

## Lewis River Fish Passage Subcommittee Meeting

### Agenda

Thursday February 9, 2023

2:30 to 4:30 pm

Teams

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2:30	<b>Introductions, Review Agenda and Approve Meeting Notes</b>	All
2:45	<b>Design Team Updates</b>	Hansen/Higa/All
3:00	<b>Comments on 30% designs</b>	Karchesky
3:15	<b>Upstream Fish Passage Capacity Estimates</b> <ul style="list-style-type: none"><li>• Yale Upstream – TM 1 and TM 6</li><li>• Swift Upstream – TM 1 and TM 4</li></ul>	Karchesky/All
4:00	<b>Alternative Analysis - Objectives/Criteria</b> <ul style="list-style-type: none"><li>• Draft Tables</li><li>• Next Steps</li></ul>	Olson/All
4:20	<b>Scheduling a Tour of the Proposed Facility Locations</b>	Karchesky/All
4:25	<b>Next FPS meeting – March 9<sup>th</sup></b> <ul style="list-style-type: none"><li>• Agenda</li></ul>	All
4:30	<b>Adjourn</b>	

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**FINAL Meeting Notes  
Lewis River License Implementation  
ACC Fish Passage Subcommittee Meeting  
February 9, 2023  
2:30 pm – 4:30 pm  
MS Teams Meeting**

Attendees

Christina Donehower – Cowlitz Indian Tribe	Danny Didricksen – WDFW
Amanda Farrar – Cowlitz PUD	Sam Gibbons – WDFW
Steve West – LCFRB	Bryce Glaser – WDFW
Melissa Jundt – NOAA	Josua Holowatz – WDFW
Beth Bendickson – PacifiCorp	Peggy Miller – WDFW
Eric Hansen – PacifiCorp	Erin Peterson – WDFW
Nathan Higa – PacifiCorp	Pad Smith – WDFW
Chris Karchesky – PacifiCorp	Jeffrey Garnett – USFWS
Erik Lesko – PacifiCorp	Keely Murdoch – Yakama Nation Fisheries
Todd Olson – PacifiCorp	Bill Sharp – Yakama Nation Fisheries

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**Introductions, Review Agenda and Meeting Notes**

Bryce Glaser, WDFW, briefly reviewed the meeting agenda. Beth Bendickson, PacifiCorp, will send out the December 2022 meeting notes for final approval. If no additional comments are received in seven days, they will be considered final. The January 2023 notes will be reviewed at the March 2023 meeting.

**Design Team Updates**

Eric Hansen, PacifiCorp, provided an update on the Yale downstream fish passage facility. The design team is advancing towards the 60% design. Concurrently, individual teams will be developed for Geotech investigations as well as for the permitting process. We are in the process of reviewing the floating surface collector (FSC) 30% design comments from the technical memos, especially “what are the effects if we make a change as well as do we need to make a design change.” We are proceeding with cost estimates, investigating options to shorten the FSC and construction planning. By the end of the month, the designers should be completely through addressing the ACC 30% design comments.

Nathan Higa, PacifiCorp, provided an update on Yale and Swift upstream facilities. These facilities are following a similar track to Eric Hansen’s downstream process. We are processing the 30% design comments, and planning for the Geotech investigation. We are also planning and scoping the 60% design work. We are talking with the Cowlitz PUD regarding the access road and the route along the canal to the new facility site. Lastly we are working on the structural design of facility.

Bill Sharp, Yakama Nation Fisheries, asked if the design team looked at the downstream collector site location and was it a design consideration? Eric said yes, the technical memo covers the hydraulic flow modeling and the initial fish behavior study confirmed the site location. The behavior study showed the team that the fish will eventually end up by the powerhouse intake. If determined to be better, Eric said there could be a slight adjustment to move the FSC out beyond the intake a few feet.

### **Comments on 30% Designs**

Chris Karchesky, PacifiCorp, appreciated everyone's time and effort to review and provide comments on the 30% design documents. He feels the due diligence was reflected in agency comments. There are some general themes. The plan at this point is to share the comments with the design teams and go through them comment by comment. It is important to step through them and provide a response. Chris has put everything into an overall comment matrix which he will distribute to this group by the next meeting. This will give everyone a chance to see all submitted comments. At the next meeting we can identify any additional discussion points.

### **Upstream Fish Passage Capacity Expansions**

Chris mentioned that several commenters on this item pointed to the work done by the Columbia Basin Partnership (CBP) (2020 Columbia Basin Partnership Report) to identify healthy harvest numbers. There is an interest to look at the CBP numbers to see if they align with the related technical memo.

In terms of what was considered for the upstream facility, Chris said they stepped through the numbers and what was used in the Lewis River EDT (Model Run NOAA 2019). Chris presented a slide comparing the numbers from both the Columbia Basin Report and the EDT model run.

From a sizing standpoint, the design team selected the swim-through option as it could result in the greatest number of fish entering the upstream traps. We also looked at the maximum number of fish expected during a one day timeframe, assuming you are running the facility once a day. We used fish return information from the ten years the Merwin facility has been in operation. Of the fish runs, when they arrived in Merwin, what was the maximum percentage on a given day? It was focused on Coho given this run has the highest return numbers. One thing to note is that the CBP values are for the entire North Fork Lewis River including downstream of Merwin Dam. The EDT model work used as the basis for the design criteria excluded fish production downstream of Merwin Dam. The numbers we used look to be very much in line with the CBP targets. It is the mid-level number that most folks have identified. Chris said he is comfortable that we are all on the same track.

### Comments

Keely Murdoch said she is generally happy that the EDT numbers are aligning with the Columbia Basin Report but asked if we needed to plan to other scenarios? She is not sure, but both cases are estimates that may not take into consideration larger sizes. It is encouraging from these initial numbers that they are somewhat similar. In terms of hatchery supplementation phase, Chris said the population is healthy above Merwin Dam. We are dealing with natural fish. Eventually, with

a successful program, hatchery supplementation would be phased out. Bryce said WDFW does not agree with that statement. In the future, the state may want to include hatchery fish. They have not defined what the final outcome is for healthy and harvestable fish as far as the future. Melissa Jundt, NOAA, had a different view. She agreed the initial numbers were encouraging, but said it is worth talking about the work rate. Did you plan to work the facility once per day? Chris said the capacity is based on a single day operation. If you have a large number of fish show up, you can operate more than once a day, and it can handle the CBP targets. The design team is working to include adaptive management. The current design is based on the single daily maximum for the mid-CBP targets but we will have the ability to process more fish through additional processing cycles. With moving to a swim-through process, we will know the numbers of fish released into Merwin Reservoir and can schedule the number of daily cycles appropriately.

Bryce said a useful piece of information that Melissa provided that Chris might want to capture in future documents would be “how would you address being wrong?” Are there things you could do operationally without having to build more infrastructure? He agreed with Keely that mid-range goals and EDT capacity are models and may not fully estimate the maximum returns. Whatever number we decide to use for a capacity, it could be a much larger number in good ocean condition years. He would prefer to use the larger capacity number. With improved efficiencies, we anticipate more fish, etc. and we would want to plan for larger number of fish that come with those changes (above the 9-year average). He said there are still concerns with using the EDT model. He questions the best way to account for the numbers. Chris added that we can speak on expandability. He looked at the 1,100 fish number design capacity at Yale Upstream facility based on a 12,000 fish return. If we apply it the high level of 21,000 fish run size the daily maximum came out at around 1,800 fish. This number of fish can be processed with additional cycles. A few truck loads is 1,100 to 1,800 fish. The high levels are within the reasonable design intent for the facilities. Bryce added that in good ocean years, Coho respond better. If marine survival and smolt to adult return (SAR) values jump, you could have two to three times the capacity in those years. They may not produce more juveniles but you are still going to have to pass the adults and deal with them. Bryce just wants to make sure we are going to be able to manage higher capacities and not have to build more infrastructure. In terms of where things have been, Chris asked Bryce what range/value/detail in SAR is Bryce is thinking about? He would like to confirm with others at WDFW as far as what is the range we should be looking at. He believes 4% was the SAR value used in EDT. Bryce wants to make sure we are not confusing capacity with abundance. When he looked at the technical memo, he did not see the detail that he was looking for. He will dig up an older EDT model/memo so we can have more discussion on this. Chris said the fish return data collected at Merwin has been beneficial. In those nine years, we found between 4-5% of the fish run could show up in one day. Bryce wondered if the average percentage of fish captured in one day is driven by the fact that the trap could not collect any more. Josua Holowatz, WDFW, mentioned that he thought using six pounds as an average weight for adult coho seemed light, and asked where that number came from and whether jacks were included. Chris said he believed that it came from field measurements at Merwin Trap but was not sure whether it included jacks or not.

As far as next steps, Bryce suggested looking at a range of SARs because it ties in with the Draft Elements Document. There is interest that we size facilities for the future. We need to have language we all can agree on. What if we are wrong, how are we to account for it (design, ability to expand, trucks, flexibility, etc.)? If folks want to look at SAR, we need information we can work through and represent in the Elements Document. We have a little bit of work left to capture variability and the upper bounds of what we might expect to better describe the relationship. He

said he did not see where the number of run cycles was included in the design criteria or how the uncertainty would be addressed through increasing run cycles of the facilities in the Technical Memos.

Pad Smith, WDFW, added that moving forward from 30% design to 60% design, we should make sure the facility can physically manage the high fish numbers as well as the operational adjustments. Todd Olson, PacifiCorp, said that some of the information would be to say these tanks were sized at this, assuming number of Coho, we could have “x many fish” on station and that we expect it would take “x many hours” to work up all those fish. What can you collect through the night and is it a big enough buffer for the sizing of the facility? This is good feedback. Bryce’s biggest concern is if we build something too small it could take a rebuild or redesign and we do not want to get stuck there. We need to demonstrate that if there are more fish, this is how we address it and here is our maximum capacity.

Bryce thanked Chris for walking through this and said he appreciated all the time that was spent on the technical memos. Chris appreciated all the feedback and added that if we need to bring in the EDT folks to provide a narrative, we can do that. There was definitely interest in seeing design numbers in comparison to the 2020 Columbia Basin Partnership Report today.

### **Alternative Analysis – Objectives/Criteria**

Todd noted that at the last meeting there was interest in finding a way to put all the information (e.g., specific facility considerations) into a table format to memorialize our evaluation of new facility alternatives. Todd worked with Chris to produce a color-coded chart that gives a high-level review across the alternatives.

### Draft Tables

Todd walked the group through the draft tables. He said what is in the tables right now is only from Todd and Chris and everyone should review the results and identify any changes.

Jeff Garnett, FWS, thanked Todd and Chris for putting this together. One thing he would like to make sure of is Column A (Considerations). The technical memos and previous Alternative Analysis were more focused on operational analysis. He asked if biological considerations, important to each of the stakeholders here (e.g. tag or transport fish) were considered. Todd pointed to some of the Settlement Agreement items that were identified and other biological considerations in the tables. If folks think these tables might be useful, he will send them out for review and folks can provide input. If there are desired changes, code them in blue and make a comment. Jeff appreciated the response and said it looks like a lot of the groups previous considerations were pulled into Column A. Bryce added that he did an initial brainstorm list and used the technical memos to produce a list for Column A. When reviewing, he likes the idea if there are colors that need to be different or black out items (“no go” items) to note those. Adding to what Todd said, there could still be red items among a preferred alternate but there could also be a description on how they can be addressed or overcome by having parts in stock, etc.

### Next Steps

Todd will add a description and directive for review of the fish passage facility alternatives, and Beth will send it out for review/comments asking that responses be provided before the March meeting. Bryce mentioned we could have a short write-up about the process and tables could be embedded within. Todd said there could be two parts. Within the Elements Document we would revise the text, point to an attachment, and in the attachment cover, describe the intent of the tables.

Jeff liked the visually appealing tables but also likes the idea of a write-up to memorialize the decision. Bryce appreciated Todd working on it.

### **Scheduling a Tour of the Proposed Facility Locations**

Chris said he could provide fish passage tours either one-on-one or as a group. There was also discussion at the ACC meeting for a trip to PGE’s project in Estacada, OR. They have a no-touch fish passage facility for adults, and a FSC like we are considering for Yale. He suggested the tour happen around the time of the April meeting or replace that meeting with a two-day field trip (Lewis River facility and PGE facility). Josua’s thoughts are to stay away from the April meetings since we are getting close to the deadline for the Draft Element Document. Chris said he would take that into consideration.

Bryce found and shared the SAR table from the 2016 PowerPoint EDT Issue Resolution indicating an average SAR of 4% was indicated for coho and was consistent with the EDT model. He will take it back to his agency folks for review and updating. Chris said would be helpful to get some updated numbers and talk about what it means for design and capacity numbers.

Melissa asked if we could “look under the hood” of the NOAA EDT model.

**Next FPS Meeting:** March 9, 2023

### Agenda

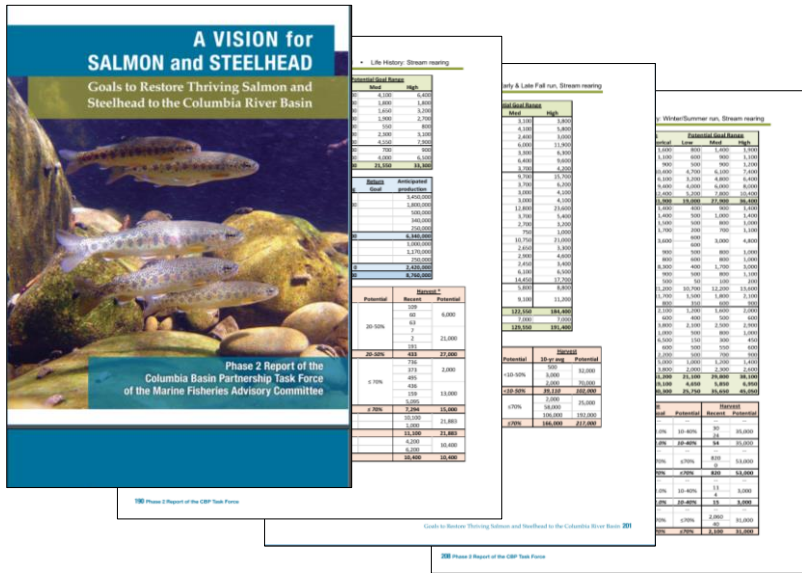
Below are suggested agenda items for the March meeting.

- 30% design matrix
- Capacity topics and how they might be addressed (jacks vs. adults)
- Alternative Analysis table review
- Comments
- Updates on remaining Draft Elements Document to work through (Bryce will work w/Todd)

<b>Action Items from February 9, 2023</b>	<b>Status</b>
Final review of draft December 8, 2022 meeting notes for approval (Due Date: February 22, 2023)	Complete
Review <i>Draft Lewis River Fish Passage Alternatives Evaluation Summary</i> (Due Date: March 2, 2023)	

<b>Action Items from December 8, 2022</b>	<b>Status</b>
Continued review of <i>Design Elements</i> document (Due Date: December 22, 2022)	Complete
<b>Action Items from October 13, 2022</b>	<b>Status</b>
Jeff Garnett will share a master/PhD document about bull trout criteria with the group.	

The meeting adjourned at 4:00 p.m.



## Lewis River EDT (model run NOAA 2019):

- NF Lewis River Abundance (Capacity) Estimates for adults above Merwin Dam

Species	LR Fish Passage Design Criteria for Adult Numbers
<b>Coho</b>	<b>11,936</b>
Lake Merwin	723
Yale Lake	1,842
Swift Reservoir	9,371
<b>Winter Steelhead</b>	<b>1,604</b>
Lake Merwin	89
Yale Lake	276
Swift Reservoir	1,239
<b>Spring Chinook</b>	<b>3,627</b>
Lake Merwin	0
Yale Lake	364
Swift Reservoir	3,263

## 2020 Columbia Basin Partnership Report:

- NF Lewis River Abundance Estimates

Species	Abundance Goals		
	Low	Mid	High
<b>Coho</b>	500	<b>10,750</b>	21,000
<b>Steelhead</b>	400	<b>1,700</b>	3,000
<b>Spring Chinook</b>	1,200	<b>2,300</b>	3,100