and tiger muskellunge to gauge how northern pikeminnow might affect populations of reintroduced anadromous salmonids. They characterized the temporal-spatial dimensions of the thermal environment, food supply, and the distribution, size, age, and diet of key predators and prey, and mapped the overall trophic structure of the food web through stable isotope analysis for 2013–2014. They then used the data to inform bioenergetics simulations to estimate the seasonal and size-specific consumption rates and predation impact of northern pikeminnow on reintroduced anadromous salmonids under different scenarios (rearing in versus migrating through the reservoir, by subyearling and yearling fish) and alternative prey fish species.

The study concluded that northern pikeminnow are a substantial predation threat to anadromous smolts in Lake Merwin (yearly consumption by a population of 1,000 large northern pikeminnow would be approximately 16,000–40,000 age-0 spring Chinook salmon rearing in the reservoir). However, the predation studies suggest the overall northern pikeminnow predation on salmonids was considerably reduced due to predation on smaller northern pikeminnow by larger

conspecifics and tiger muskellunge. Additional measures for reduction of the pikeminnow population in Lake Merwin have not been evaluated to date but may be available.

#### Viability Benefits of Passage

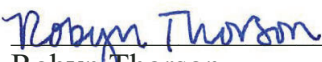
Providing passage automatically addresses viability concerns observed by Northwest Fisheries Science Center (2021), that the dams' obstruction of habitat access is the largest limiting factor in achieving population spatial structure for Lower Columbia River (LCR) coho, LCR Chinook salmon, and LCR steelhead. 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 Lake Merwin and its tributaries to more reliably meet productivity and abundance Viable Salmonid Population (VSP) parameters than in lieu habitat, and that Lake Merwin passage provides spatial structure and diversity gains in VSP parameters that the in lieu restoration would not.

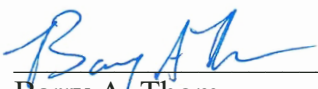
#### Conclusion and Deadline

When all habitat information and VSP factors of passage at Lake Merwin 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 Lake Merwin (downstream passage at Merwin Dam and upstream passage at Yale Dam) as required in the current license remains appropriate. This passage will reliably provide access to up to six additional miles of habitat suitable for spawning and as many as 20 miles of rearing habitat. This restored habitat access augments abundance, productivity, and spatial structure, which affords diversity within the population structure, and provides additional resiliency against climate change-induced habitat perturbations.

Passage into Lake Merwin is required by the provisions in sections 4.6 and 4.7 of the Settlement Agreement, as incorporated into the licenses for the Merwin and Yale Projects. Both provisions have a deadline for completing construction by June 26, 2025.

Sincerely,

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

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

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## Attachment C – Fish Passage Design and Construction Schedules



## Yale Downstream Fish Passage Project Schedule

Due Date	Milestone
6/1/2022	SA 4.5: LR: YAL: Notify ACC design work has begun
12/14/2022	SA 4.1: LR: YAL: Provide project implementation schedule and timeline to ACC
12/14/2022	SA 4.5: LR: YAL: Provide 30% Downstream Passage Design to Services, WDFW, and ACC
1/5/2024	SA 4.5: LR: YAL: Provide 60% Downstream Passage Design to Services, WDFW, and ACC
6/5/2024	SA 4.5: LR: YAL: Provide 90% Downstream Passage Design to ACC
7/29/2024	SA 4.5: LR: YAL: Provide Final Downstream Passage Design to Services
9/1/2024	SA 4.5: LR: YAL: Provide Final Downstream Passage Design to FERC
6/26/2026	SA 4.5: LR: YAL: Downstream Passage Facility in Operation

## Yale Upstream Fish Passage Project Schedule

Due Date	Milestone
6/1/2022	SA 4.7: LR: YAL: Notify ACC design work has begun
12/14/2022	SA 4.1: LR: YAL: Provide project implementation schedule and timeline to ACC
12/14/2022	SA 4.7: LR: YAL: Provide 30% Upstream Passage Design to Services, WDFW, and ACC
1/5/2024	SA 4.7: LR: YAL: Provide 60% Upstream Passage Design to Services, WDFW, and ACC
6/5/2024	SA 4.7: LR: YAL: Provide 90% Upstream Passage Design to ACC
7/29/2024	SA 4.7: LR: YAL: Provide Final Upstream Passage Design to Services
9/1/2024	SA 4.7: LR: YAL: Provide Final Upstream Passage Design to FERC
6/26/2026	SA 4.7: LR: YAL: Upstream Passage Facility in Operation

## Swift Upstream Fish Passage Project Schedule

Due Date	Milestone
6/1/2022	SA 4.8: LR: SW1: Notify ACC design work has begun
12/14/2022	SA 4.1: LR: SW1: Provide project implementation schedule and timeline to ACC
12/14/2022	SA 4.8: LR: SW1: Provide 30% Upstream Passage Design to Services, WDFW, and ACC
1/5/2024	SA 4.8: LR: SW1: Provide 60% Upstream Passage Design to Services, WDFW, and ACC
6/5/2024	SA 4.8: LR: SW1: Provide 90% Upstream Passage Design to ACC
7/29/2024	SA 4.8: LR: SW1: Provide Final Upstream Passage Design to Services
9/1/2024	SA 4.8: LR: SW1: Provide Final Upstream Passage Design to FERC
6/26/2026	SA 4.8: LR: SW1: Upstream Passage Facility in Operation

## Merwin Downstream Project Schedule

Due Date	Milestone
2022	Dam Safety Project Initiated
3/1/2025	Initiate Fish Passage Facility Alternatives Evaluation
12/31/2026	Complete Facility Alternatives Evaluation
2027	FERC Review and Approval of Conceptual Dam Safety Project
6/1/2028	SA 4.6: LR: MER: Notify ACC design work has begun
12/14/2028	SA 4.1: LR: MER: Provide project implementation schedule and timeline to ACC
1/5/2029	SA 4.6: LR: MER: Provide 30% Downstream Passage Design to Services, WDFW and ACC
3/31/2029	Final Designs of Dam Safety Project to FERC
9/26/2029	SA 4.6: LR: MER: Provide 60% Downstream Passage Design to Services, WDFW and ACC
12/26/2029	SA 4.6: LR: Mer: Provide 90% Downstream Passage Design to ACC
12/31/2029	FERC Approval of Dam Safety Project Designs
3/26/2030	SA 4.6: LR: MER: Provide Final Downstream Passage Design to FERC
6/26/2032	SA 4.6: LR: MER: Downstream Passage Facility in Operation
9/31/2032	Completion of Dam Safety Project

## Attachment D – Evaluation of Fish Passage Facility Alternatives

Various alternatives are presently available to convey fish past artificial barriers such as large dams. During the initial fish passage facility design phase an alternative analysis evaluation was conducted on potential options for the Lewis River hydroelectric projects. Selection of the preferred alternative was based on a number of key considerations for providing safe and efficient passage of fish, consistent with criteria established by the National Marine Fisheries Services and US Fish and Wildlife Service. Such designs will also consider the Settlement Agreement, environmental conditions, dam safety, and operational functionality including maintenance and worker safety.

Concurrent with the development of 30% designs for the Yale Upstream Fish Passage Facility, Swift Upstream Fish Passage Facility and the Yale Downstream Fish Passage Facility, the Aquatic Coordination Committee (ACC) Fish Passage Subcommittee identified the following fish passage alternatives:

### **Yale Downstream**

Passage Through Existing Turbines	Passage Through New Fish- Friendly Turbines
Passage Over Spillway	Penstock Eicher Screens with Truck Transport
Fixed Surface Collector with Truck Transport	Fixed Surface Collector with Flume or Pipe Bypass
Floating Surface Collector with Truck Transport	

### **Yale and Swift Upstream**

Concrete Fish Ladder (pass through fish ladder, Ice Harbor style or similar)	Trap and Mechanical Tram/Gondola Transport
Trap and Fish Lock Transport	Trap and Whoosh Transport
Trap and Fish Pump or Pescalator	Trap and Truck Transport (similar to what is presently implemented at Merwin Dam)

The origination of the evaluations came from review of fish passage facility alternative pros and cons developed by the Utilities design team. From this review, the Fish Passage Subcommittee expanded the evaluation by identifying a number of considerations by which to compare the alternatives. Basis for list of considerations included the Settlement Agreement, 30% Design Technical Memos and experience/knowledge of subcommittee members. Considerations included items related to facility function and capacity; operations and maintenance over varying flow and climatic conditions; safety; consistency with NMFS and USFWS fish passage guidelines – safe, timely and effective fish passage; biological performance and monitoring and evaluation. In some cases, multiple criteria were originally contained within a single consideration (e.g., meet and monitor performance standards) but after discussion, separated into separate considerations. Following the compilation of considerations, the Fish Passage

Subcommittee finalized and approved the list of considerations identified in the following tables of this Attachment D and are key to evaluating the alternative fish passage facilities.

Following the identification of considerations, the Fish Passage Subcommittee completed the evaluation by categorizing each alternative based on the following conditions:

- “No go” based on clear impacts or limitations (cell is color coded black);
- “High concern or not likely to achieve” (cell is color coded red);
- “Some concern” (cell is color coded yellow) and
- “Minimal or no concern, or likely to achieve the desired outcome” (cell is color coded green)

Results of the Fish Passage Subcommittee evaluations are provided in the following tables and indicate that (1) a Floating Surface Collector with Truck Transport is the preferred alternative for Yale downstream fish passage; and (2) Trap and Truck Transport is the preferred alternative for Yale and Swift upstream fish passage.

The Fish Passage Subcommittee, as noted above, has engaged in the development of the evaluation tables, and provides approval in this final form.

## Yale and Swift Upstream

## Fish Passage Alternatives

Items for consideration	Concrete Fish Ladder (pass through fish ladder, Ice Harbor style or similar)	Trap and Mechanical Tram/Gondola Transfer	Trap and Fish Lock Transfer	Trap and Whoosh Transfer	Trap and Fish Pump or Pescalator	Trap and Truck Transfer (similar to what is presently implemented at Merwin Dam)
Dam Safety – design cannot compromise dam safety.	Red	Red	Red	Yellow	Red	Green
No impact to project operations - particularly operation for reservoir levels and flood control	Red	Green	Green	Green	Green	Green
Employee/staffing safety	Green	Yellow	Yellow	Yellow	Yellow	Green
Use the best available technology - Yale Upstream	Yellow	Yellow	Yellow	Red	Yellow	Green
Use the best available technology - Swift Upstream	Red	Yellow	Yellow	Red	Yellow	Green
Consistent with NMFS guidelines	Green	Yellow	Yellow	Red	Yellow	Green
Design passage facilities for upstream and downstream collection and transport of Chinook, coho, steelhead, bull trout, and sea-run cutthroat	Green	Green	Green	Green	Green	Green
Safe, timely and effective passage for all transport species (at a minimum) - Yale Upstream	Yellow	Yellow	Yellow	Red	Yellow	Yellow
Safe, timely and effective passage for all transport species (at a minimum) - Swift Upstream	Red	Yellow	Yellow	Red	Yellow	Yellow
Likelihood facilities will be successful as initially constructed (ability to function as designed, known technology)	Green	Yellow	Yellow	Red	Yellow	Green
Ability to have adequate attraction flows over a range of conditions	Yellow	Green	Green	Green	Green	Green
Operate over a range of different reservoir levels	Red	Green	Green	Green	Green	Green
Operational reliability	White	White	White	White	White	White
<ul style="list-style-type: none"> <li>Weather (e.g., Can reasonably function in wind, rain, snow)</li> </ul>	Green	Yellow	Yellow	Red	Yellow	Yellow
<ul style="list-style-type: none"> <li>Amount of required maintenance (frequency &amp; duration)</li> </ul>	Green	Red	Red	Red	Red	Yellow
<ul style="list-style-type: none"> <li>Ease of maintenance &amp; repair (i.e. parts acquisition, technical expertise needed)</li> </ul>	Green	Red	Red	Red	Red	Yellow
Debris management	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Function under all flows and all seasons except upstream passage facilities where flood events with spill that could not be reasonably accommodated by the passage facility Exception: "for upstream passage facilities, to the extent it is infeasible due to flood events that require spill that could not be reasonably accommodated by the passage facility."	Red	Green	Green	Green	Green	Green
Facility location: Operations – access to facility and components	Yellow	Red	Red	Red	Red	Green
Facility location: Biological performance – is it in a location that can catch/pass fish safely and effectively.	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Provide capacity for subsequent expansion or facility adjustments.	Red	Yellow	Yellow	Green	Yellow	Green
Collect all life stages (upstream and downstream)	Yellow	Green	Green	Green	Green	Green

Evaluate facility recruitment/minimize delays						
Ability to meet SA performance standards						
Ability to monitor SA performance standards (e.g., collect, sort, and mark fish needed for evaluation and management)						
Ability to collect and transport bull trout to a location determined by USFWS						
Yale Upstream Facility: Take into account water quality - temperature variations at upper end of Lake Merwin						

## Yale Downstream

## Fish Passage Alternatives

Items for consideration	Passage through existing turbines	Passage through new fish-friendly turbines	Passage over spillway	Penstock Eicher screens with Truck Transport	Fixed Surface Collector with Truck Transport	Fixed Surface Collector with Flume or Pipe Bypass	Floating Surface Collector with Truck Transport
Dam Safety – design cannot compromise dam safety	Green	Green	Green	Yellow	Red	Red	Yellow
No impact to project operations - particularly operation for reservoir levels and flood control	Green	Green	Yellow	Green	Red	Red	Green
Employee/staffing safety	Green	Green	Green	Green	Green	Green	Green
Use the best available technology	Black	Red	Red	Red	Green	Green	Green
Design is consistent with NMFS and USFWS guidelines	Black	Black	Yellow	Black	Green	Green	Green
Design passage facilities for downstream collection and transport of Chinook, coho, steelhead, bull trout, and sea-run cutthroat	Red	Red	Red	Yellow	Yellow	Yellow	Green
Safe, timely and effective passage for all transport species (at a minimum)	Black	Black	Red	Yellow	Green	Green	Green
Likelihood facilities will achieve SA performance targets	Red	Yellow	Red	Red	Red	Red	Green
Ability to have adequate attraction flows over a range of conditions	Red	Red	Red	Red	Red	Red	Green
Operate over a range of different reservoir levels	Green	Green	Red	Green	Yellow	Yellow	Green
Operational reliability	White	White	White	White	White	White	White
<ul style="list-style-type: none"> <li>Weather (e.g., Can reasonably function in wind, rain, snow)</li> </ul>	Green	Green	Green	Green	Yellow	Yellow	Yellow
<ul style="list-style-type: none"> <li>Amount of required maintenance (frequency &amp; duration)</li> </ul>	Green	Green	Green	Black	Red	Red	Red
<ul style="list-style-type: none"> <li>Ease of maintenance &amp; repair (i.e. parts acquisition, technical expertise needed)</li> </ul>	Green	Green	Green	Red	Yellow	Yellow	Yellow
Debris management	Green	Green	Green	Red	Yellow	Yellow	Yellow
Function under all flows and all seasons	Green	Green	Red	Green	Red	Red	Green
Facility location: Operations – access to facility	Red	Red	Red	Red	Yellow	Yellow	Yellow
Facility location: Biological performance – is it in a location that can catch/pass fish safely and effectively	Red	Red	Red	Red	Red	Red	Yellow
Provide capacity for subsequent expansion or facility adjustments	Red	Red	Yellow	Red	Red	Red	Yellow
Collect all life stages (upstream and downstream respectively) at all times of year	Red	Red	Red	Yellow	Yellow	Yellow	Yellow
Evaluate facility recruitment/minimize delays	Red	Red	Red	Red	Green	Green	Green
Ability to monitor SA performance standards	Red	Red	Red	Red	Green	Green	Green
Ability to meet SA performance standards	Red	Red	Red	Red	Yellow	Yellow	Yellow
Ability to collect, sort, mark/tag fish needed for evaluation and management	Black	Black	Black	Black	Yellow	Green	Green
Ability to collect and transport bull trout to a location determined by USFWS	Black	Black	Black	Black	Yellow	Green	Red
Provide downstream transport of migrating [Adult and Juvenile] Transport Species from Yale reservoir to Woodland Release Ponds	Black	Black	Black	Black	Yellow	Green	Black
Ability to transport by truck (upstream and downstream) unless and until alternative technologies are implemented	Black	Black	Black	Black	Yellow	Green	Green



**Request No.** [2023-01]**Request Date:** [09-14-2023]

# North Fork Lewis River Project

## Request for Decision

### Elements of Lewis River Future Fish Passage

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#### Part A –Decision Summary (to be completed after decision is made)

Date of Decision:	09-14-2023
Expected Implementation Date of Action (if applicable):	Upon issuance of FERC Order
Expected completion date of action (if applicable):	Various

➤ **Decision Summary** (*brief summary of decision or action made by Committee*)

The National Marine Fisheries Service and the US Fish and Wildlife Service (Services) have determined that fish passage into and through Merwin and Yale reservoirs remains appropriate (Service’s letters dated October 27 and December 23, 2021). To guide the design and implementation of new fish passage facilities, the Fish Passage Subcommittee (FPS) has prepared a document that contains key elements of the future fish passage program (“Elements of Lewis River Future Fish Passage”) including but not limited to dates for new facilities to be operational, guidance for upstream reservoir fish distribution (“Select Reservoir Release” and “Swim-Through Release” strategies) and facility sizing, and additional contributions to the Aquatic Fund. Upon ACC approval, the Elements of Lewis River Future Fish Passage document will be provided to the Services for approval. After obtaining approval from the Services, the Utilities will submit a request for an extension of the construction completion schedules to the Federal Energy Regulatory Commission (FERC), along with the approval documents from the Services, for FERC approval.

The ACC voted unanimously in favor of submitting the Future Fish Passage Plan as attached to the Services for approval.

#### Part B –Decision Request (to be completed by Representative(s) requesting decision)

##### 1. Representatives and Affiliations

The FPS submits this Request for Decision for ACC consideration. The FPS is composed of:

<i>Organization</i>	<i>Primary Contact/Alternate Contact</i>
American Rivers	Bridget Moran
Cowlitz Tribe	Christina Donehower
Lower Columbia Fish Recovery Board	Steve Manlow/ Steve West
Trout Unlimited	Jim Byrne
Yakama Nation	Bill Sharp/ Keely Murdoch
US Forest Service	Joshua Chapman

**Request No.** [2023-01]**Request Date:** [09-14-2023]

NOAA	Bonnie Shorin/Melissa Jundt
US Fish & Wildlife Service	Jeffrey Garnett
PacifiCorp	Chris Karchesky/Todd Olson
Cowlitz PUD	Amanda Farrar
Washington Dept. of Fish & Wildlife	Bryce Glaser/ Peggy Miller

## 2. Description and Justification of Request

- **Requested Action:** [What specifically is the Committee to decide?](#)

The FPS requests ACC review and consideration for approval of the Elements of Lewis River Future Fish Passage document.

The first draft of the document was provided by the Utilities in the spring of 2022, and over the past year, the FPS has considered and discussed the various elements, revising the document along the way. Members of the subcommittee have now reached agreement on the content and language within the document. A final draft has been distributed to the ACC for review and consideration for approval.

Of significance to the fish passage program is the type of new fish passage facilities and timing in which facilities will be operational. The Elements of Lewis River Future Fish Passage identifies the following:

Facility	Facility Type	Operational Date:
Yale Downstream	Floating Surface Collector	June 26, 2026
Yale Upstream	Trap with Truck Transport	June 26, 2026
Swift Upstream	Trap with Truck Transport	June 26, 2026
Merwin Downstream	To Be Determined	June 26, 2032

The document also identifies the general siting of the facilities, an adaptive management pathway for distribution of returning adult fish and identifies the Utilities contribution of \$3,511,516 to the Lewis River Aquatic Fund. The first payment of \$877,879 will be made within six months of FERC's approval of the request for extension of the construction completion schedules. A second contribution of \$2,633,637 to the Aquatic Fund will be provided in the calendar year following FERC's approval. Contribution will be administered consistent with the procedures outlined in Section 7.5 of the Settlement Agreement.

By approving the Request for Decision, the ACC will approve the document as recommendations to the Services, and support the Services' decision for approval and FERC's consideration for approving the revised construction completion schedules.

**Request No.** [2023-01]

**Request Date:** [09-14-2023]

### 3. FERC or Settlement Agreement Requirement(s)

- **What relevant FERC or SA articles justify this action? [Articles xx]**
  - SA 4.1.8(b) Upstream Transport After Full Adult Fish Passage
  - SA 4.1.8(d) Downstream Transport
  - SA 4.5 Downstream Passage at Yale Dam
  - SA 4.6 Downstream Passage at Merwin Dam
  - SA 4.7 Upstream Passage at Yale Dam
  - SA 4.8 Upstream Passage at Swift Projects
  - SA 8.0 Hatchery and Supplementation Program
  - Lewis River FERC Licenses, Article 401. Scheduling and Reporting Requirements and Amendment Applications

## Part C – Committee Decision (to be completed by the ACC)

### 4. Committee Decision

- **Was the decision made by consensus (as defined in the Committee ground rules)?**  
Yes

- **Document voting record and tally (if applicable)**

Representatives in attendance at the September 14, 2023, ACC meeting.

Yes = Y

No= N

Abstain= A

Representative Present	Vote
Christina Donehower (CIT)	Y
Steve Manlow (LCFRB)	Y
Melissa Jundt (NMFS)	Y
Erik Lesko (Utilities)	Y
Jeff Garnett (USFWS)	Y
Peggy Miller (WDFW)	Y
Keely Murdoch (Yakama Nation)	Y

### 5. Justification for Committee Decision

- **What information (i.e., empirical data) and how was this information used to inform decision?**

The ACC used the Services final letters of determination regarding fish passage at the Yale and Merwin projects, engagement from several ACC members on the FPS, and individual review of the Elements of Lewis River Future Fish Passage document.

**Request No.** [2023-01]

**Request Date:** [09-14-2023]

## 6. Contingencies or Conditions of the Decision

- **Is decision contingent on other actions or information?**  
No
- **Is implementation of decision contingent on specific actions or information?**  
Progress toward completion of fish passage facilities will continue in parallel with the Services approval process and FERC's approval of the Utilities' request for extension of the construction completion schedules.
- **Are there any conditions attached to this decision?**  
None

## 7. Additional Information or Notations

The final Elements of Lewis River Future Fish Passage document is attached.

**Exhibit B**

**Letter from National Marine Fisheries Service and  
U.S. Fish and Wildlife Service**

**October 27, 2023**



National Marine Fisheries Service  
510 Desmond Dr SE, Suite 103  
Lacey, Washington 98503

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



U.S. Fish and Wildlife Service  
500 Desmond Dr SE, Suite 102  
Lacey, Washington 98503

October 27, 2023

Mr. William Shallenberger  
Vice President, 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 12<sup>th</sup> Avenue  
Longview, Washington 98632

Dear Mr. Shallenberger and Mr. Huhta:

**Subject: Schedule for Installation of Fish Passage Facilities at the Lewis River  
Hydroelectric Projects**

This letter is in response to your September 28, 2023, requests for approval of updated fish passage recommendations and construction schedule pursuant to section 16.6 of the Lewis River Hydroelectric Projects (Project) Settlement Agreement (SA). This letter is submitted on behalf of the National Marine Fisheries Service and U.S. Fish and Wildlife Service (together, the Services).

By way of background, on March 8, 2022, PacifiCorp and Public Utility District No. 1 of Cowlitz County (together, the Utilities) provided to the Services a draft proposal to resolve disputes regarding fish passage under the SA. The Utilities requested the Services' approval in order that the

Utilities could notify the Federal Energy Regulatory Commission and begin taking to the steps necessary to implement the proposal. On March 9, 2022, the Services responded with general support for the Utilities' proposal but identified several areas of the proposal that required additional consideration, including a completion date for fish passage facilities beyond which is identified in the SA. The Services requested that the Utilities initiate dialogue with the Lewis River Aquatic Coordination Committee (ACC) to resolve the outstanding issues.

William Shallenberger and Gary Huhta

2

On March 15, 2022, in a letter provided to the Services, the Utilities agreed to engage in discussions with the ACC to resolve remaining issues related to the implementation of fish passage at the Project. By receipt of your September 28, 2023, letter and the attached "Elements of Lewis River Future Fish Passage" (Elements) document, the Services understand those discussions are complete and any outstanding issues have been satisfactorily resolved by all parties subject to the SA.

Upon our review of the Elements document, the Services approve of the updated fish passage recommendations and construction schedule. The recommendations found within adequately address our comments to your March 8, 2022, draft proposal. While we continue to express a desire for expeditious construction and operation of all remaining fish passage facilities, we understand the constraints that may result in the delayed completion of the Merwin Reservoir Downstream Passage facility; we look forward to future discussions regarding its design. In the interim, we look forward to the timely completion, and successful operation, of the Swift Upstream, Yale Upstream, and Yale Downstream Fish Passage facilities. Additionally, we expect the contribution to the Lewis River Aquatics Fund will further habitat restoration goals to support fish passage.

We appreciate your good faith engagement with the ACC to work towards resolution on the outstanding issues related to fish passage implementation at the Project. The Services look forward to continued collaboration with the Utilities as fish passage is implemented at the Project.

Sincerely,

KRATZ.KIM.W  
.1365874677

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Kim Kratz  
Assistant Regional Administrator  
NOAA Fisheries

BRADLEY  
THOMPSON

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Brad Thompson  
State Supervisor  
US Fish and Wildlife Service