

## Lewis River Fish Passage Subcommittee Meeting

### Agenda

Thursday July 13, 2023

2:30 to 4:30 pm

Teams

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<b>Introductions, Review Agenda and Approve Meeting Notes</b>	All
<ul style="list-style-type: none"><li>• Meeting notes</li></ul>	
<b>Design Team Updates</b>	Hansen/Higa/All
<b>Elements of Lewis River Future Fish Passage Updates</b>	Olson/All
<b>Next Steps for Fish Passage Subcommittee</b>	All
<b>Next FPS meeting – August 10<sup>th</sup> Teams</b>	All
<ul style="list-style-type: none"><li>• Agenda</li></ul>	
<b>Adjourn</b>	

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**FINAL Meeting Notes**  
**Lewis River License Implementation**  
**ACC Fish Passage Subcommittee Meeting**  
**July 13, 2023**  
**2:30 PM – 4:30 PM**  
**MS Teams Meeting**

Attendees

Christina Donehower – Cowlitz Indian Tribe	Melissa Jundt – NOAA
Amanda Farrar – Cowlitz PUD	Josua Holowatz – WDFW
Steve Manlow – LCFRB	Dawson Matthews – WDFW
Steve West – LCFRB	Peggy Miller – WDFW
Beth Bendickson – PacifiCorp	Erin Peterson – WDFW
Eric Hansen – PacifiCorp	Pad Smith – WDFW
Chris Karchesky – PacifiCorp	Keely Murdoch – Yakima Nation Fisheries
Erik Lesko – PacifiCorp	Jeffrey Garnett – USFWS
Todd Olson – PacifiCorp	

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**Introductions, Review Agenda and Approve Meeting Notes**

Todd Olson, PacifiCorp, reviewed the meeting agenda. The May 2023 meeting notes will be sent out at a future date for 7-day review.

**Design Team Updates**

Eric Hansen, PacifiCorp, provided the following design team updates. He mentioned it's been beneficial to have the same design team working on all three fish passage projects. Instead of having to hold three separate meetings each week, most days, everything can be covered in one design update meeting.

*Yale Downstream:* The design team is double checking the 30% design while advancing other design items to the 60% design level; in particular, they are looking at ways to lower construction costs because the current construction cost estimate is high. They are evaluating various aspects including guide net length, overall length of the FSC, combining structural elements including pile location, analyzing seismic loading at adjacent structures and looking at options to combine the sorting and sampling locations.

*Yale Upstream:* The design team is still fine tuning the hydraulic modeling for the discharge and confirming the attraction flow source for upstream, including determining the best location to obtain up to 300 cfs of attraction flow. They are also working on finding a good way to build a coffer dam to isolate the new work away from the water and have found that an elevation of 227 ft in Merwin Reservoir is the most effective as it's near to the lower-than-normal pool on an

average winter month at Merwin. They will coordinate this coffer dam design with operations to get the work done as fast, and as safe, as possible.

*Swift Upstream:* The design team is looking at the attraction water source options for fish ladder flow either from the plant or the power canal. They need to check grade lines and confirm design details including the new fish sorting, sampling and truck loading facility elevation and will want to keep this fish facility out of the high water from the Swift spillway discharge. They are also looking at fish transport options using the existing power canal road and then adding a simple bridge over the existing wasteway, with the exit at one of the existing highway junctions.

Chris Karchesky, PacifiCorp, presented an update on the Yale Behavioral Study (slide presentation attached). Data collection is still occurring because fish with active tags are still in the system. He noted that all fish were tagged and released by the end of May, and that all three transport species (i.e., Chinook, Coho and Steelhead) were tagged this year. It is anticipated that data collection will end in early-August, and from there a more comprehensive data analysis will begin. He reported that study fish were released only at the head of the reservoir as opposed to last year when there was a group of fish released at mid-reservoir. The same generalized acoustic tags (signals underwater) along with hydrophones were used. Chris noted that the target goals of tagged juvenile Chinook and steelhead were slightly lower than what was called for and that extra tags were tagged into juvenile Coho. Chris indicated that too few Chinook of taggable size were captured and that juvenile Steelhead began to experience higher than normal tagging mortality towards the end of the tagging period as reasons for the shortcoming. Currently Ppass rates (the proportion of tagged fish that were detected in the forebay following release) were running lower than what was seen the previous year for coho. Chris reminded the group that data were still being collected, but related this to potentially lower inflows and fewer spill events this year compared to in 2022. This will be looked at more closely since all the data have been collected. Melissa Jundt, NOAA, was curious as to why we focused monitoring in Yale forebay. Chris said last year there were some receivers up reservoir as part of this year's study and they also did some manual tracking of fish throughout the reservoir last year. The focus this year was to watch fish behavior in the forebay to help guide the location and positioning of the new Yale FSC. The final report will analyze results from both years. Pad Smith, WDFW, wanted clarification on what Ppass was. Chris replied it was for fish that made it to the forebay to date. Melissa noted that the current estimates of Ppass were concerning especially for juvenile Chinook and was curious if the fish are rejecting the entire reservoir. Chris said he doesn't have the information now but should be able to look into it further once all the data have been collected. A report will be prepared including what we observed last year, which was a high number of fish that passed through the reservoir. That was for Coho. Melissa asked if it would come as a final report or will the FPS group have the opportunity to weigh in. Chris said once we get preliminary data we can provide monthly updates at these meetings. He asked if she had specific questions? Melissa was curious if there were locations more favorable than others, and how many forays did they go to? Chris said they had a higher Ppass last year (2022) but we may have to sift through the data to see what it looks like this year. Melissa also wondered if fish knew where to go. Chris added that they are reviewing powerhouse flows. When spill conditions or generation is higher in a given year, you may get different attraction vs. lower flows. Last year there was greater flow than this year. Melissa then asked that once they got down to the dam during last year's study, do you know how many forays they took across the dam? Chris indicated that it depended on whether there was a spill event or high generation occurring when the fish entered the forebay. If there wasn't an easy escape route they go back and forth a lot looking for an exit.

Josua Holowatz, WDFW, said regarding the exclusion net in front of forebay and looking back to last year, maybe some of the fish escaped because of that. Are they not escaping this year? Chris said he will take a look at it. There may be a few fish that do that. Pad Smith, WDFW, thanked Chris for the clarification and asked what the resolution on depth value was and was it attached to the tag itself. Chris said they are good quality tags and have a depth resolution of about a foot.

### Elements of Lewis River Future Fish Passage Updates

Todd reported that per discussion on this topic at the ACC that morning, Yakima Nation, WDFW, Trout Unlimited, and LCFRB weren't quite ready to provide their final reviews. The aim is for approval of both the Elements Document and Decision Document at the August 2023 ACC meeting. Todd thanked everyone for progressing the document through their respective organizations, and added that if there are any last questions to please email him. He will forward the NMFS edit out to the group.

### Next Steps for Fish Passage Subcommittee

As this group has been focused on the Draft Elements Document, future meetings could include updates on any new agenda items. As Eric mentioned, the design team is working through design items of the 60% design level and a future meeting could include a more in-depth look at specific design items. If there are any significant changes, they could be discussed at the September meeting which may be held at the WDFW office. In December, we will have the 60% design presentation, similar to last year's 30% design meeting and distribute the 60% design presentation for review.

Melissa said if there are any significant changes, it would be beneficial to get a heads up before just relaying it at the September meeting. Todd said we could provide a list of the key elements, along with an update on each item and then go over them in more depth at the September meeting.

Regarding attraction and flow conditions for the Swift upstream facility, Melissa asked how do you move forward with it when there aren't any fish? Josua Holowatz, WDFW, asked if we have ever thought about doing an adult fish behavioral study at Yale? HPP fish could be used to determine if adults are moving to the proposed location for the Swift upstream facility. Todd said we could consider it. Maybe we can do some observations. He'll give it some thought and then discuss it with Chris and Erik Lesko, PacifiCorp. Right now they're using pit-tag array in Cougar Creek and some other areas for bull trout monitoring. Maybe we could move some of these after the bull trout monitoring to areas of interest.

Todd asked if there were any other items of interest to talk about over the next couple of months. One thought was potentially skipping the August Fish Passage meeting as the Elements Document Decision would take place at the August ACC meeting. Peggy Miller, WDFW, said Bryce Glaser, WDFW, may have had some ideas on topics for August. Todd will check in with Bryce. If anyone has anything they'd like to cover, let Bryce, Todd or Peggy know and they'll add it to the agenda.

### Next Steps

Peggy mentioned the Upstream and Downstream Fish Transportation Plans will need to be prepared and reviewed by the group. Chris noted he will be working on the transport plans and will share them at the appropriate time.

**Next FPS Meeting:** August 10, 2023 (unless otherwise communicated).

The meeting adjourned at 3:23 p.m.

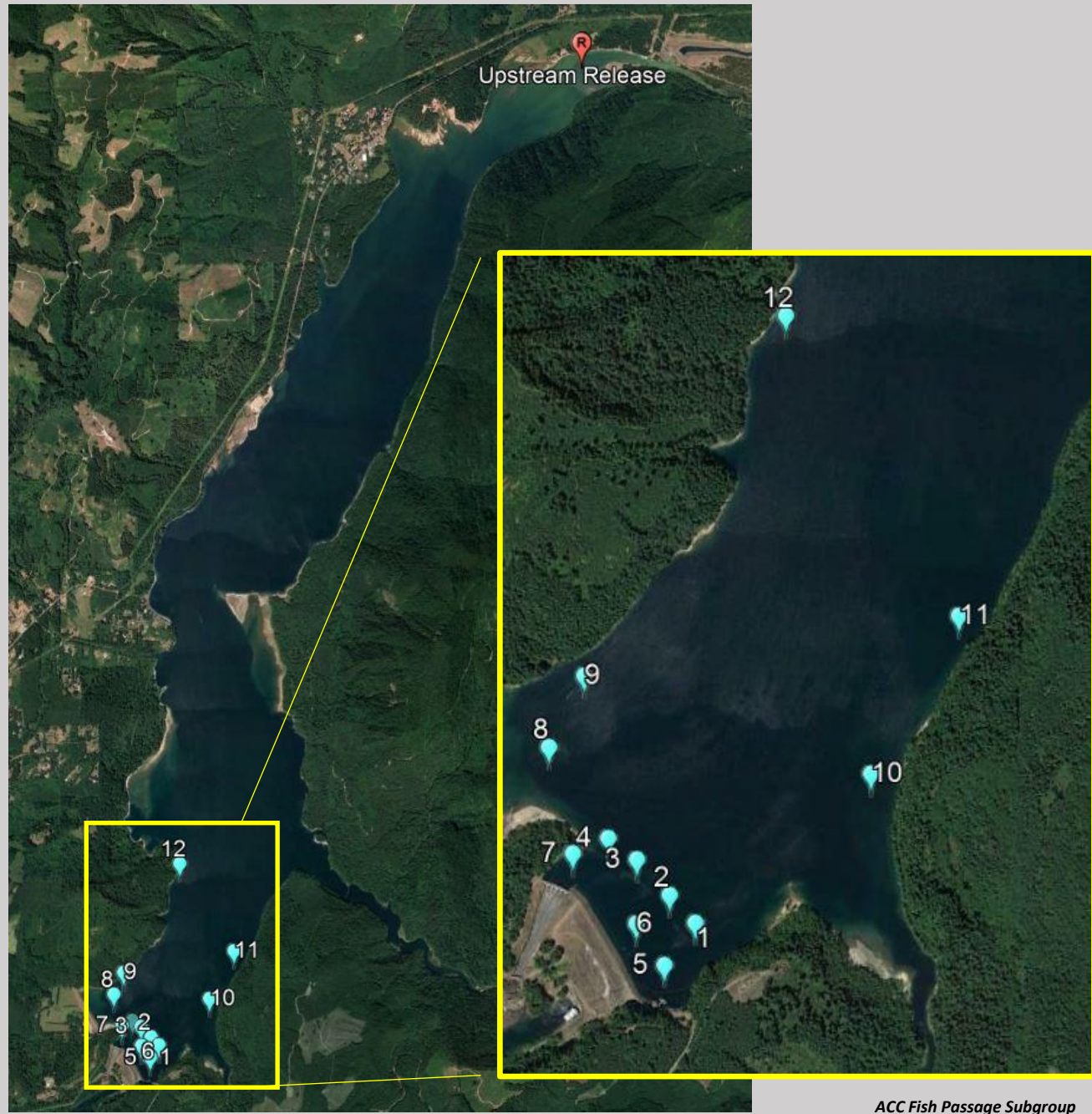
# Yale Fish Behavior Study – Spring 2023

Species	Study Goal	Released	SS400	Depth Tag
Chinook	140	133	64	69
Coho	120	140	75	65
Steelhead	140	130	66	64

P<sub>PASS</sub> Data through July 5, 2023

Species	SS400	Depth Tag	Total
Chinook	0.63	0.49	0.56
Coho	0.75	0.75	0.75
Steelhead	0.74	0.77	0.75

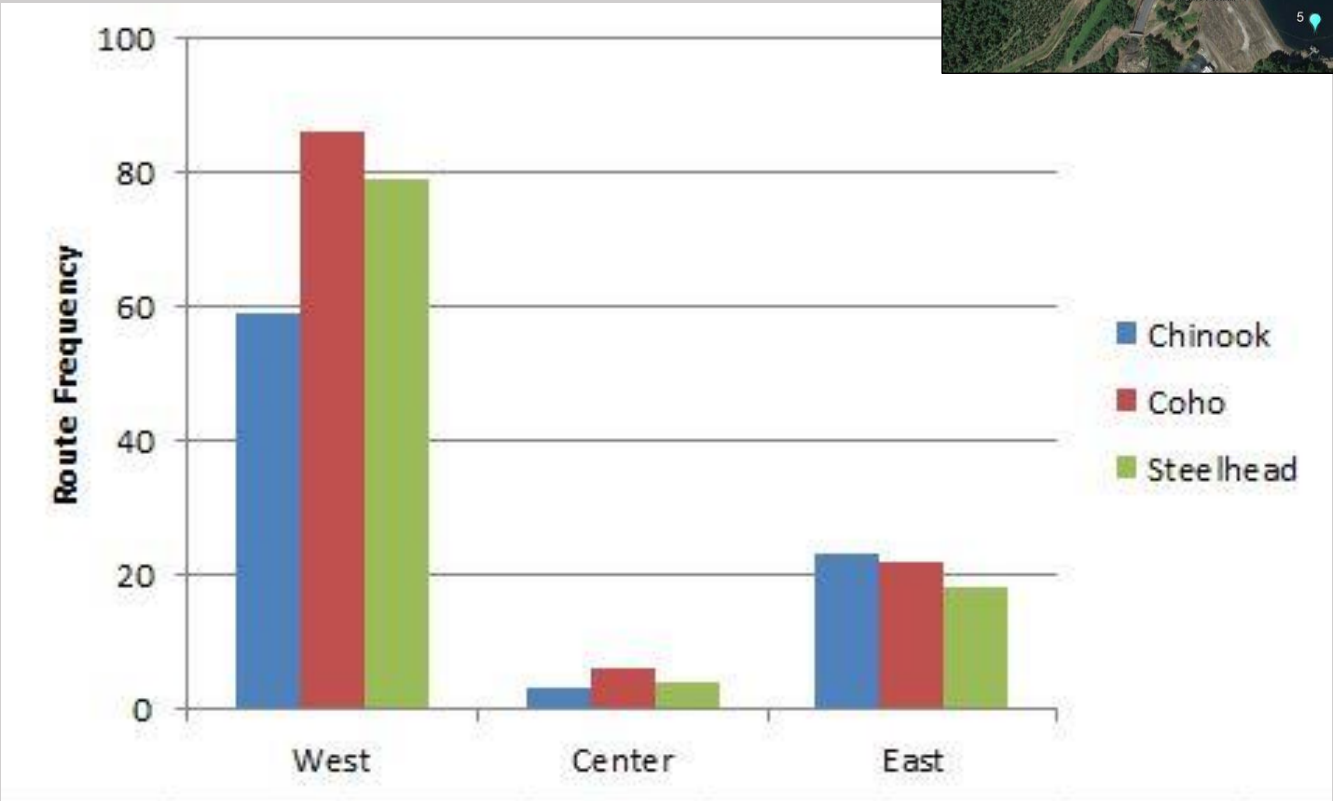
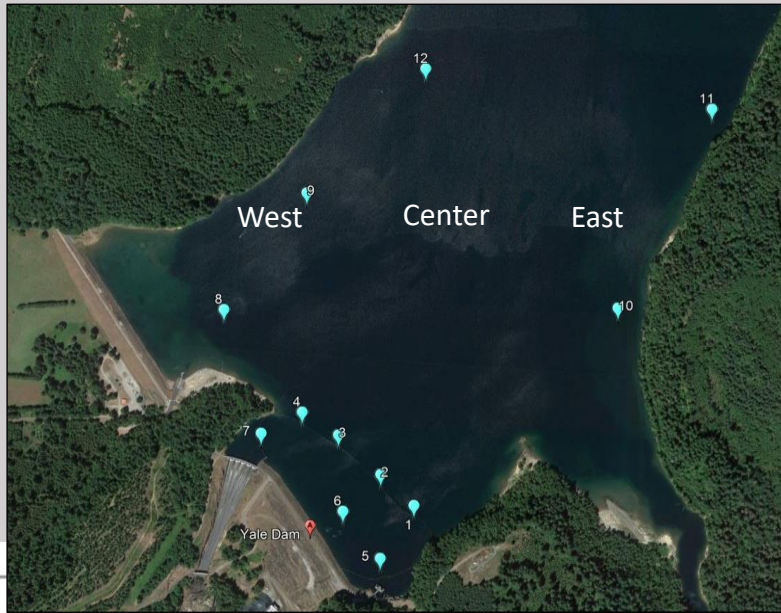
- SS400 tag nominal tag life 71 days
- Depth tag nominal tag life 35 days



# Yale Fish Behavior Study – Spring 2023

## Forebay Approach-Data Summary through July 5, 2023

- During their initial approach to the forebay, study fish appear to generally move down the western shoreline (river right).
- Nearly all fish detected in this region to date have also been detected at both the spillway and powerhouse receivers.
- Study fish generally display milling behavior once in the forebay and are being detected on multiple occasion on all receivers.



# Yale Fish Behavior Study – Spring 2023

## Characterizing Fish Depth – Data Summary through July 5, 2023

- Data analysis is ongoing.
- Currently working on summarizing the data by species, developing trends in depth behavior in relation to location and environmental conditions.
- Based on information summarized to date, most fish regardless of species appear to be migrating within the top 10ft of the water column.
- There has been some indication that a small proportion of fish take brief (~minutes) dives down to 30-40ft while milling in the forebay.

