Lewis River Hydroelectric Projects Settlement Agreement
Aquatic Coordination Committee (ACC)
Meeting Agenda

Date & Time: **Thursday, April 12, 2018**
9:00 a.m. – 12:00 p.m.

Place: **Merwin Hydro Control Center**
105 Merwin Village Court
Ariel, WA 98603

Contacts: **Erik Lesko: (503) 412-8401**

Time	Discussion Item
9:00 a.m.	Welcome ➢ Review Agenda and ACC 3/8/17 Meeting Notes ➢ Comment & Accept Agenda and 3/8/17 Meeting Notes
9:10 a.m.	Public Comment Opportunity
9:20 a.m.	➢ Lewis River Acclimation Program - Release Strategy and Monitoring Plan Update o Review of existing information o Discuss general approach and outcome goals
10:15 a.m.	**Break**
10:30 a.m.	In Lieu Fund Update Presentation – Nat'l Fish and Wildlife Foundation
11:30 a.m.	Study/Work Product Updates o H&S Plan Update o Woodland Release Ponds - Status o Merwin Upstream Passage – Status o Swift Floating Surface Collector – Status o Acclimation Pond Removal - Status
11:45 a.m.	➢ Next Meeting's Agenda ➢ Public Comment Opportunity Note: all meeting notes and the meeting schedule can be located at: http://www.pacificorp.com/es/hydro/hl/lr.html#
12:00 p.m.	**Adjourn**

Join by Phone
+1 (503) 813-5252 [Portland, Ore.]
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Conference ID: 2625672

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FINAL Meeting Notes
Lewis River License Implementation
Aquatic Coordination Committee (ACC) Meeting
April 12, 2018
Merwin Hydro Control Center

ACC Representatives Present (16)
Kim McCune, PacifiCorp
Chris Karchesky, PacifiCorp
Erik Lesko, PacifiCorp
Todd Olson, PacifiCorp
Jeremiah Doyle, PacifiCorp
Tom Wadsworth, WDFW
Peggy Miller, WDFW
Aaron Roberts, WDFW
Bryce Glaser, WDFW
Ruth Tracy, USDA Forest Service
Steve Manlow, LCFRB
Steve West, LCFRB
Jim Byrne, Trout Unlimited
Tim Romanski, USFWS (via conference)
Jim Malinowski, Fish First
Eli Asher, Cowlitz Indian Tribe

Guests (2)
Jonathan Birdsong, NFWF
Andrew Purkey, NFWF

Calendar:

May 10, 2018	ACC Meeting	HCC

Assignments from April 12, 2018	**Status**
Olson/McCune: Email In-Lieu Briefing Paper and PowerPoint to ACC that went to Agency leads.	**Complete – 4/19/18**
Lesko/Karchesky: Request feedback from NMFS (Rich Turner) and Yakama Nation (Bob Rose) on the Acclimation Program – Release Strategy and Monitoring Plan.	**Complete**
Lesko: Contact NMFS regarding the Acclimation pond removal this year and their needed response to consultation.	**Complete – 4/19/18**

Assignments from November 9, 2017	**Status**
McCune/Lesko: Schedule a tour of the Woodland Release Ponds for the ACC, when possible.	**Scheduled for May 10, 2018**

Opening, Review of Agenda and Meeting Notes
Erik Lesko (PacifiCorp) called the meeting to order at 9:05 a.m. and reviewed the agenda. Eli Asher (Cowlitz Indian Tribe) requested one additional topic to review the land lock salmon regulations currently on Swift Reservoir.

Lesko also reviewed the March 8, 2018 meeting notes. The meeting notes were approved without change at 9:10 a.m.

Public Comment
None

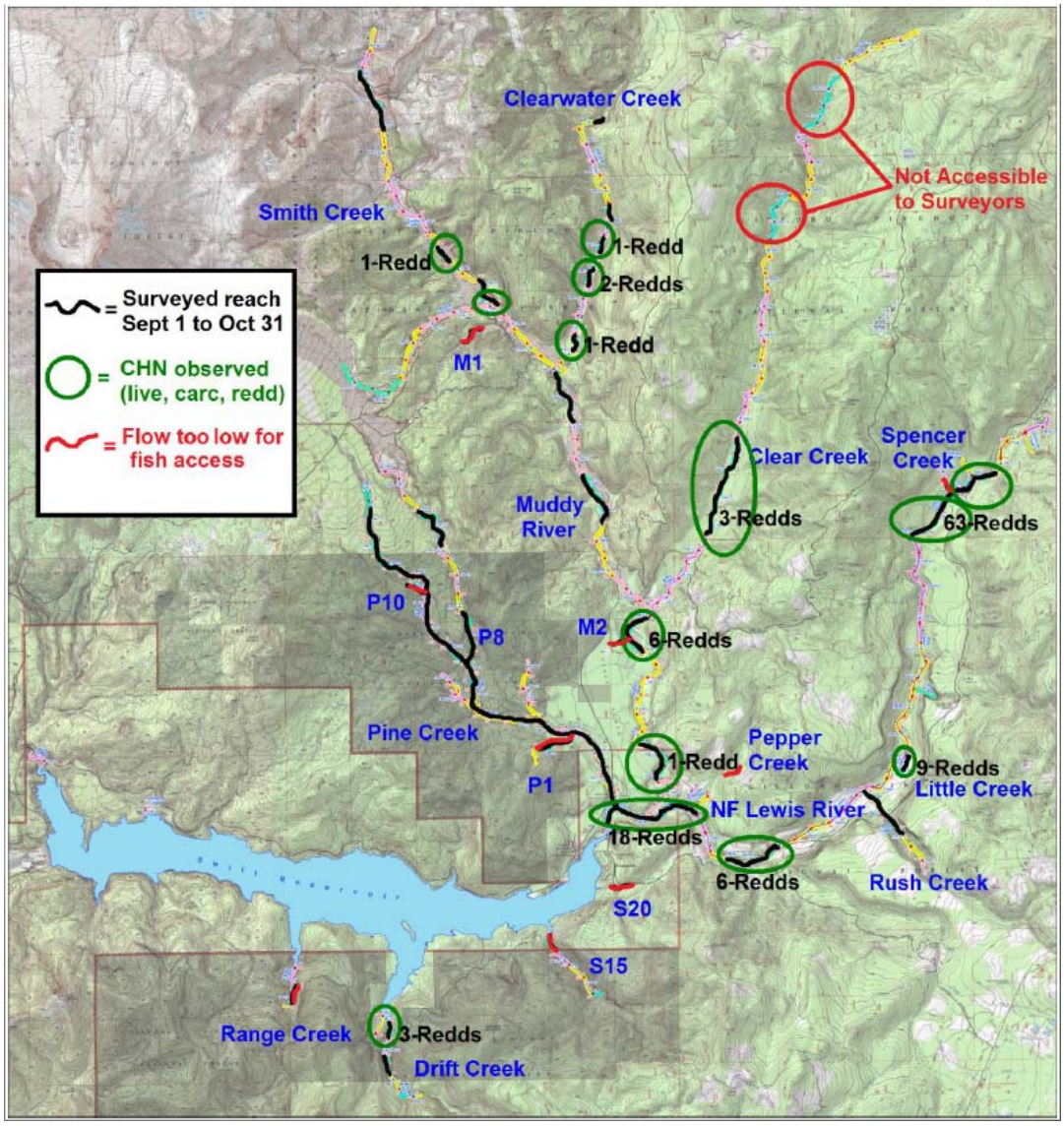
Lewis River Acclimation Program – Release Strategy and Monitoring Plan Update
Chris Karchesky (PacifiCorp) provided a PowerPoint presentation (**Attachment A**) for review and discussion specific to the Lewis River Acclimation Pond Plan provided to the ACC September, 2017. The Acclimation Pond Plan calls for the development of a detailed study plan outlining the release strategy and evaluation objectives for directly releasing juvenile spring Chinook throughout the upper basin. A link to the documents is provided below for reference:
http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Lewis_River/li/acc/09282017_LR_ACCL_Plan_FINAL.pdf

Karchesky reviewed the proposed objectives of the study plan, which were developed to: 1) identify initial release sites and numbers of smolts to be released; 2) evaluate the distribution of juveniles after release; 3) evaluate the duration of time juveniles rear in the upper watershed; 4) determine the out-migration timing to the Swift Reservoir Floating Surface Collector; and 5) determine the adult return numbers by release various group. (See **Attachment A** for further details).

Karchesky also provided the results of the 2017 spawning survey for spring Chinook above Swift Dam in 2017 (**Attachment B**), which found that redds and spawned-out carcasses throughout the upper basin – predominately in the upper Lewis River just downstream of Lower Falls, and in the Muddy River and Clear Creek drainages. Karchesky then asked the ACC that if hatchery reared spring Chinook adults are distributing this well throughout the upper basin, is the Acclimation Program necessary. He went on to ask if rather it would it be better to convert the spring Chinook program to an exclusive adult supplementation program upstream (with supplemental brood stock collection and juvenile production) similar to the existing recovery strategy for late-winter steelhead? This Winter Steelhead program has been a success with above program target numbers of adults returning to Merwin Dan and transported upstream since 2014.

Karchesky pointed out the following items as to why this strategy makes sense:
- Distribution of adult spring Chinook throughout the available habitat in the upper basin does not appear to be an issue.
- Projections for adult returns on the Lewis River are favorable in 2018.
- Current estimates of juvenile collection efficiency for spring Chinook at the Swift FSC are less than 15%.
- Higher adult returns from acclimation smolts released directly into the lower river would reduce the number of hatchery fish needed for adult supplementation.
- Example: A return rate of 1% on 100,000 smolts would yield approximately 1,000 adults; half the number needed for supplementation.

- Allows for estimates of natural production of spring Chinook through adult supplementation and natural spawning in the upper basin without acclimation fish.



No decision is expected from the ACC today. The present ACC representatives agreed that PacifiCorp's proposal is viable to put fish downstream. PacifiCorp needs feedback from absent ACC representatives. PacifiCorp suggest making the decision this May and work out the details prior to the first scheduled release of spring Chinook from the hatchery in October 2018.

Lesko noted that the H&S subgroup will add this topic to their next agenda to solicit ideas for how this may enhance the implementation of the spring Chinook release evaluations. Recommendations from the H&S subgroup will be provided to the ACC at the May 2018 meeting.

Break 10:05am
Reconvene 10:20am

Lewis River In-Lieu Update Presentation – National Fish and Wildlife Foundation (NFWF)
Jonathan Birdsong, Director – Western Region (NFWF) provided a PowerPoint presentation (see **Attachment C** for greater detail) to inform the ACC of the background of NFWF.

NFWF leverages public and private dollars for on-the-ground conservation projects through grant making and consists of a plethora of federal, corporate, timber companies, Utilities and foundation partners. NFWFs goal with each project is to sustain, restore and enhance the nation's natural heritage, to bring collaboration among federal agencies and the private sector, to create common ground among diverse interests restore instream flows and to benefit habitat. Birdsong noted one of the many key components is the science and evaluation provided for each project.

In response to an ACC representatives' question Birdsong noted that NFWF will work within the existing framework and their available opportunities to get highest return on investment, seek additional funding and increase the number of fish. NFWF would provide a request for proposal with a well-defined set of requirements and activities that aligns with local recovery plans, and including a review team for all proposals. Contractors would be selected to implement actions based on a road map of what treatments need to be done in a specific reach. Todd Olson (PacifiCorp) expressed that the big lift is creating the initial comprehensive habitat restoration plan, which sets the pathway for what the ACC wants to do and subsequent contracting.

The ACC encouraged NFWF representatives to read all of the Lewis River fish passage/in lieu fund documents (e.g., New Information Studies and Decision Support Document).

Olson provided a discussion memorandum titled, "*Information regarding the National Fish and Wildlife Foundation and description of a Lewis River Full In-Lieu Fund implementation program*" (**Attachment D**). The memo provides an introduction and an outline of a draft full in-lieu fund implementation program. This outline was developed with input from NFWF and the Yakama Nation. The Utilities and NFWF wish to get ACC input regarding all aspects of the proposed program. The ACC expressed that they would like PacifiCorp to consider working with NFWF even if only the Merwin portion of the In-Lieu fund is decided by the Services.

Some ACC representatives would like to have been informed earlier, and in writing, about PacifiCorp's plan to contact Agency leads. In general, most ACC members prefer not to

review/comment on the memorandum/draft outline until such time that the Services (NMFS and USFWS) make their decision, which is currently expected no later than August 23, 2018.

Olson has individually met with people outside the ACC. It was requested that Olson provide information he has shared in these meetings. That information is provided in **Attachment E**.

Break 11:45am
Reconvene 11:50am

Study/Work Product Updates

H&S Plan Update
The H&S Subgroup is close to completing a review draft of the 2018 Annual Operating Plan (AOP). The Subgroup intends to provide the AOP for approval by the ACC in May or June.

Woodland Release Ponds
Fully operational and will be ready for the ACC tour May 10, 2018. PIT tag antennas are installed. Ponds are designed for volitional exit. The facility is included in region wide PIT Tag Information System (PTAGIS). The ACC agreed that a tour of the Ponds will be conducted May 10, 2018.

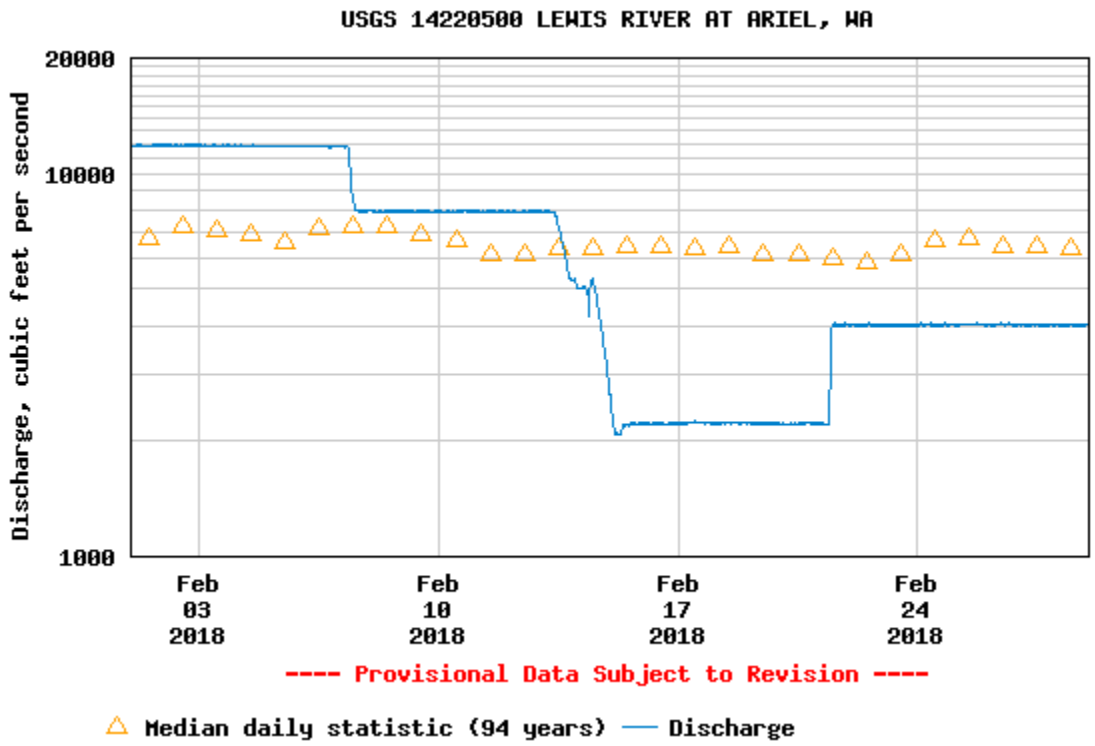
Acclimation Pond Decommission
Have not received a response from NMFS regarding its consultation. At this time it's slim to none that removal of the acclimation pond will take place this year. The FS suggested PacifiCorp follow up with or write a letter to NMFS.

Merwin Fish Collection Facility and General Operations (Attachment F)
During the month of February, a total of 358 fish were captured at the Merwin Adult Fish Collection Facility. The majority of these fish were Blank Wire Tag (BWT) winter steelhead (222 – 62%).

The Merwin Dam adult fish trap crowder and conveyance system ran continuously through the month of February except for on February 16, 2018 due to a damaged hoist block on the fish hopper. The damage was repair and fish trap put back in service. The Attraction Water Supply (AWS) and ladder water supply remained on during this brief outage. River flow varied below Merwi n Dam ranging between 2,210 and 11,900 cfs throughout the month.

Karchesky (PacifiCorp) provided a brief update regarding the Merwin Dam Adult Trap Efficiency Evaluation. To date, 16 naïve and 59 non-naïve study fish have been tagged. The current collection efficiency estimate for each group are 100% and 63%, respectively. The study will continue through the month of April.

Discharge, cubic feet per second



Upstream Transport (Attachment F)

Nine Blank Wire Tag (BWT) winter steelhead were transported upstream above Swift Dam in December 2017. Two additional fish were transported earlier this fall for a total of 11 BWT steelhead collected and transported in fall/winter 2017. Through February 2018, an additional 248 BWT winter steelhead were transported upstream for a total of 259 fish transported as part of the 2018 run year.

Typically, late run wild winter steelhead in the North Fork Lewis River begin arriving at the trap in January and continue through early-May. By February 16, 2018, more than 180 late-winter steelhead (both BWT and NOR) had already arrived at the Merwin Trap. Compared to all previous years, no more than 63 fish had ever arrived back to Merwin Trap by this time. Most of these fish (~80%) so far in 2018 have been BWTs.

YTD: February 16	
Year	**All WWSH (BWT+NOR)**
2013	13
2014	29
2015	63
2016	27
2017	23
2018	186

PacifiCorp began transporting early coho salmon to the upper basin on August 25, 2017. By the end of the December, a total of 6,499 early- and late-coho had been transported and released at the head of Swift Reservoir. An additional 448 late-run coho were transported in January 2018 for a total of 6,947 transported during the 2017 run year. No coho were transported in February.

2017 Coho Salmon (thru January 2018)

Stock	Origin	Male	Female	Jacks	Total
Early (S-type)	Natural	910	1,141	18	2,069
Early (S-type)	Hatchery	765	752	16	1,533
Late (N-type)	Natural	77	92	23	
Late (N-type)	Hatchery	1615	1,532	6	3,153
TOTAL		**3367**	**3517**	**63**	**6,947**

Swift Floating Surface Collector (Attachment F)

During the month of February, 1,707 fish were collected. The largest percentage of the fish were coho parr and smolt (24%) and spring Chinook smolt (59%). The FSC ran continuously throughout the month of February. Fish were not processed on February 24, 2018 due to poor road conditions.

Total numbers collected at the Swift FSC during the month of February by operation year.

Species (parr/smolt)	**Feb. 2013**	**Feb.2014**	**Feb.2015**	**Feb.2016**	**Feb.2017**	**Feb.2018**
Coho	100	*NA*	3,368	6,511	151	412
Chinook	34	*NA*	554	1,031	9	1,707
Steelhead	1	*NA*	8	45	1	27

Other

Land locked coho super smolts in Swift; land lock salmon harvest regulations. Discussion to be added to the May 10, 2018 ACC agenda. This will also be discussed within the H&S subgroup as it is an objective in the H&S program.

Agenda items for May 10, 2018

- April 12, 2018 Meeting Notes
- Lewis River Acclimation Program – Release Strategy and Monitoring Plan Update
- Land Locked Salmon; harvest regulations
- Study/Work Product Update
- Tour Woodland Release Ponds

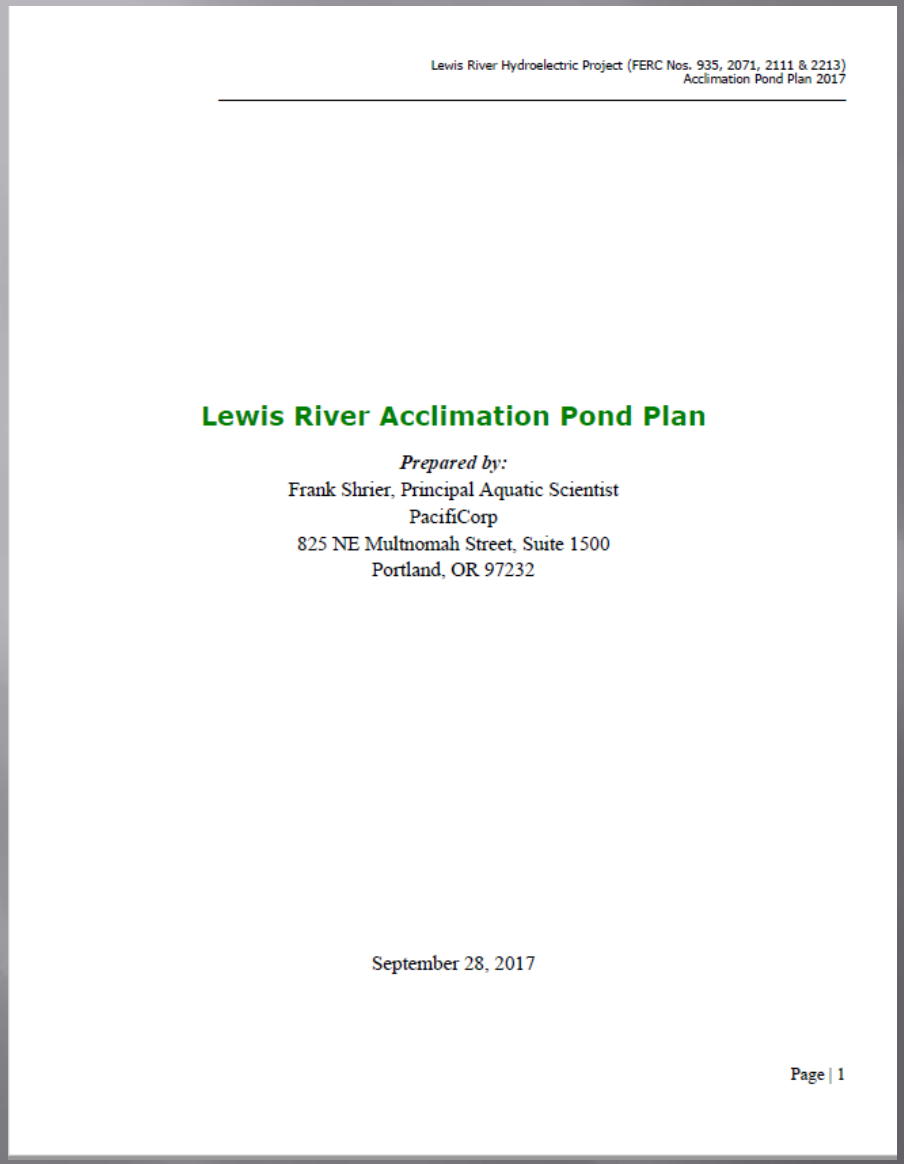
Adjourn 12:20pm

Next Scheduled Meeting:

May 10, 2018
HCC
9:00 a.m. - 12:00 p.m.

Meeting Handouts & Attachments:

- Meeting Notes from 3/8/18
- Agenda from 4/12/18
- **Attachment A** - Lewis River Acclimation Program – Release Strategy and Monitoring Plan Update PowerPoint, April 12, 2018
- **Attachment B -** Memo describing the spawning distribution of adult spring Chinook released above Swift Dam in 2017, April 10, 2018
- **Attachment C -** Lewis River In-Lieu Update Presentation – National Fish and Wildlife Foundation (NFWF)
- **Attachment D –** Discussion Memo; Information regarding the National Fish and Wildlife Foundation and description of a Lewis River Full In-Lieu Fund implementation program, April 5, 2018
- **Attachment E -** Lewis River Future Fish Passage In-Lieu Decision PowerPoint presentation and briefing paper
- **Attachment F** - Lewis River Fish Passage Report (March 2018)



Lewis River Acclimation Pond Plan

Prepared by:
Frank Shrier, Principal Aquatic Scientist
PacifiCorp
825 NE Multnomah Street, Suite 1500
Portland, OR 97232

September 28, 2017

Aquatic Coordination Committee Meeting – April 12, 2018

- Update regarding the "Study Plan" outlined in the *Lewis River Acclimation Pond Plan*
- Topics to be discussed:
  - Proposed study objectives for evaluating direct releases
  - Original intent and overarching goal of acclimation program
  - Study results and new information
  - Acclimation program strategy moving forward

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Lewis River Acclimation Pond Plan

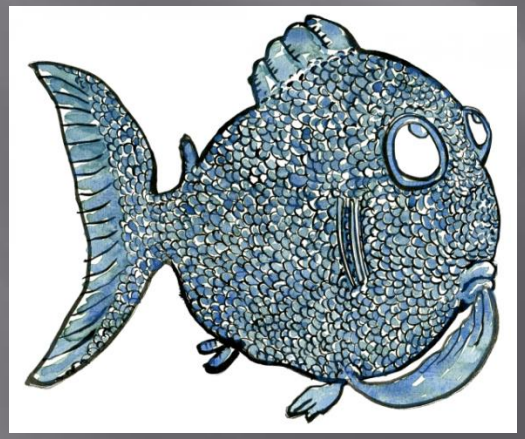
- ACC approved the Lewis River Acclimation Pond Plan and decommissioning of all three acclimation ponds (*August 10, 2017 decision*).

- Acclimation Pond Plan calls for the development of a detailed study plan outlining the release strategy and evaluation objectives for directly releasing juvenile spring Chinook throughout the upper basin.

- The proposed objectives include:

1) Identify the initial release sites and numbers to be released with input from the ACC;
2) Evaluate distribution of juveniles after release into the upper watershed;
3) Evaluate the duration of time juveniles rear in the upper watershed prior to migrating downstream;
4) Determine the out-migration timing to Swift FSC for each release group and use the information to approximate juvenile survival from release to arrival at the FSC; and
5) Determine adult return numbers by release group which will yield the smolt to adult statistic.

What is the overarching goal of the Spring Chinook Acclimation Program?



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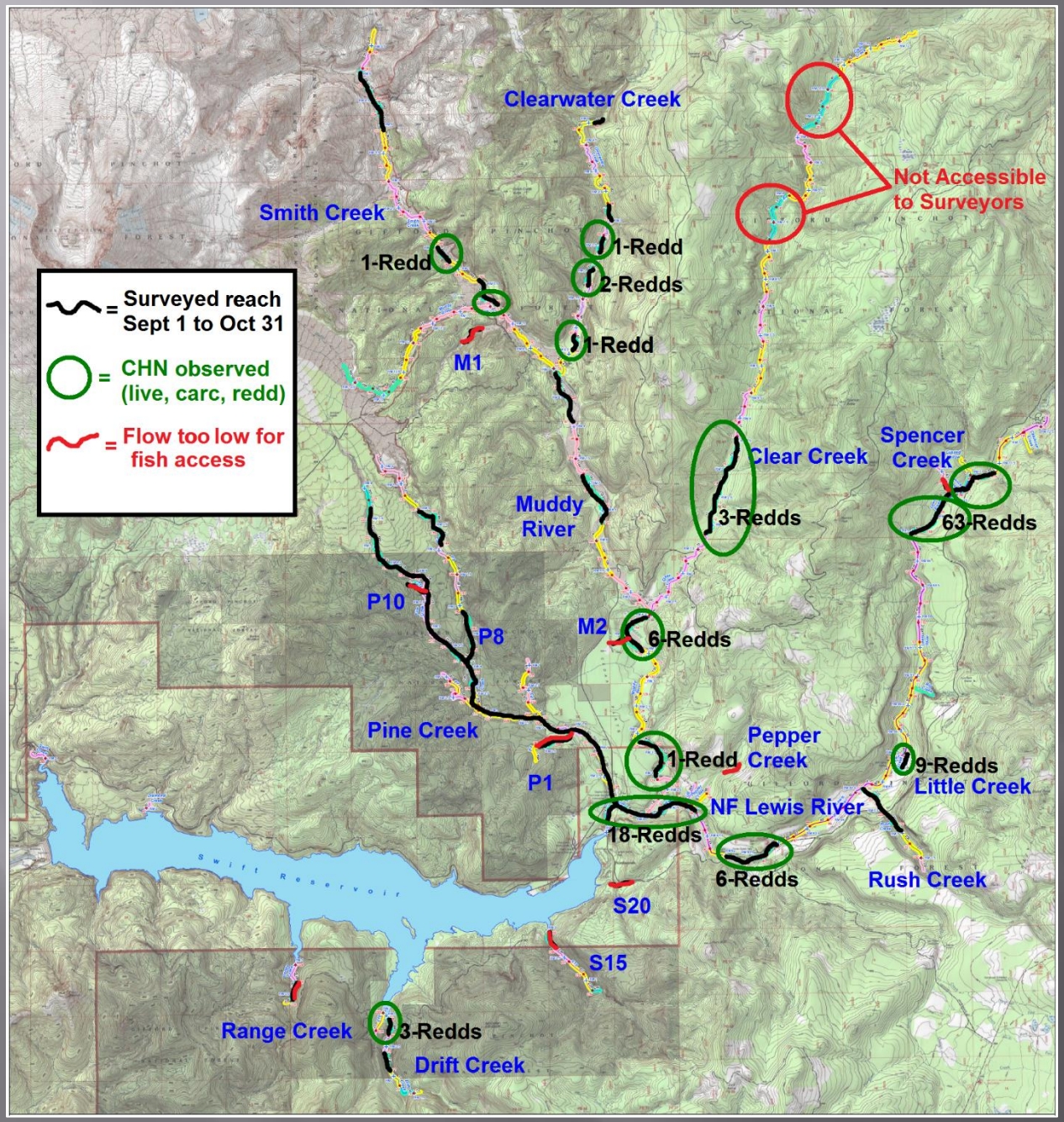

2017 Spawning Survey Distribution Map for Adult Spring Chinook

- 430 adult female hatchery spring Chinook transported upstream in 2017
- 114 spring Chinook redds observed within survey reaches
- Evidence of spawning found throughout the upper basin and reservoir tributaries

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Question:

Because hatchery origin adult spring Chinook appear to distribute throughout the upper basin, would it be better to convert the program to an exclusive adult supplementation program upstream (with supplemental brood stock collection and juvenile production) similar to the existing recovery strategy for late-winter steelhead?

Why does this strategy make sense?

- Distribution of adult spring Chinook throughout the available habitat in the upper basin does not appear to be an issue.
- Projections for adult returns on the Lewis River are favorable.
- Current estimates of juvenile collection efficiency for spring Chinook at the Swift FSC are less than 15%.
- Higher adult returns from acclimation smolts released directly into the lower river would reduce the number of hatchery fish needed for adult supplementation .
  - Example: A return rate of 1% on 100,000 smolts would yield approximately 1,000 adults; half the number needed for supplementation.
- Allows for estimates of natural production of spring Chinook through adult supplementation and natural spawning in the upper basin without acclimation fish.

For Discussion v040518

April 5, 2018

To: Lewis River Aquatic Coordination Committee

From: PacifiCorp and Cowlitz PUD

Subject: Information regarding the National Fish and Wildlife Foundation and description of a Lewis River Full In-Lieu Fund implementation program.

At the March 2018 Lewis River Aquatic Coordination Committee (ACC) meeting, PacifiCorp was requested to provide information regarding efforts to develop a full in-lieu fund implementation program. Specifically, PacifiCorp was asked to provide a briefing at the April 2018 ACC meeting. In an interest to share information prior to the April ACC meeting, the following information and attachment are provided to the ACC.

Proposal to partner with the National Fish and Wildlife Foundation

To implement the Full In-Lieu Fund in a cost-effective, efficient manner, the Utilities propose to partner with the National Fish and Wildlife Foundation (NFWF). NFWF is an independent 501(c)(3) nonprofit organization that is governed by a Board of Directors appointed by the Secretary of the Interior. NFWF works with public and private sectors to protect and restore fish, wildlife, plants and habitats. NFWF has a long history of working to protect and restore fish and wildlife and their habitats in the Columbia River and on the West Coast. NFWF presently implements a program in the upper Columbia River where it acquires water rights and commits these water rights to instream uses, including salmonid enhancement. Consequently, involving NFWF in the Lewis River process presents a unique opportunity to connect upriver conservation projects with lower-river projects, resulting in a more coordinated conservation planning process.

For additional information on the NFWF, please visit www.nfwf.org

Outline of proposed Full In-Lieu Fund Implementation Plan

The attached document is for discussion purposes and is an outline of an implementation program. This outline has been developed with input from NFWF and the Yakama Nation. Input from the Yakama Nation does not necessarily constitute recommendation of the Full In-Lieu Fund alternative, rather input helps define the expectation, needed program components, and areas needing additional discussion.

As mentioned above, this outline is provided to the ACC for discussion purposes. Utilities and NFWF wish to get input regarding all aspects of the proposed program.

Next Steps

Following input from interested parties, the utilities will draft an implementation plan for submittal to the US Fish and Wildlife Service and National Marine Fisheries Service. To provide consideration in the decision process, the plan should be submitted to Services in June.

For Discussion Purposes: Outline of Draft Lewis River Full In-Lieu Fund Implementation Plan

Introduction:

- Reference to fish passage in-lieu decision process in Settlement Agreement
- Identification of Services decision
- Purpose of this document – and how the elements described within will be used in future documentation
- Introduction of the National Fish and Wildlife Foundation (NFWF)

Roles and Responsibilities of interested parties:

Utilities -

- "Ownership" of program. Assure actions are completed per FERC license (including, settlement agreement, biological opinions, clean water act certificate, etc.).
- Provide funding into the program as defined in the Lewis River Settlement Agreement.
- Contract/fund NFWF to administer the program. (*Note: this is funded by utilities – not in-lieu fund*)
- Annual reporting to FERC
- Promote goals and objectives of program to local counties and communities

NFWF –

- Administer the program.
- Facilitate and manage efforts to implement program developed by interested parties and as approved by ACC.
- Report on program status and outcomes.
- Obtain matching funding to that provided by Utilities.

ACC –

- Various levels of engagement with NFWF.
- Use of sub-group of habitat experts to develop Comprehensive Habitat Restoration Plan (Plan) including specific habitat improvement actions, possibly involved with project evaluation and selection.
- Final Plan to be approved by ACC.
- As desired[1], participate on annual project review/award team.
- Annual project selection and individual selected contractors to be approved by ACC
- Support Plan actions within respective ACC representative's organization.

[1] ACC members may not have time or technical experience to review projects – each agency will have discretion in staffing these efforts.

Regulatory Process:

- Upon selection of the Full In-Lieu Alternative, the Utilities will notify FERC that PacifiCorp and Cowlitz PUD will be submitting application for license amendments to formalize the outcome of the Services decision.
- Utilities will prepare applications for license amendments and submit those to the Lewis River Settlement Agreement parties for 60 day review.
- Following review, Utilities will address any comments, then submit applications to FERC.
- FERC will respond to application request.

Goal:

Support re-establishment and improvement of the form and function of aquatic habitats of the Lower Columbia River[2] which collectively promote large-scale environmental benefits, substantial increases in numbers of ESA listed salmon and steelhead, and achievement of the Lewis River Settlement Agreement Outcome Goal.

Objectives:

a) Develop Comprehensive Habitat Restoration Plan through collaboration and in consultation with interested representatives of the Lewis River Aquatic Coordination Committee. Final Plan will have support of these entities and be approved by the Federal Energy Regulatory Commission (as required by Lewis River hydroelectric project licenses).
b) Planning, to extent possible, will be integrated with strategies developed under other processes to recover salmon, steelhead and bull trout which are listed under the federal Endangered Species Act (ESA). Consistency with the Lower Columbia Salmon Recovery Plan (Recovery Plan) will be considered in developing the Plan.
c) Planning will be based on existing laws, rules, or ordinances created for the purpose of protecting, restoring, or enhancing fish habitat, including the Shoreline Management Act, Chapter 90.58 RCW, the Growth Management Act, Chapter 36.70A RCW, and the Forest Practices Act, Chapter 76.09 RCW.
d) Planning will consider habitat projects which have previously been identified and have great expected benefit, but have not been implemented ("low hanging fruit").
e) Plan will be implemented by the ACC, facilitated by the NFWF through a process defined by the ACC.
f) Acquire additional funding for habitat restoration/protection efforts in the Lower Columbia River area.
g) Include an Adaptive Management cycle to integrate new information as it becomes available.

[2] Areas under the purview of the Lower Columbia River Fish Recovery Board

Guiding Principles:

- Focus efforts on identifying and prioritizing actions that achieve multiple objectives;
- Consider without prejudice, available actions that benefit aquatic habitat form and function (e.g., nutrient enhancement);
- Consider actions that provide resilient habitat over changing conditions;
- Achieve goals and objectives in a cost-effective and efficient manner;
- Strive to ensure that overlap and duplication of efforts is avoided;
- Ensure actions are coordinated and integrated with other planning efforts in the watershed and other activities adjacent to the planning area;
- Facilitate and promote active participation by those entities affected by actions and key decisions;
- Keep affected entities informed of key decisions and outcomes;
- Work cooperatively to achieve the goal and all objectives of the plan;
- Strive to ensure planning actions are integrated into federal, state and local decision-making processes;
- Work to broaden public awareness and support of the plan; demonstrate positive outcomes.

Timeframe:

- Comprehensive Habitat Restoration Plan development is estimated to take 12 – 18 months.
- Plan implementation period is estimated to be 10+ years, but will continue until all In-Lieu Funds have been spent.
- Per Lewis River Settlement Agreement, Utilities will begin funding program in calendar year 2019 and conclude specific contributions in 2025 (see attachment A for schedule). Funds will exist within an interest bearing account and annually withdrawn as necessary to promote Plan actions supported by the ACC. Funds do not have a time limit in which they may be spent.
- Annual Plan activities and schedule will be identified in the Final Plan.

Comprehensive Habitat Restoration Plan Recommendations and Action Schedules:

- Intent of the Plan is to identify areas that can benefit the most from focused habitat improvements, and for then each area, identify corresponding actions specifically designed to re-establish and improve the form and function of that area.
- Working with the ACC and designated subgroup (TBD), NFWF will:
    - use existing/available data to characterize the current condition of habitat,
    - solicit site expertise for Plan areas,
    - conduct site reviews to verify conditions, and
    - recommend to the ACC site-specific project actions
- Recommended actions will be submitted to the ACC for review, approval and inclusion into the Plan.
- NFWF will encourage engagement with the ACC throughout this process.

A valuable planning component found in other watershed planning documents is the development of "Action Schedules" for each of the recommendations presented in the Plan (See Lower Columbia River Fish Recovery Board, WRIA 29A Watershed Planning Detailed Implementation Plan, November 2015). Using a template prepared by the Lower Columbia River Fish Recovery Board, Action Schedules describe the following information:

- Title and description
- Status
- Goals
- Expected Outcomes
- Supporting Tasks
- Supporting Strategy and Policies
- Oversight Responsibility
- Cooperating Partners
- Cost and Funding Outlook
- Constraints and Uncertainties

Collectively, these Action Schedules are intended to serve as the framework to achieve the Plan goal and objects and recommendations in an integrated, coordinated and efficient manner. Action Schedules are designed to provide specific restoration concept and habitat targets for their associated actions, and to identify the basic steps necessary to achieve them. Action Schedules are intended to be specific enough to identify a clear pathway for project implementation, yet general enough to permit flexibility in carrying them out.

Technical Advisory Committee (*move up to Roles and Responsibilities?*)

- Facilitated/administered by NFWF
- Committee is comprised of experienced technical experts with knowledge of geographic environment (*Discussion needed; require certain level of qualifications?*)
- Establish annual program priorities consistent with the Comprehensive Habitat Restoration Plan
- Conduct outreach to prospective project applicants
- Review project proposals and provide recommendations to ACC
- Members do not have conflict of interest. (*Discussion needed: intent is that committee member has no conflict or bias towards considered projects*).

Disseminate Request for Proposal (RFP) and related outreach:

- Facilitated/administered by NFWF
- Develop list of prospective project applicants
- Announcement of RFPs
- NFWF will assist applicants in application process

Review and select project proposals:

- Facilitated/administered by NFWF

- Project review process with Technical Advisory Committee
- Annually rank and select projects that best achieve goals and outcomes
- Recommend projects to ACC
- NFWF will be contact for all applicants regarding status of application and questions of Technical Advisory Committee
- Following ACC approval, NFWF to assist preparation of annual report to FERC

Announce grants:

- Facilitated/administered by NFWF
- Inform grant recipients of selection
- Promote individual projects through press releases and other media

Administer awards:

- Facilitated/administered by NFWF
- Carry out all financial, administrative and contractual aspects of awards
- Monitor progress of all projects to ensure they successfully reach stated objectives
- Provide periodic financial reports to ACC

Permitting:

- Look for ways to expedite project permitting (Engage a subgroup of permitting agencies?)
- Programmatic approach?
- Completed by grant recipient?
- Use of subcontractor to complete permit applications and manage applications through process?
- Subcontractor to work on behalf of agencies to complete NEPA, etc.?

Provide technical assistance:

- As appropriate, NFWF and Technical Advisory Committee will provide necessary technical assistance to ensure successful project implementation

Monitoring and evaluation of success:

- Determine level of need:
    - Project implementation (Did it get done?)
    - Additive value (What is it providing to surrounding environment?)
- Timing of monitoring and associated reporting
    - Project construction report due within 90 days of completion
    - Set aside $ for programmatic level assessment of completed projects in year 8? Are projects still in place and functioning?

- Use results of PacifiCorp's M&E to provide high-level review of response to habitat projects??

Reporting:

- NFWF business plan tracking?
- Grant recipient 6 month reports
- Grant recipient final report – how they satisfied specific objectives
- NFWF project report
  - Evaluation
  - Project accomplishments
  - Partnership accomplishments
  - Financial record
- PacifiCorp to submit annual reports to FERC

Community Outreach – Media:

- Identify objectives
- Identify target audiences
- Identify methods (i.e., presentations, media releases, website postings, tours, etc.)

ATTACHMENT A

In-Lieu Funding amount and schedule as provided in article 7.6 of the Lewis River Settlement Agreement

Action	Schedule	Utilities Funding Amount (Approximate)
Selection of Full In-Lieu Fund Alternative by Services	August, 2018	
ACC approves Foundation's role to administer/manage Full In-Lieu Fund	September, 2018	
Development of Comprehensive Restoration Strategy	September, 2018 to December, 2019	
Year 1 funding available from Utilities as per the Lewis River Settlement Agreement	June 2019	$4,000,000
Comprehensive restoration strategy is provided to ACC for review and approval	December, 2019	
Year 1 restoration project plan recommended to ACC for review and approval	May, 2020	
Year 1 project Request for Proposals are announced	June 2020	
Year 1 project contractors selected and contracts issued	August 2020	
Year 1 projects obtain necessary permits	May 2021	
Year 1 project work is initiated	June 2021	
Project activities noted above will repeat on an annual basis until the In-Lieu Fund and related matching funds are committed for use		
Funding available from Utilities as per the Lewis River Settlement Agreement	June 2020	$4,100,000
	June 2021	$5,600,000
	June 2022	$5,400,000
	June 2023	$5,500,000
	June 2024	$5,700,000
	June 2025	$5,800,000

Background on NFWF

Jonathan Birdsong, Director – Western Region

NATIONAL FISH AND WILDLIFE FOUNDATION

NFWF

About Us

Who We Are

- Chartered by Congress in 1984
- 30 member Board appointed by Secretary of the Interior,
  - Includes FWS Director and NOAA Administrator

What We Do

- Sustain, restore, enhance the nation's natural heritage
- Bring collaboration among federal agencies and private sector
- Create common ground among diverse interests

Bald eagle

How We Do It

- Leverage public funding with private money for on-the-ground conservation projects through grant making

NATIONAL FISH AND WILDLIFE FOUNDATION NFWF

Opportunities for Leverage

Non-Federal Partners

- Corporations
- Foundations
- Private Donors
- Mitigation and Settlements
- States
- NGOs

$

NFWF

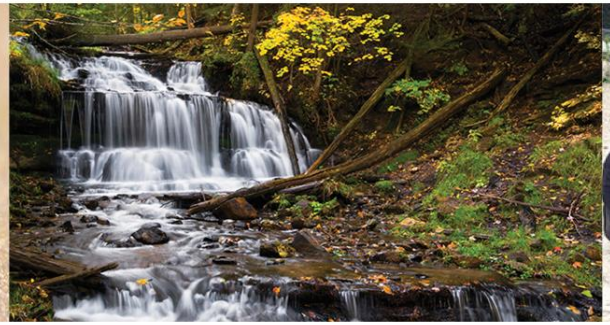
Convener of focused, leveraged funding and leadership for priority wildlife and habitat conservation through grant making

$

Federal Partners

- Appropriations
- Cooperative Agreements

Species and Habitats



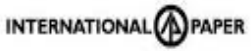
Water Quality and Scarcity

People in Conservation

NFWF

Current Federal Partners

Current Corporate Partners



Current Foundation Partners

Ann and Gordon Getty Foundation

Harte Charitable Foundation

Ishiyama Family Foundation

Jeniam Foundation

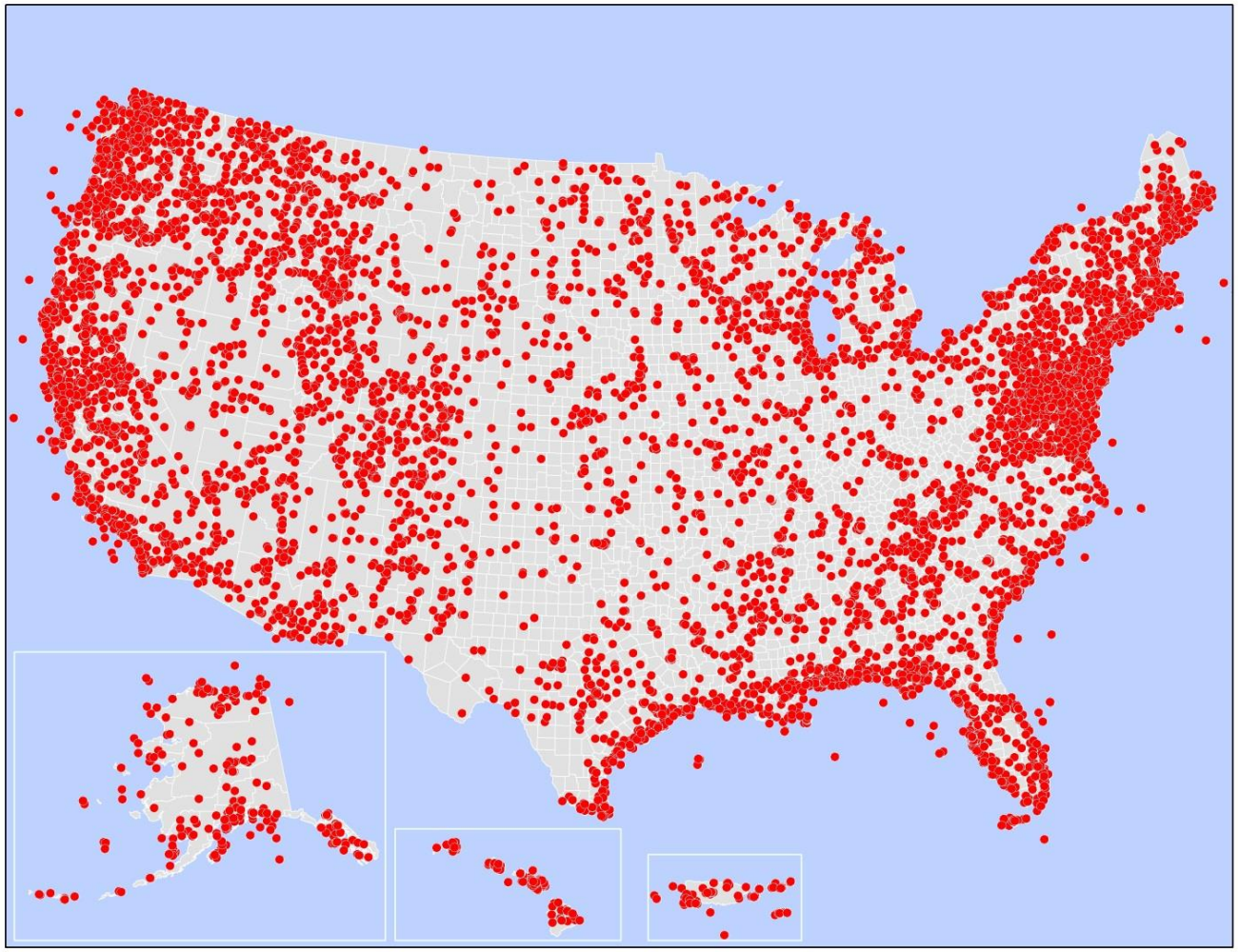
Long Island Sound Funders Collaborative

Marisla Foundation, Inc.

The David and Lucile Packard Foundation

The Moore Charitable Foundation

NFWF Conservation Investments (1984 – 2017)



- 16,318 Investments
- 4,500 organizations
- All 50 states

NATIONAL FISH AND WILDLIFE FOUNDATION NFWF

Science and Evaluation

- Analyze and synthesize findings
- Share learnings with conservation community
- Establish the Foundation as thought leader

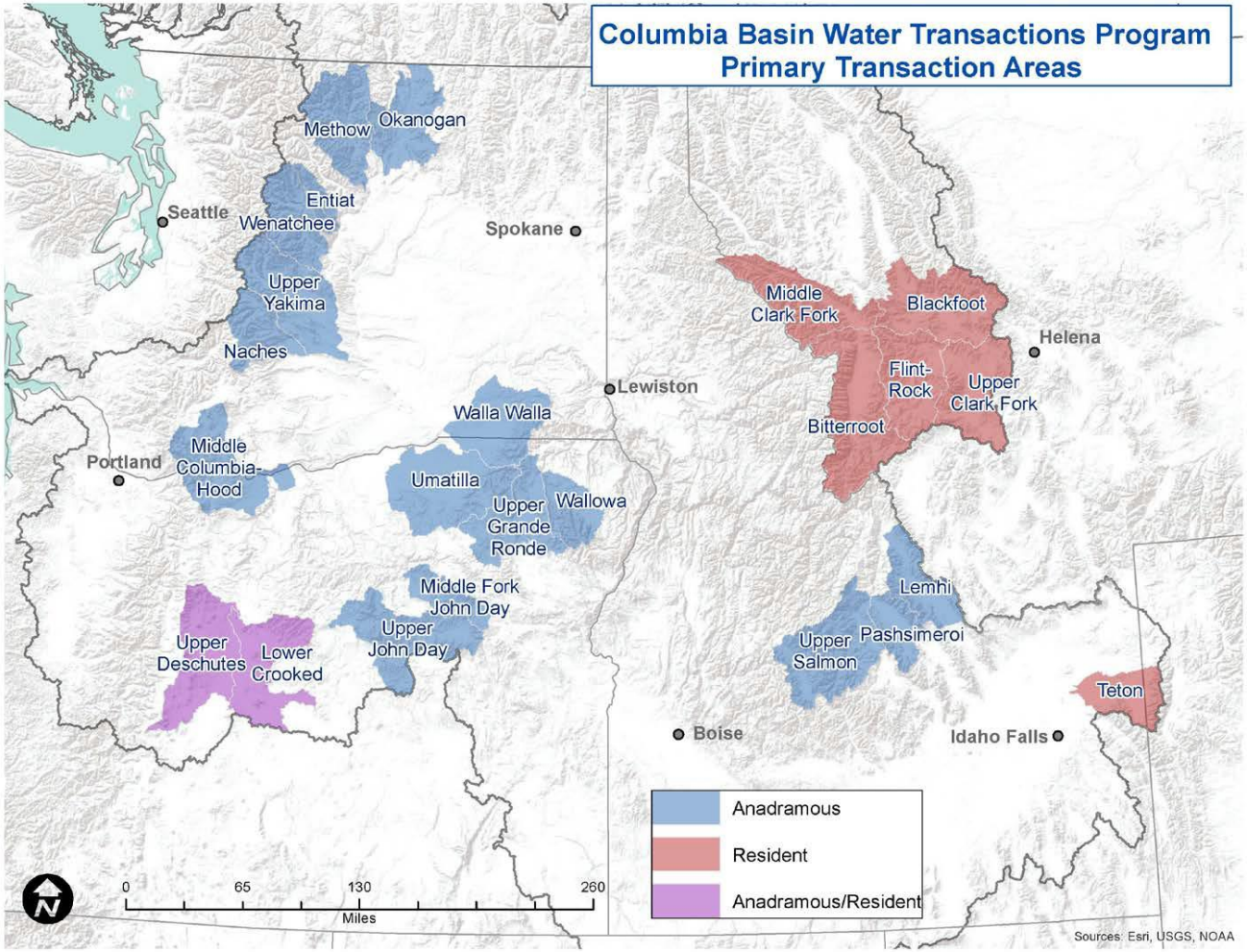
- Synthesize science, leveraging internal and external expertise
- Understand root causes and model effective methods of action
- Define outcomes, strategies and evaluation

- Evaluate conservation impact and cost-effectiveness of investments at both project and program levels
- Report results and track metrics
- Adapt strategic and operational plans on an ongoing basis

- Build science and evaluation principles into implementation processes
- Identify and select grantees, methodologies and tools

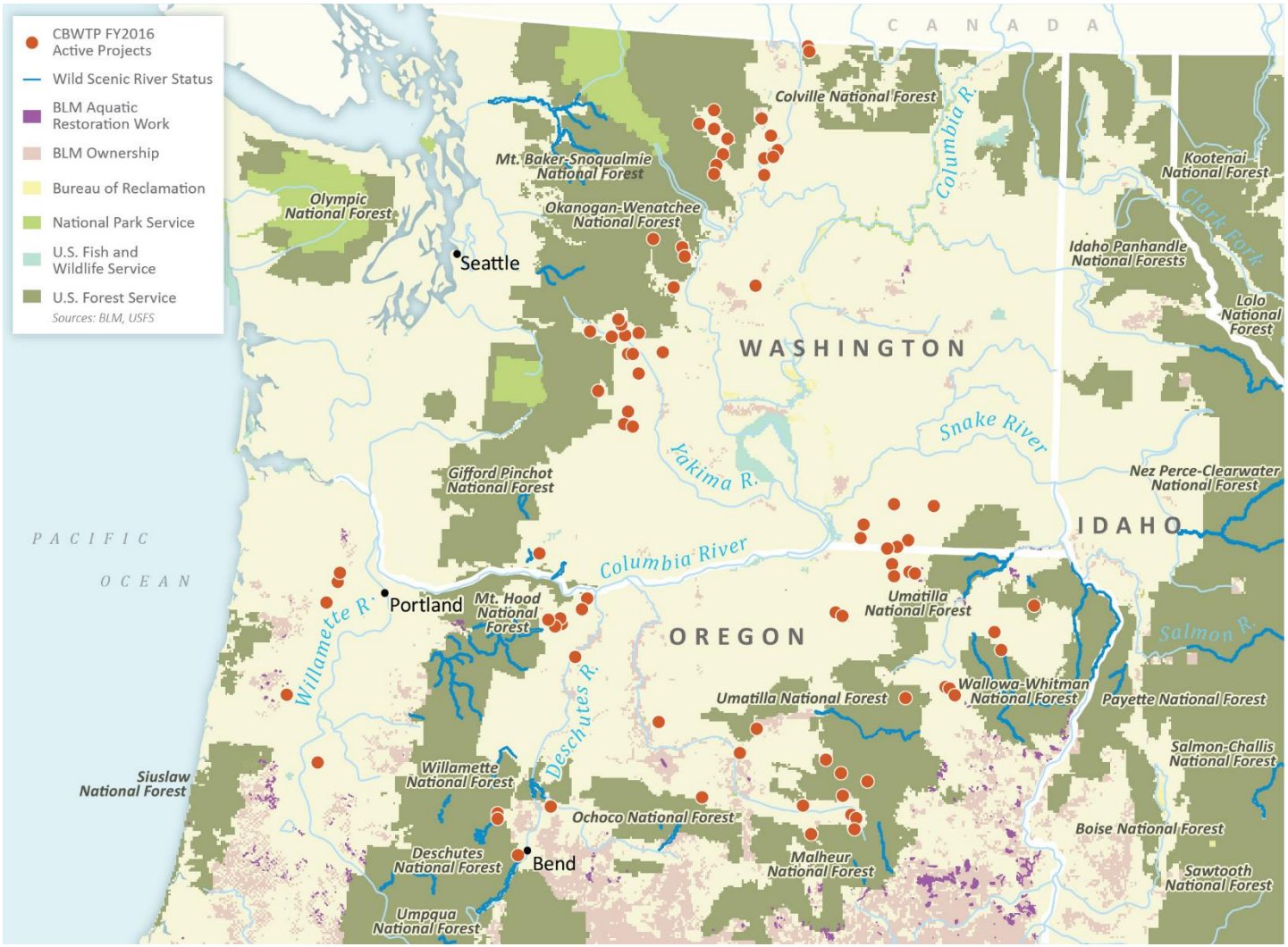
NFWF

How we are currently working in the Columbia Basin?



- Columbia Basin Water Transaction Program
  - 16 year partnership with BPA.
  - To date, helped secure over 10 million acre feet of water fish recovery.

How can we align with other partners?

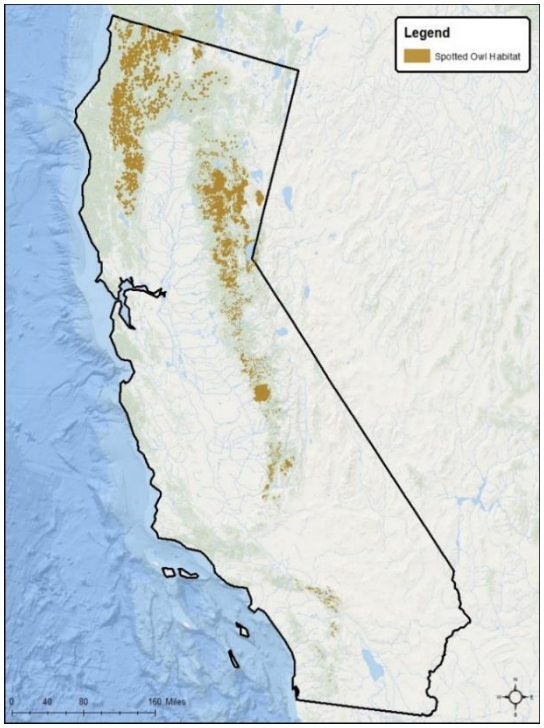


NATIONAL FISH AND WILDLIFE FOUNDATION NFWF

Other Partners in the Forest – Timber Companies and Utilities

Sierra Pacific Industries

MOU with SPI, USFS, CalFire and in consultation with the U.S. Fish and Wildlife Service, proactive step to align fuels management with habitat improvement of California spotted owl



Pacific Gas and Electric

Veterans in the Forest

Questions or Comments?

Jonathan Birdsong
Director Western Regional
Phone: 415-243-3101
Jonathan.Birdsong@nfwf.org

Coral reef

Caribou

American avocet

For Discussion v040518

April 5, 2018

To: Lewis River Aquatic Coordination Committee

From: PacifiCorp and Cowlitz PUD

Subject: Information regarding the National Fish and Wildlife Foundation and description of a Lewis River Full In-Lieu Fund implementation program.

At the March 2018 Lewis River Aquatic Coordination Committee (ACC) meeting, PacifiCorp was requested to provide information regarding efforts to develop a full in-lieu fund implementation program. Specifically, PacifiCorp was asked to provide a briefing at the April 2018 ACC meeting. In an interest to share information prior to the April ACC meeting, the following information and attachment are provided to the ACC.

Proposal to partner with the National Fish and Wildlife Foundation

To implement the Full In-Lieu Fund in a cost-effective, efficient manner, the Utilities propose to partner with the National Fish and Wildlife Foundation (NFWF). NFWF is an independent 501(c)(3) nonprofit organization that is governed by a Board of Directors appointed by the Secretary of the Interior. NFWF works with public and private sectors to protect and restore fish, wildlife, plants and habitats. NFWF has a long history of working to protect and restore fish and wildlife and their habitats in the Columbia River and on the West Coast. NFWF presently implements a program in the upper Columbia River where it acquires water rights and commits these water rights to instream uses, including salmonid enhancement. Consequently, involving NFWF in the Lewis River process presents a unique opportunity to connect upriver conservation projects with lower-river projects, resulting in a more coordinated conservation planning process.

For additional information on the NFWF, please visit www.nfwf.org

Outline of proposed Full In-Lieu Fund Implementation Plan

The attached document is for discussion purposes and is an outline of an implementation program. This outline has been developed with input from NFWF and the Yakama Nation. Input from the Yakama Nation does not necessarily constitute recommendation of the Full In-Lieu Fund alternative, rather input helps define the expectation, needed program components, and areas needing additional discussion.

As mentioned above, this outline is provided to the ACC for discussion purposes. Utilities and NFWF wish to get input regarding all aspects of the proposed program.

Next Steps

Following input from interested parties, the utilities will draft an implementation plan for submittal to the US Fish and Wildlife Service and National Marine Fisheries Service. To provide consideration in the decision process, the plan should be submitted to Services in June.

For Discussion Purposes: Outline of Draft Lewis River Full In-Lieu Fund Implementation Plan

Introduction:

- Reference to fish passage in-lieu decision process in Settlement Agreement
- Identification of Services decision
- Purpose of this document – and how the elements described within will be used in future documentation
- Introduction of the National Fish and Wildlife Foundation (NFWF)

Roles and Responsibilities of interested parties:

Utilities -

- "Ownership" of program. Assure actions are completed per FERC license (including, settlement agreement, biological opinions, clean water act certificate, etc.).
- Provide funding into the program as defined in the Lewis River Settlement Agreement.
- Contract/fund NFWF to administer the program. (*Note: this is funded by utilities – not in-lieu fund*)
- Annual reporting to FERC
- Promote goals and objectives of program to local counties and communities

NFWF –

- Administer the program.
- Facilitate and manage efforts to implement program developed by interested parties and as approved by ACC.
- Report on program status and outcomes.
- Obtain matching funding to that provided by Utilities.

ACC –

- Various levels of engagement with NFWF.
- Use of sub-group of habitat experts to develop Comprehensive Habitat Restoration Plan (Plan) including specific habitat improvement actions, possibly involved with project evaluation and selection.
- Final Plan to be approved by ACC.
- As desired[1], participate on annual project review/award team.
- Annual project selection and individual selected contractors to be approved by ACC
- Support Plan actions within respective ACC representative's organization.

[1] ACC members may not have time or technical experience to review projects – each agency will have discretion in staffing these efforts.

Regulatory Process:

- Upon selection of the Full In-Lieu Alternative, the Utilities will notify FERC that PacifiCorp and Cowlitz PUD will be submitting application for license amendments to formalize the outcome of the Services decision.
- Utilities will prepare applications for license amendments and submit those to the Lewis River Settlement Agreement parties for 60 day review.
- Following review, Utilities will address any comments, then submit applications to FERC.
- FERC will respond to application request.

Goal:

Support re-establishment and improvement of the form and function of aquatic habitats of the Lower Columbia River[2] which collectively promote large-scale environmental benefits, substantial increases in numbers of ESA listed salmon and steelhead, and achievement of the Lewis River Settlement Agreement Outcome Goal.

Objectives:

a) Develop Comprehensive Habitat Restoration Plan through collaboration and in consultation with interested representatives of the Lewis River Aquatic Coordination Committee. Final Plan will have support of these entities and be approved by the Federal Energy Regulatory Commission (as required by Lewis River hydroelectric project licenses).
b) Planning, to extent possible, will be integrated with strategies developed under other processes to recover salmon, steelhead and bull trout which are listed under the federal Endangered Species Act (ESA). Consistency with the Lower Columbia Salmon Recovery Plan (Recovery Plan) will be considered in developing the Plan.
c) Planning will be based on existing laws, rules, or ordinances created for the purpose of protecting, restoring, or enhancing fish habitat, including the Shoreline Management Act, Chapter 90.58 RCW, the Growth Management Act, Chapter 36.70A RCW, and the Forest Practices Act, Chapter 76.09 RCW.
d) Planning will consider habitat projects which have previously been identified and have great expected benefit, but have not been implemented ("low hanging fruit").
e) Plan will be implemented by the ACC, facilitated by the NFWF through a process defined by the ACC.
f) Acquire additional funding for habitat restoration/protection efforts in the Lower Columbia River area.
g) Include an Adaptive Management cycle to integrate new information as it becomes available.

[2] Areas under the purview of the Lower Columbia River Fish Recovery Board

Guiding Principles:

- Focus efforts on identifying and prioritizing actions that achieve multiple objectives;
- Consider without prejudice, available actions that benefit aquatic habitat form and function (e.g., nutrient enhancement);
- Consider actions that provide resilient habitat over changing conditions;
- Achieve goals and objectives in a cost-effective and efficient manner;
- Strive to ensure that overlap and duplication of efforts is avoided;
- Ensure actions are coordinated and integrated with other planning efforts in the watershed and other activities adjacent to the planning area;
- Facilitate and promote active participation by those entities affected by actions and key decisions;
- Keep affected entities informed of key decisions and outcomes;
- Work cooperatively to achieve the goal and all objectives of the plan;
- Strive to ensure planning actions are integrated into federal, state and local decision-making processes;
- Work to broaden public awareness and support of the plan; demonstrate positive outcomes.

Timeframe:

- Comprehensive Habitat Restoration Plan development is estimated to take 12 – 18 months.
- Plan implementation period is estimated to be 10+ years, but will continue until all In-Lieu Funds have been spent.
- Per Lewis River Settlement Agreement, Utilities will begin funding program in calendar year 2019 and conclude specific contributions in 2025 (see attachment A for schedule). Funds will exist within an interest bearing account and annually withdrawn as necessary to promote Plan actions supported by the ACC. Funds do not have a time limit in which they may be spent.
- Annual Plan activities and schedule will be identified in the Final Plan.

Comprehensive Habitat Restoration Plan Recommendations and Action Schedules:

- Intent of the Plan is to identify areas that can benefit the most from focused habitat improvements, and for then each area, identify corresponding actions specifically designed to re-establish and improve the form and function of that area.
- Working with the ACC and designated subgroup (TBD), NFWF will:
    - use existing/available data to characterize the current condition of habitat,
    - solicit site expertise for Plan areas,
    - conduct site reviews to verify conditions, and
    - recommend to the ACC site-specific project actions
- Recommended actions will be submitted to the ACC for review, approval and inclusion into the Plan.
- NFWF will encourage engagement with the ACC throughout this process.

A valuable planning component found in other watershed planning documents is the development of "Action Schedules" for each of the recommendations presented in the Plan (See Lower Columbia River Fish Recovery Board, WRIA 29A Watershed Planning Detailed Implementation Plan, November 2015). Using a template prepared by the Lower Columbia River Fish Recovery Board, Action Schedules describe the following information:

- Title and description
- Status
- Goals
- Expected Outcomes
- Supporting Tasks
- Supporting Strategy and Policies
- Oversight Responsibility
- Cooperating Partners
- Cost and Funding Outlook
- Constraints and Uncertainties

Collectively, these Action Schedules are intended to serve as the framework to achieve the Plan goal and objects and recommendations in an integrated, coordinated and efficient manner. Action Schedules are designed to provide specific restoration concept and habitat targets for their associated actions, and to identify the basic steps necessary to achieve them. Action Schedules are intended to be specific enough to identify a clear pathway for project implementation, yet general enough to permit flexibility in carrying them out.

Technical Advisory Committee (*move up to Roles and Responsibilities?*)

- Facilitated/administered by NFWF
- Committee is comprised of experienced technical experts with knowledge of geographic environment (*Discussion needed; require certain level of qualifications?*)
- Establish annual program priorities consistent with the Comprehensive Habitat Restoration Plan
- Conduct outreach to prospective project applicants
- Review project proposals and provide recommendations to ACC
- Members do not have conflict of interest. (*Discussion needed: intent is that committee member has no conflict or bias towards considered projects*).

Disseminate Request for Proposal (RFP) and related outreach:

- Facilitated/administered by NFWF
- Develop list of prospective project applicants
- Announcement of RFPs
- NFWF will assist applicants in application process

Review and select project proposals:

- Facilitated/administered by NFWF

- Project review process with Technical Advisory Committee
- Annually rank and select projects that best achieve goals and outcomes
- Recommend projects to ACC
- NFWF will be contact for all applicants regarding status of application and questions of Technical Advisory Committee
- Following ACC approval, NFWF to assist preparation of annual report to FERC

Announce grants:

- Facilitated/administered by NFWF
- Inform grant recipients of selection
- Promote individual projects through press releases and other media

Administer awards:

- Facilitated/administered by NFWF
- Carry out all financial, administrative and contractual aspects of awards
- Monitor progress of all projects to ensure they successfully reach stated objectives
- Provide periodic financial reports to ACC

Permitting:

- Look for ways to expedite project permitting (Engage a subgroup of permitting agencies?)
- Programmatic approach?
- Completed by grant recipient?
- Use of subcontractor to complete permit applications and manage applications through process?
- Subcontractor to work on behalf of agencies to complete NEPA, etc.?

Provide technical assistance:

- As appropriate, NFWF and Technical Advisory Committee will provide necessary technical assistance to ensure successful project implementation

Monitoring and evaluation of success:

- Determine level of need:
    - Project implementation (Did it get done?)
    - Additive value (What is it providing to surrounding environment?)
- Timing of monitoring and associated reporting
    - Project construction report due within 90 days of completion
    - Set aside $ for programmatic level assessment of completed projects in year 8? Are projects still in place and functioning?

- Use results of PacifiCorp's M&E to provide high-level review of response to habitat projects??

Reporting:

- NFWF business plan tracking?
- Grant recipient 6 month reports
- Grant recipient final report – how they satisfied specific objectives
- NFWF project report
  - Evaluation
  - Project accomplishments
  - Partnership accomplishments
  - Financial record
- PacifiCorp to submit annual reports to FERC

Community Outreach – Media:

- Identify objectives
- Identify target audiences
- Identify methods (i.e., presentations, media releases, website postings, tours, etc.)

ATTACHMENT A

In-Lieu Funding amount and schedule as provided in article 7.6 of the Lewis River Settlement Agreement

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	June 2024	$5,700,000
	June 2025	$5,800,000

PACIFICORP
A BERKSHIRE HATHAWAY ENERGY COMPANY

Pacific Power |
Rocky Mountain Power
825 NE Multnomah
Portland, OR 97232

February, 2018

Lewis River Full In-Lieu Fund Implementation Process – Briefing Paper

Contact: Todd Olson, Director, Compliance Hydro Resources
Email: Todd.Olson@PacifiCorp.com
Phone: (503) 813-6657

Overview

PacifiCorp owns and operates three hydroelectric projects on the Lewis River in southwestern Washington (Merwin, Yale and Swift No. 1). These projects each have large dams which create large storage reservoirs (see attached map). Public Utility District No. 1 of Cowlitz County, Washington (Cowlitz PUD) is the owner of Swift No. 2, a generation facility associated with these dams. Together, the two Utilities participate in the operation of the Lewis River projects.

In 2008 the Federal Energy Regulatory Commission (FERC) issued 50-year operating licenses for these projects that incorporate a settlement agreement ("Agreement"). The Agreement provides a process to evaluate if fish passage should be constructed around Merwin and Yale dams, or if a mitigation fund should be implemented in lieu of such fish passage. Currently fish passage is provided to the upper basin via trap and haul around these two reservoirs. The Agreement provides that the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) (collectively, "the Services" and the agencies with authority to prescribe fishways under Section 18 Federal Power Act) evaluate the need for fish passage and, based on the post-settlement agreement studies, determine if passage at one or both of the dams is inappropriate. If fish passage is not deemed appropriate based on these studies, then the Agreement provides that the Utilities will fund approximately $40 million of aquatic habitat enhancement projects to benefit the affected salmon and steelhead populations. This is known as the Full In-Lieu Fund alternative.

To support an informed decision regarding the need for fish passage, and to inform consideration of the effects of fish passage on Endangered Species Act (ESA)-listed fish stocks, PacifiCorp engaged the United States Geological Survey (USGS) and private technical consultants to study local habitat conditions, species interactions--including predation by resident fish, fish passage facility effectiveness, and potential of fish production under current and improved habitat conditions using the enhancement fund. These studies have been completed and results were reported to the Services in June, 2016. The results of these studies is available on PacifiCorp's website:
http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Lewis_River/li/ar/06242016_LR%20In%20Lieu%20Reports.pdf

In the fall of 2016, the Services engaged Tribal governments and interested stakeholders to review and consider fish passage and in-lieu habitat restoration alternatives. As a result of these discussions, additional analysis was prepared. As the technical review process concluded, the Agreement parties could not reach full consensus on a preferred alternative. Three parties,

including Fish First, a local fishing organization, favor the full In-Lieu Alternative. One party favored full fish passage, and four parties either favored a mix of alternatives or remain undecided. This period of engagement focused only on the science and did not consider other social, cultural or policy matters. The results from this process were summarized in a report authored by a meeting facilitator which is available on PacifiCorp's website: http://www.pacificorp.com/content/dam/pacificorp/doc/Energy_Sources/Hydro/Hydro_Licensing/Lewis_River/li/acc/Final_Decision_Support_July_28_2017%20(website).pdf)

The current FERC deadline for the Services to make a decision regarding the need for fish passage is February 23, 2018; however, an Extension of Time request to further consider this matter was filed with the Commission on February 15, 2018. At the request of the Services, the filing identifying an additional six month period of time is needed for the Services to make their decision. The new proposed decision date is no later than August 23, 2018.

Utilities' Perspective

The Utilities believe available scientific information supports selection of the Full In-Lieu Fund Alternative. Information contained in technical studies indicates that substantially greater fish production will occur under this alternative compared to constructing fish passage into Merwin and Yale reservoirs (Table 1). Additional supporting information is provided in Exhibit A:

- The Full In-Lieu Alternative meets or exceeds the agency minimum population abundance goals for spring Chinook, coho and winter steelhead in the Lewis River;
- Unlike the fish passage alternative, the Full In-Lieu Alternative has the added benefit of avoiding adverse effects on federally-listed bull trout - a small and important subpopulation of which resides in Yale reservoir;
- The Full In-Lieu Alternative provides the greatest opportunity to increase adult returns of native spring Chinook, and coho to the Lewis River Basin;
- The Full In-Lieu Alternative is a more cost-effective use of ratepayer dollars as compared to the fish passage alternative; and
- The Full In-Lieu Alternative provides an opportunity to partner with the National Fish and Wildlife Foundation (NFWF) which can provide matching dollars to the Utilities funding (Fund potentially expands from $40 million to $80+ million) bringing habitat benefits to the Lower Columbia River and increased survival to all Columbia River fish.

Table 1. Comparison of modeled salmon production under three alternatives.

	Full Fish Passage Alternative	Full In-Lieu Fund Alternative	Yale Fish Passage Alternative
Species	Modeled estimates of adult abundance following construction of fish passage projects	Modeled estimates of adult abundance following $40 million of In-Lieu Fund habitat projects	Modeled estimates of adult abundance following Yale fish passage and $20 million of In-Lieu Fund habitat projects
Spring Chinook	2,761	3,911 (+30% higher than full fish passage alternative)	3,483 (+21%)
Coho	8,310	12,153 (+42 %)	10,782 (+33%)
Winter Steelhead	1,910	2,280 (+16%)	2,160 (+12%)

Beyond creating self-sustaining populations of fish, the Agreement recognizes a goal of achieving harvestable populations of salmon and steelhead upstream of Merwin dam. In defining harvest, the Agreement includes without limitation, commercial, tribal and recreational harvest. This goal is important to achieve for cultural and economic reasons. Tribal and recreational harvest are important to the local community, and provide important economic benefits within the Lewis River basin.

Currently, limited sportfishing opportunities are provided in the Lewis River to harvest hatchery origin coho, winter steelhead and spring Chinook if annual adult fish returns are expected to meet hatchery escapement goals. No fishery is currently available on these stocks upstream of Merwin dam. Downstream of Merwin dam, PacifiCorp provides sportfishing access facilities at five locations, three of which have boat ramps. In the future, recreational facilities upstream of Swift dam would be supported by bank fishing access at Swift dam and boat access at PacifiCorp's existing Swift Forest Campground. This campground is planned for expansion once capacity metrics have been met or exceeded.

As outlined in Exhibit A, the In-Lieu Alternative has the greatest probability of meeting or exceeding the goal of providing harvestable populations based on modeling results. As a result, this alternative will provide greater Tribal, commerical, and sportfishing opportunities than the passage alternatives, resulting in larger financial benefits for local businesses involved in tourism and the sportfishing industry. Matching funds noted below will also provide an additional means to improve harvest opportunities even further.

Proposal for Implementation of the Full In-Lieu Fund

To implement the Full In-Lieu Fund in a cost-effective, efficient manner, the Utilities propose to partner with the National Fish and Wildlife Foundation (NFWF). NFWF is an independent 501(c)(3) nonprofit organization that is governed by a Board of Directors appointed by the Secretary of the Interior. NFWF works with public and private sectors to protect and restore fish, wildlife, plants and habitats. NFWF has a long history of working to protect and restore fish and wildlife and their habitats in the Columbia River and on the West Coast. NFWF presently implements a program in the upper Columbia River where it acquires water rights and commits these water rights to instream uses, including salmonid enhancement. Consequently, involving

NFWF in the Lewis River process presents a unique opportunity to connect upriver conservation projects with lower-river projects, resulting in a more coordinated conservation planning process.

Under the Utilities' proposal, the Utilities would transfer In-Lieu Funds to NFWF for management on the schedule provided in the Agreement. As per the Lewis River Settlement Agreement, $4 million would be available in June, 2019, after development and approval of a Comprehensive Restoration Plan by the Utilities and NFWF (Table 2). Subsequent transfers will occur on the schedule provided in the Agreement. NFWF will maintain In-Lieu Funds in a segregated, interest-earning account. NFWF will provide annual reports and accounting summaries to the Agreement parties outlining how funding has been spent, the availability of matching funds, and the status of projects implemented pursuant to the In-Lieu Fund.

Prior to making any funding transfers to NFWF, the Utilities and NFWF will execute a Memorandum of Agreement (MOA). This MOA will guide NFWF's involvement in the implementation of the In-Lieu Fund consistent with the requirements of the Agreement. Under the MOA, NFWF will directly manage and administer the In-Lieu Fund using its internal technical staff. Funding will be released from the NFWF-managed account at the direction of ACC, and as provided by the Agreement.

Comprehensive Restoration Plan

Under this proposal, the Utilities and NFWF will jointly develop in consultation with the Services, Tribes and interested ACC representatives a Comprehensive Restoration Plan commencing in October of 2018, after formal approval of the In-Lieu Alternative (Table 2). The Comprehensive Restoration Plan will be presented to the ACC in December, 2019, for review and approval. Thereafter, restoration actions will commence in spring of 2020.

The Comprehensive Restoration Plan will contain a detailed project schedule for identifying, developing and conducting restoration activities. This Plan will also identify specific criteria and monitoring requirements that each restoration action will meet prior to its presentation to the ACC in annual meetings for review and approval. The Plan may be modified on an annual basis based on the results of effectiveness monitoring conducted as a part of the restoration action. Results from the planning process will be shared with upper- and lower Columbia River groups to help inform selection and implementation of effective habitat enhancement actions that result in demonstrable benefits to anadromous fish species, including spring Chinook, coho, and steelhead.

Projects identified through the Comprehensive Restoration Planning process will be provided to the Services, Tribal governments and interested ACC representatives for review and approval. Expertise will be employed to develop comprehensive subbasin restoration strategies to ensure "treatments" and corresponding projects address the key limiting factors to salmon and steelhead in these areas. These treatments will focus on conducting habitat improvements, nutrient enhancement, and protection of key aquatic habitats in the Lewis River. Project criteria will include consistency with the Washington Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan (Lower Columbia fish Recovery Board, May 2010), and the ESA Recovery Plan for Lower Columbia River Coho, Lower Columbia River Chinook Salmon,

Columbia River Chum Salmon and Lower Columbia River Steelhead (NMFS, June 2013). Each project selected will include firm cost estimates and project criteria. Contracts will be executed by NFWF and parties undertaking the work.

Matching Restoration Funds

Under this proposal, NFWF will endeavor to match fund provided by the Utilities with other funding sources, such as private donations, federal appropriations, and other contributions. NFWF has indicated the Utilities' contribution would be treated as a private party contribution under its rules, thus qualifying for matching funds. These matching funds may increase the overall amount of In-Lieu Fund by an additional $40 million or more, potentially making the total enhancement fund over $80 million. This would result in even greater habitat benefits and corresponding fish production increases than were evaluated in technical studies. Under this proposal the Utilities will pay NFWF's administrative costs associated with implementing the Full In-Lieu Alternative so that those administrative costs do not diminish the overall fund.

The $40 million value of the Full In-Lieu Fund is significant. In conducting fish production modeling of the Lewis River basin upstream of Swift dam, 56.5 miles of stream length have been identified for improvement. Assuming a cost of $500,000 per mile of habitat restoration cost, all of this stream length could be improved and approximately $9.7 million would be available for habitat improvements downstream of Merwin dam. An additional $40 million dollars made available through matching money could be prioritized for use in the lower Columbia River, immediately downstream from the Lewis River, in the Columbia River estuary. These additional matching funds and associated habitat work is expected to have significant value towards the survivability of all salmon and steelhead smolts migrating through the Columbia River estuary.

Implementation Schedule

Table 2 provides a preliminary implementation schedule for the Full In-Lieu Fund alternative. Funding amounts and the funding schedule outlined below are consistent with the Agreement.

Table 2. Implementation schedule for Full In-Lieu Alternative.

Action	Schedule	Utilities Funding Amount (Approximate)
Selection of Full In-Lieu Fund Alternative by Services	August, 2018	
ACC approves Foundation's role to administer/manage Full In-Lieu Fund	October, 2018	
Development of Comprehensive Restoration Strategy by Utilities and NFWF	October, 2018 to December, 2019	
Year 1 funding available from Utilities as per the	June 2019	$4,000,000

Lewis River Settlement Agreement		
Comprehensive restoration strategy is provided to ACC for review and approval	December, 2019	
Year 1 restoration project plan recommended to ACC for review and approval	May, 2020	
Year 1 project Request for Proposals are announced	June 2020	
Year 1 project contractors selected and contracts issued	August 2020	
Year 1 projects obtain necessary permits	May 2021	
Year 1 project work is initiated	June 2021	
Project activities noted above will repeat on an annual basis until the In-Lieu Fund and related matching funds are committed for use		
Funding available from Utilities as per the Lewis River Settlement Agreement	June 2020	$4,100,000
	June 2021	$5,600,000
	June 2022	$5,400,000
	June 2023	$5,500,000
	June 2024	$5,700,000
	June 2025	$5,800,000

Bull Trout Fish Passage Facilities

Under the terms of the Agreement, upon selection of the Full In-Lieu Alternative, the Utilities are required to provide downstream bull trout passage from Yale reservoir, and upon a further determination by USFWS, upstream bull trout passage from Yale reservoir into Swift reservoir. The "Yale Downstream Bull Trout Facility" must be similar in magnitude and scale to modular floating Merwin-type collectors.

The Utilities are prepared to initiate the bull trout fish passage design process and invite engagement from the Services, Tribal governments and other ACC representatives. Regarding construction and operation of a permanent upstream bull trout passage facility, the Utilities look forward to providing information and discussing the need for such a facility with the USFWS as the agency that makes the determination.

Exhibit A. Additional Supporting Information

- Merwin reservoir only has 5.1 miles of available tributary spawning habitat for coho and steelhead, and 0 miles for spring Chinook. In comparison, Yale has 18.4 miles and Swift over 82 miles of suitable habitat.

- With fish passage, the majority of returning adult fish will be required to swim through the approximately 14-mile long Merwin reservoir to reach the next upstream passage facility. Given no spring Chinook habitat in Merwin, all of these fish must swim through the reservoir. Any spring Chinook that stay in the reservoir will not be able to contribute to future production. The same can be expected for any coho and steelhead destined for upstream habitat but electing to stay in Merwin if that habitat gets overpopulated.

- For fish that do successfully spawn in Merwin tributaries, their offspring will face "… a substantial predation threat…"(USGS, New Information Report, June 24, 2016). The USGS estimates that Merwin Reservoir holds 11,240 Northern Pikeminnow greater than 300mm in length (large), and 544,259 Northern Pikeminnow of size 200 – 299 mm (sub adults). Assessing the yearly consumption of this population on juvenile fish, the Northern Pikeminnow in Merwin could easily consume all juvenile salmonids produced in this area.

- As previously mentioned above, the Yale bull trout population appears to be small and geographically isolated. Spawning use is limited to the upper 1,700 meters of available habitat within Cougar Creek. Recent annual redd counts in 2015 and 2016 recorded fewer than 20 redds. In 2017, a total of 22 redds were observed. The highest redd count since 2007 is 28 redds observed in 2008. The expectation is that introduced adult coho (1,595 fish destined for Yale tributaries) will reach and spawn in upper Cougar Creek. A significant concern is the potentially detrimental timing of coho spawning, which follows bull trout spawning. There is a high risk of redd imposition, whereby coho could dig up and destroy bull trout redds. Should bull trout eggs survive to juvenile fish, they would have to compete with juvenile salmon and steelhead for rearing areas, and sheer numbers of these anadromous fish could push bull trout out of prime rearing habitat. All species would also compete for the same food resources in the available habitat. And, depending on the size of the fish, each can become predators of the other.

- While Yale reservoir has 18.4 miles of available tributary spawning habitat, the spring Chinook, coho and winter steelhead production value of the habitat is modeled to be less than that available with implementation of the Full In-Lieu Fund habitat restoration alternative (see Table 1).

Lewis River Fish Passage In-Lieu Decision

Presentation to XXXX

Todd Olson
Director, Compliance
PacifiCorp – Hydro Resources
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Lewis River Hydroelectric Project

- North Fork Lewis River
- Southwest Washington
- Consists of 4 hydroelectric projects
- Spans 30 river miles

Mt. St. Helens

Lower Falls

Swift No. 2

Swift Dam

Merwin Dam

Yale Dam

Woodland

North Fork Lewis R.

N

10 Miles

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Lewis River Fish Passage In-Lieu Decision

Spring Chinook

Lewis River
Winter Steelhead

Coho Salmon

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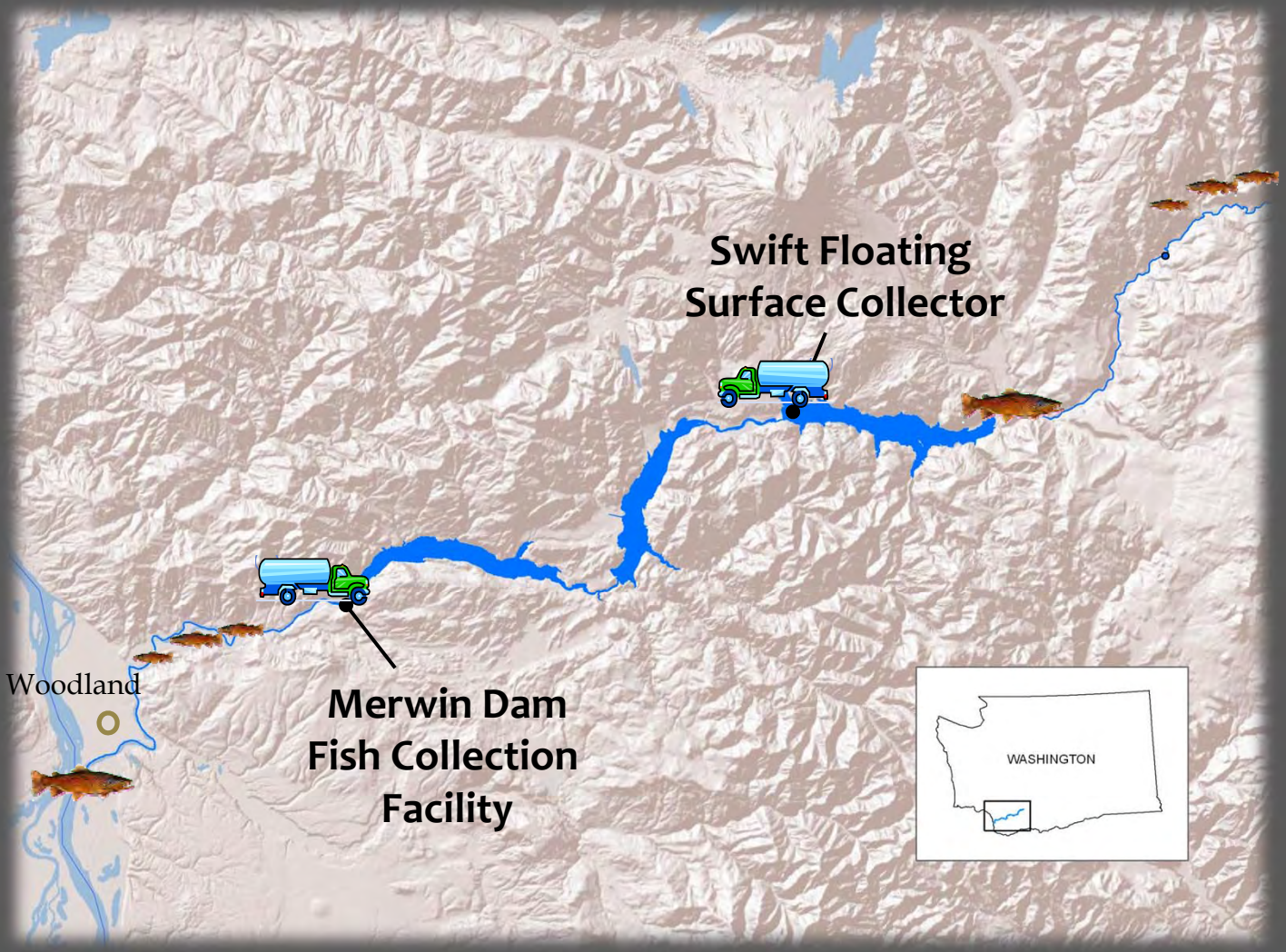
Anadromous Fish Reintroduction – Phase 1



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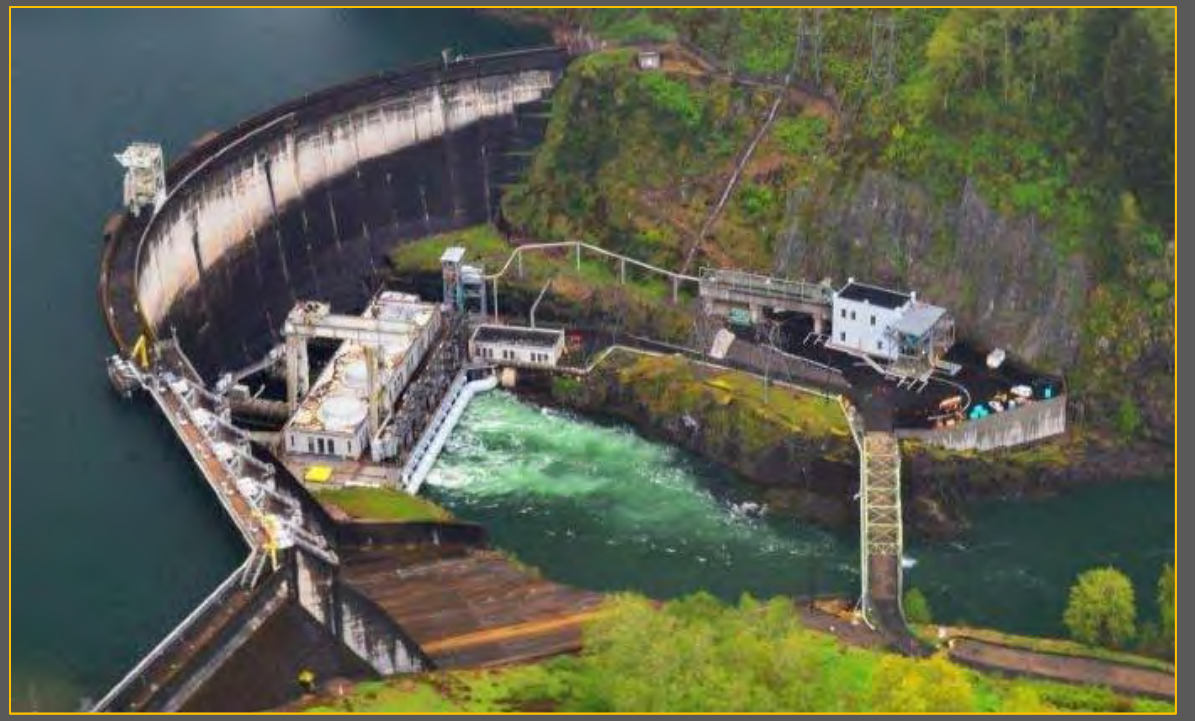
Merwin Dam
Adult Fish Collection Facility

- Facility has 5 main structures
  - Attraction Water Supply (AWS) System (up to 400cfs attraction flow)
  - Volitional Fish Ladder
  - Fish Lift and Conveyance System
  - Presort Pond
  - Fish Sorting and Transport Building
- Trap and Haul Facility
- Fish holding capacity: 3,000 adult fish
- Operating range: designed for continuous operation
- Began Operation: Dec 2013



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Swift Reservoir
Floating Surface Collector (FSC)

- FSC has 4 main structures
  - Truck Access Trestle
  - Mooring Tower
  - Fish Collector
  - Barrier Net System
- Trap and Haul Facility
- Began operation Dec 2012
- Dimensions: 170 ft long, 60ft wide, 53 ft tall
- 600-1,000 cfs attraction flow
- Fish holding capacity: 75,000 smolt-sized fish
- Operating range: will work within a 100ft reservoir fluctuation – designed for continuous operation

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Future Fish Passage or In-Lieu Habitat Projects?

- Per Settlement Agreement, USFWS and NMFS will review New Information, and consider if salmon and steelhead fish passage into Merwin and/or Yale reservoirs is inappropriate.
- If deemed so, Utilities will provide approximately $40 million (2016 $) for in-lieu habitat restoration projects

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Future Fish Passage or In-Lieu Habitat Projects?

- New Information Studies:
  - U.S. Geological Survey studies – Regional fish passage facility assessment, tributary habitat assessments, and species interaction including predation by resident fish
  - Mason Bruce & Girard – Update of Lewis River basin EDT Model and modeling of fish passage/in-lieu alternatives
  - PacifiCorp – Bull trout monitoring

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Future Fish Passage or In-Lieu Habitat Projects?

- New Information Key Results:
  - Merwin has 5.1 miles of associated spawning habitat for coho and winter steelhead, 0 miles for spring Chinook
  - Yale has 18.4 miles of associated spawning habitat
  - EDT results of adult abundance upstream of Merwin:

	Full Fish Passage	Yale Fish Passage Alt	Full In-Lieu Fund Alt
	Merwin and Yale tributaries	Yale tributaries and approximately $20 million of In-Lieu Fund habitat projects	Approximately $40 million of In-Lieu Fund habitat projects
Spring Chinook	2,794	3,483	3,911
Coho	8,384	10,782	12,153
Winter Steelhead	1,930	2,160	2,280

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Future Fish Passage or In-Lieu Habitat Projects?

- New Information Key Results:
  - USGS estimates Merwin reservoir holds 11,240 Northern Pikeminnow > 300 mm length and 544,259 of size 200 – 299mm
  - Yale bull trout population (currently listed under the Endangered Species Act) is genetically unique, appears to be small and is geographically isolated. Less than 20 redds observed in 2015 and 2016; 22 redds in 2017; all within a single tributary to Yale reservoir

Future Fish Passage or In-Lieu Habitat Projects?

- Status:
  - Science workgroup has deliberated on alternatives; no consensus reached on preferred fish passage/in-lieu alternative
  - Utilities prefer In-Lieu Fund alternative instead of fish passage into Merwin and Yale
    - Greatest benefit to increase fish populations
    - Protects the small Yale population of bull trout
    - Supports properly functioning aquatic habitat in key areas needed for recovery of spring Chinook
  - Services have not identified their preferred alternative

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Future Fish Passage or In-Lieu Habitat Projects?

- PacifiCorp and The National Fish and Wildlife Foundation partnership
  - Explore the best way to implement In-Lieu Fund and bring greatest value towards recovery of ESA listed spring Chinook, coho and winter steelhead
  - Intent is to use habitat restoration measures to enhance properly functioning conditions in upper Lewis River basin tributaries, and support the survival of out-migrating juveniles to the Pacific Ocean
  - Outcome is project plan that identifies tributary/mainstem specific treatments from which construction RFPs can be developed
  - Coordinate with other partners in developing and administrating the project plan

Future Fish Passage or In-Lieu Habitat Projects?

- Next Steps:
  - Awaiting input from Services
  - Federal Energy Regulatory Commission license deadline (extended) is February 23, 2018.
  - Services requesting additional extension to August 23, 2018.

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Lewis River Fish Passage In-Lieu Decision

For more information: http://www.pacificorp.com/es/hydro/hl/lr.html

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Lewis River Fish Passage Report

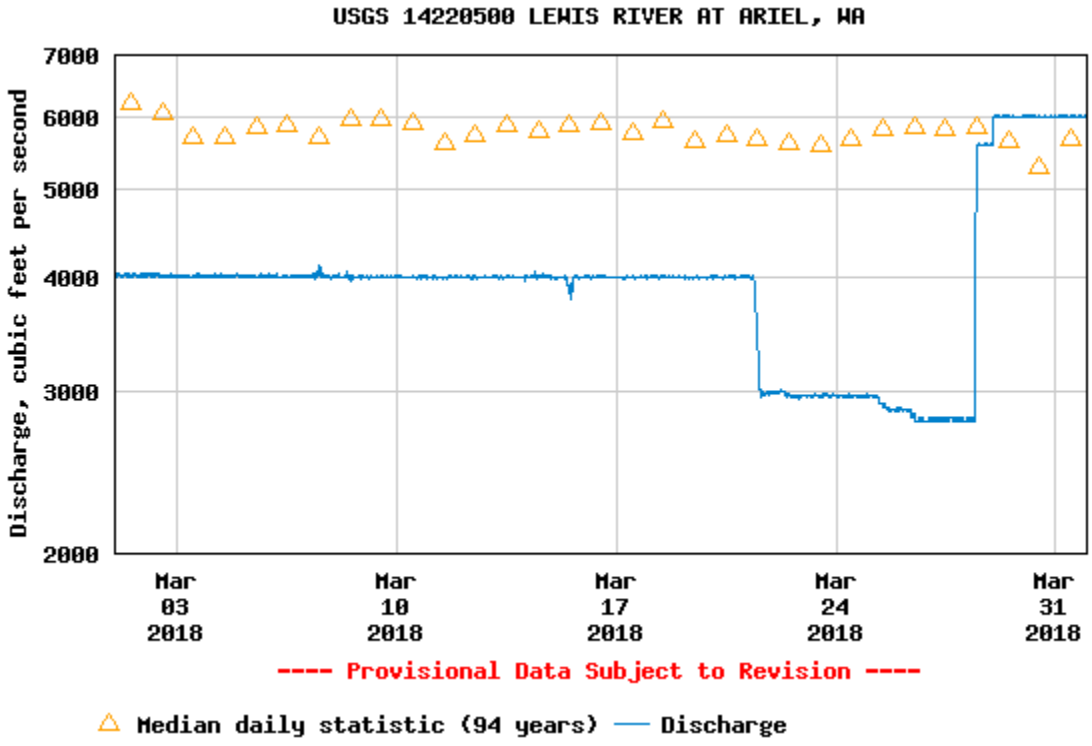
March 2018

Merwin Fish Collection Facility and General Operations

During the month of March, a total of 462 fish were captured at the Merwin Adult Fish Collection Facility. The majority of these fish were Blank Wire Tag (BWT) winter steelhead (372 – 80%).

The Merwin Dam adult fish trap crowder and conveyance system ran continuously through the month of March. River flow varied below Merwin Dam ranging between 2,790 and 6,030 cfs throughout the month.

Discharge, cubic feet per second



Upstream Transport

Nine Blank Wire Tag (BWT) winter steelhead were transported upstream above Swift Dam in December 2017. Two additional fish were transported earlier in the fall for a total of 11 BWT steelhead collected and transported in fall/winter 2017. Through March 2018, an additional 579 BWT winter steelhead were transported upstream for a total of 590 fish transported as part of the 2018 run year.

Typically, late run wild winter steelhead in the North Fork Lewis River begin arriving at the trap in January and continue through early-May. By the end of March 2018, 663 late-winter steelhead (both BWT and NOR) had already arrived at the Merwin Trap. Compared to all previous years, no more than 402 fish had ever arrived back to Merwin Trap by this time. Most of these fish (~80%) so far in 2018 have been BWTs.

YTD: March 31	
Year	**All WWSH (BWT+NOR)**
2014	351
2015	402
2016	392
2017	287
2018	663

PacifiCorp began transporting early coho salmon to the upper basin on August 25, 2017. By the end of the December, a total of 6,499 early- and late-coho had been transported and released at the head of Swift Reservoir. An additional 448 late-run coho were transported in January 2018 for a total of 6,947 transported during the 2017 run year.

2017 Coho Salmon (thru January 2018)

Stock	Origin	Male	Female	Jacks	Total
Early (S-type)	Natural	910	1,141	18	2,069
Early (S-type)	Hatchery	765	752	16	1,533
Late (N-type)	Natural	77	92	23	
Late (N-type)	Hatchery	1615	1,532	6	3,153
TOTAL		**3367**	**3517**	**63**	**6,947**

No adult spring Chinook have been transported upstream as part of the 2018 run year.

Floating Surface Collector (FSC)

During the month of March, 3,371 fish were collected in 2018. The largest percentage of these fish were spring Chinook parr and smolt (55%). The FSC ran continuously throughout the month of March except on March 15, 2018 when the vessel was turned off for repairs to the one of the discharge flaps. The vessel was returned to service on March 16, 2018.

Total numbers collected at the Swift FSC from January through March by operation year.

Species (parr/smolt)	**YTD: 3/31/2013**	**YTD: 3/31/2014**	**YTD: 3/31/2015**	**YTD: 3/31/2016**	**YTD: 3/31/2017**	**YTD: 3/31/2018**
Coho	872	*Na*	4,579	14,972	818	2,625
Chinook	111	*Na*	1,643	2,832	285	3,322
Steelhead	45	*Na*	39	115	52	86

Fish Facility Report
Merwin Adult Trap
March 2018

Reporting Date	Spring Chinook [1]									Early Coho											
	AD-Clip			Wild			Recap			AD-Clip			CWT			Wild			Recap		
	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	JK
01-Mar	1	1																			
02-Mar	1																				
03-Mar		1																			
04-Mar																					
05-Mar	1																				
06-Mar																					
07-Mar	1																				
08-Mar	1																				
09-Mar																					
10-Mar	1																				
11-Mar	1																				
12-Mar		1																			
13-Mar	1																				
14-Mar																					
15-Mar	3																				
16-Mar																					
17-Mar		2																			
18-Mar		1			1																
19-Mar		1																			
20-Mar																					
21-Mar	1																				
22-Mar	5																				
23-Mar	5																				
24-Mar		1																			
25-Mar		1																			
26-Mar																					
27-Mar	2																				
28-Mar	2																				
29-Mar																					
30-Mar	2																				
31-Mar		1																			
Monthly	28	10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Annual	28	11	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Reporting Date	Late Coho												S. Steelhead					
	AD-Clip			CWT			Wild			Recap			Fresh		Recap		Wild	
	M	F	JK	M	F	JK	M	F	JK	M	F	JK	M	F	M	F	M	F
01-Mar																		
02-Mar																		
03-Mar																		
04-Mar																		
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25-Mar													2					
26-Mar																		
27-Mar																		
28-Mar																		
29-Mar																		
30-Mar																		
31-Mar																		
Monthly	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
Annual	1	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0

Reporting Date	W. Steelhead								Fall Chinook									Sockeye		Chum		Pink		Cutthroat	Rainbow (< 20 inches)	Bull Trout	Daily Total
	AD-Clip		BWT		Recap		Wild		AD-Clip			Wild			Recap												
	M	F	M	F	M	F	M	F	M	F	JK	M	F	JK	M	F	JK	M	F	M	F	M	F				
01-Mar		1	2	2																							7
02-Mar	1	1	8	4			1																				16
03-Mar			6	4																							11
04-Mar		1	7	5		1	1	1																			16
05-Mar	1		6	9		1		2																			20
06-Mar	3	1	2	1				1																			8
07-Mar			6	1	1		1																				10
08-Mar			5																								6
09-Mar			7	5																							12
10-Mar		1	6	2		1		1																			12
11-Mar	2		6	1																							10
12-Mar	2		10	2			1																				16
13-Mar		1	14	4																							20
14-Mar		2	12	3	1		1	1																			20
15-Mar	1		11	6				1																			22
16-Mar			9	6			1	1																			17
17-Mar	1		14	12		1		2																			32
18-Mar			7	7			1																				17
19-Mar			6					1																			8
20-Mar			5	3																							8
21-Mar			7	6				1																			15
22-Mar		1	8	5	1	1		1																			22
23-Mar			7	5	1																						19
24-Mar			5	4	1			1																			12
25-Mar			9	5																							17
26-Mar			4	1	1																						6
27-Mar			4	1		1		1																			9
28-Mar			2			1																					5
29-Mar			12	8	1			1																1			23
30-Mar	1		11	9	1			1																			25
31-Mar			6	10	1	1		2																			21
Monthly	12	9	224	131	9	8	7	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	462
Annual	294	506	410	188	9	8	21	27	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	2	0	0	1500

[1] Only hatchery verses wild distinctions are currently being made. All hatchery fish are labeled as "AD-Clip".

[2] Total counts do not include recaptured salmon.

Berkshire Hathaway Energy

Fish Facility Report

Swift Floating Surface Collector

March 2018

	Coho			Chinook			Steelhead				Cutthroat			Bull	Planted	
Day	**fry**	**parr**	**smolt**	**fry**	**parr**	**smolt**	**fry**	**parr**	**smolt**	**kelt**	**fry**	**< 13 in**	**> 13 in**	**Trout**	**Rainbow**	**Total**
01		7				9						2			7	**25**
02		6	1			31			1			4			5	**48**
03		7	5			10			1			4			5	**32**
04		11				30									9	**50**
05		15			1	31						3			10	**60**
06		41	4		2	29			1			1			5	**83**
07	6	35	8			9			1			2		1	6	**68**
08	3	20	12		2	37			3			1			16	**94**
09	23	26	1		2	56	1		1						7	**117**
10	75	39	1		18	89						1			6	**229**
11	7	31	1		7	117			2						7	**172**
12		37				59						5			4	**105**
13	10	44	10		1	67						3			5	**140**
14	20	27	5		10	106									5	**173**
15	17	31	6		6	143			1			3			4	**211**
16																
17	15	43	8		19	156			4			3			17	**265**
18	8	44	4		16	132			1						7	**212**
19	8	39	7		13	138						3	1		32	**241**
20	22	32	7		7	64			7			2			14	**155**
21		19	11		11	88						1			11	**141**
22		24	14		1	93			1			1			17	**151**
23		36	8		4	37			1			1			8	**95**
24		41	19		8	27			2						9	**106**
25		34	10		6	47						1			5	**103**
26		16	7			56			2			1			6	**88**
27		16	6		3	19			1						2	**47**
28		25	3			24						1			3	**56**
29		6	4		1	13						2			4	**30**
30	1	4	2		3	15						1			5	**31**
31		7	5		3	24				1					3	**43**
Monthly	215	763	169	0	144	1756	1	0	30	1	0	46	1	1	244	**3371**
Total	260	2169	456	0	185	3137	1	1	85	1	1	181	1	2	459	**6939**

BERKSHIRE HATHAWAY ENERGY