

# LEWIS RIVER AQUATIC COORDINATION COMMITTEE

Facilitator: AMANDA FARRAR on behalf of ERIK LESKO  
360-501-9374

Location: TEAMS (online)

Date: August 10, 2023

Time: 9:30 AM – 12:15 PM

## AGENDA

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9:30 AM	Welcome <ul style="list-style-type: none"><li>➤ Review and Accept 08/10/2023 Agenda</li><li>➤ Review and Accept 07/13/2023 Meeting Notes</li></ul>
9:40 AM	Public Comment Opportunity
9:45 AM	Decision Template: Elements of Fish Passage. Vote ( <i>Olson</i> )
10:15 AM	Mid-year Update: Fish Passage Program ( <i>Karchesky</i> )
11:15 AM	Draft Yale Habitat Preparation Plan ( <i>Karchesky</i> )
11:30 AM	Study/Work Product Updates <ul style="list-style-type: none"><li>➤ Flows/Reservoir Conditions (<i>Karchesky</i>)</li><li>➤ Reservoir Shoreline Development Projects (<i>ACC</i>)</li><li>➤ ATS (<i>Karchesky, ATS</i>)</li><li>➤ FPS (<i>Glaser, Olson</i>)</li><li>➤ Fish Passage/Operations (<i>Karchesky</i>)</li><li>➤ Merwin Trap Outage (<i>Karchesky</i>)</li></ul>
12:00 PM	Next Meeting Agenda
12:15 PM	Meeting Adjourn

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Note: all meeting notes and the meeting schedule can be located at:  
<https://www.pacificorp.com/energy/hydro/lewis-river/acc-tcc.html>

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**FINAL Meeting Notes  
 Lewis River License Implementation  
 Aquatic Coordination Committee (ACC) Meeting  
 August 10, 2023  
 TEAMS Meeting**

**ACC Representatives and Affiliates Present (16)**

Larissa Rohrbach, Anchor QEA  
 Christina E. Donehower, Cowlitz Indian Tribe  
 Amanda Farrar, Cowlitz PUD  
 Beth Bendickson, PacifiCorp  
 Chris Karchesky, PacifiCorp  
 Todd Olson, PacifiCorp  
 Andrew Annear, WDFW  
 Bryce Glaser, WDFW  
 Josua Holowatz, WDFW  
 Peggy Miller, WDFW  
 Keely Murdoch, Yakama Nation  
 Bill Sharp, Yakama Nation  
 Steve Manlow, LCFRB  
 Jonathan Stumpf, Trout Unlimited  
 Bridget Moran, American Rivers  
 Jeffrey Garnet, USFWS

**Guests (0)**

None

**Calendar:**

September 14, 2023	ACC Meeting	IN PERSON and TEAMS Meeting
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**Assignments:**

Assignments from July 13, 2023	Status
ACC members to review Elements of Fish Passage Decision Template.	<b>Ongoing.</b>

Assignments from July 13, 2023	Status
ACC members to review Revision to Ground Rules Decision Template.	<b>Ongoing.</b> (Deferred to October ACC)

## **Opening, Review of Agenda and Meeting Notes**

Amanda Farrar (Cowlitz PUD) called the meeting to order at 9:35 a.m. and reviewed the agenda. The agenda was revised to include a brief update on the Swift No. 2 30-Inch Corrugated Metal Pipe Inspection.

Meeting note revisions from July 13, 2023, were reviewed; the notes were approved by all representatives present.

## **Public Comment Opportunity**

There were no public present.

## **Decision Template: Elements of Fish Passage. Discussion (Olson)**

Todd Olson said that he appreciates comments and suggested revisions he received this month. At the last meeting, some participants indicated that they needed to continue work within their organization before being ready to make the decision. A revised version of the Elements of Lewis River Future Fish Passage document (Elements of Fish Passage Document) and associated decision request were distributed immediately following the meeting by Larissa Rohrbach.

Olson said he had some additional comments and edits resulting from feedback from National Marine Fisheries Service (NMFS) and Washington State Department of Fish and Wildlife (WDFW) to review today. Many of the edits helped clarify and make the document a better document, which PacifiCorp appreciated and had no objection to. The following discussion summarizes the revisions:

- Bryce Glaser said that some of the edits are related to clarifying how this document will be used moving forward. Regarding whether the Elements of Fish Passage Document itself might be used to request a schedule change from the Federal Energy Regulatory Committee (FERC), Glaser said that guidance from their legal advisors suggested that this would not be the best path forward because some of what is included in this document may not be within the scope for FERC oversight, and therefore FERC may be uncomfortable approving this document. This document will support the NMFS and U.S. Fish and Wildlife Service (USFWS; together, the Services) final decision on the schedule and allow PacifiCorp to submit an independent request to FERC for a schedule change. Olson said that, after reviewing the concern from WDFW and talking with PacifiCorp's own attorneys, clarifying the difference in those steps makes sense. Olson continued that the ACC has developed a plan, and that plan has a new construction schedule and actions. The ACC will approve that plan, then the Services will approve because of their Section 18 authority (fish passage authority). Then PacifiCorp will separately request from FERC an extension of time to implement the plan. Revisions were made to the document clarifying the request to FERC for approval of that extension of time and not necessarily the actions of the document. WDFW's comments on the document helped clarify that process and will help with the structure of the letters to the Services and to FERC. Glaser asked whether or not a vote at the ACC by the Services will be their vehicle for formal approval through this formal Decision Document. Olson said that the current process has been to obtain the ACC approval, then formally request approval in a separate request to the Services, to make that formal approval very clear in the record. Jeffrey Garnett agreed that that was also his understanding for obtaining formal approval from the Services.
- Steve Manlow asked why a statement about extension of time and recognition or acknowledgement for receipt of the document by FERC was struck. Peggy Miller said that this was a concern for their counsel: that work could be put on hold until FERC

approves the document. However, PacifiCorp is not asking FERC to approve the document, just the change in schedule. Glaser said that work is essentially already being started now, and the concern was regarding including any language stating that work on implementing this document was contingent on approval from FERC. Manlow said that he understood and can accept the edits as written.

- Olson said that edits were made to clarify that PacifiCorp went forward with work that was necessary to support the Fish Passage Plan. Melissa Jundt had commented that she wanted to make sure the meaning of “early studies” was better defined.
- Additional edits were made to terminology for consistency with the Settlement Agreement and to use consistent facility and site names.
- Miller said that a sentence was added at the end of section 6 Timing of Fish Passage Measures to identify that if parties feel that delays are going on too long, the Alternative Dispute Resolution Procedures referenced in Section 2.2 of the Settlement Agreement may be exercised.
- Miller said that edits were made in section 17 Lewis River Habitat Enhancement Fund to indicate that payments to the fund would be made upon approval of the schedule by FERC and not by approval of this document. Glaser said that this particular piece would be included in the approval request to FERC.
- Miller said that no revisions were made to the attachments. Changes to the associated Decision Document were made to reflect the changes made to the Elements of Fish Passage Document.

Olson thanked Miller for WDFW’s detailed review. He reiterated the next steps: The Decision Document states that the ACC will approve the Elements of Fish Passage Document. The Elements of Fish Passage Document will then be submitted to the Services for formal approval. Then it will be submitted to FERC, along with documentation of formal approval by the ACC and Services, with a request for FERC approval of the schedule extension. Miller reiterated that approval of the Decision Document would approve the Elements of Fish Passage Document and the process for approval from the Services and FERC.

Olson asked, given that additional edits have been made to the document and reviewed today, whether there is any party who is unable to vote today due to the need for further internal review process. Bill Sharp said that the Yakama Nation (YN) is not ready to vote today and will need a bit more time for its legal counsel to review. Olson asked whether YN may be able to provide a decision by the September 14, 2023, ACC meeting. Keely Murdoch said that she is hopeful they will be ready to vote by the September meeting; at this time they (YN ACC Representatives) are still waiting on a written memorandum from their internal counsel for review by their fish and wildlife commission. Olson also noted that NMFS Representative Melissa Jundt is also unable to join the meeting to make a decision today. Olson said that the utilities are comfortable delaying the vote until the September meeting. He said that hopefully, everyone understands the decision and process very well after today’s discussion, and the version reviewed today will be distributed to the ACC. Olson requested that any additional edits be sent to PacifiCorp soon. Olson also asked whether any ACC representatives feel there may be conflicts with their ability to approve. No ACC representatives identified conflict that would prevent moving forward on a decision in September. Glaser said that WDFW would also appreciate people reaching out if any concerns arise during internal review within organizations.

Glaser reminded the group that the September meeting will occur in person, noting that the ground rules make it clear that participation in a consensus vote is limited to only the ACC

members, but it appears that the ACC would need to make a decision together regarding whether outside parties could be allowed to listen in to the discussion around the vote. Olson said that the utilities concur that the input and decision should only be provided by the representatives that are identified in the Settlement Agreement, but they are open to other parties listening in on the discussion. Olson said that he is also supportive if the ACC feels this should be a closed or confidential discussion. Glaser said that he saw no reason for this to be a closed discussion topic. Amanda Farrar said that she would agree this could be open for outside parties to listen to the discussion but would note that the discussion should be limited to consensus parties. Miller agreed that any public participants may be able to share comments during the public comment period but should not be able to discuss during the specific portion of the agenda. Miller said that if agenda topics are confidential, that should be noted directly on the agenda. Josua Holowatz noted that a separate virtual meeting room would also need to be set up for the virtual portion of the meeting.

Olson thanked everyone for the conversation.

### Mid-year Update: Fish Passage Program (Karchesky)

Chris Karchesky provided a mid-season update on upstream and downstream passage numbers to date, as well as a description of ongoing work being completed at the passage facilities as part of the summer outage periods (Attachment A).

#### Upstream Transport at Merwin Adult Fish Collection Facility

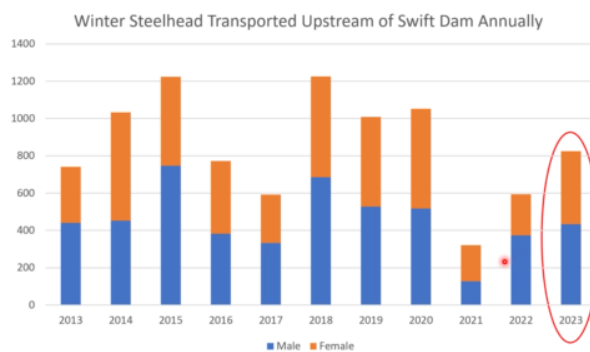
For late-winter steelhead, the number of adults available to pass upstream have been depressed in the past couple of years, so it has been good to see numbers increase again. Transport of adult steelhead that originated from upstream of Swift Dam started in 2019; before then, only program fish (i.e., blank wire-tagged fish) were passed up stream. Since 2019, about one quarter have consistently been of natural origin each year.

### Merwin Adult Fish Collection Facility

#### • Late-Winter Steelhead

- 886 Collected Overall (2022-2023 run yr)

Gender	Brood	Upstream	Downstream
BWT-Female	9	303	1
BWT-Male	12	337	0
Female (NOR)	16	88	3
Male (NOR)	18	97	2
<b>TOTAL</b>	<b>55</b>	<b>825</b>	<b>6</b>



For spring Chinook Salmon, the program did not meet the transport target of 3,000 fish this year; however, in terms of the number transported upstream, this is the second best year since the program started in 2013. Staff have been sampling in the upper basin streams this summer as part of the 2-year feasibility study and have observed a number of adult salmon in deep pools throughout the upper basin. Karchesky reminded ACC members that spawner surveys start in

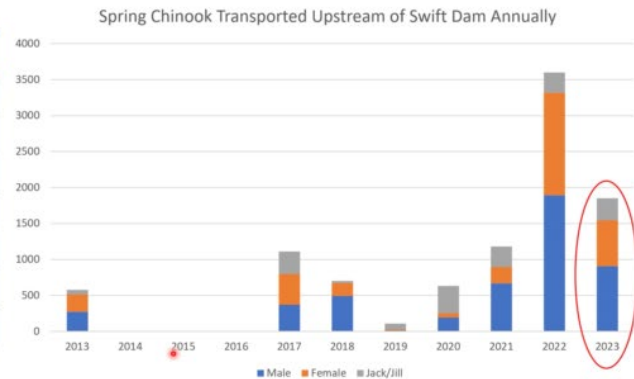
early September. The 2022 brood year juveniles are anticipated to outmigrate next year, so it could be a banner year for juvenile outmigrants.

## Merwin Upstream Collection Facility

- Spring Chinook

- 3,172 collected overall (2023 run year)

Gender	Brood/Surplus	Upstream
Female (HOR)	Brood Goal Met	528
Male (HOR)		767
Jack (HOR)		295
Female (NOR)	0	111
Male (NOR)	0	137
Jack (NOR)	0	13
<b>TOTAL</b>	<b>1,321</b>	<b>1,851</b>



For Coho Salmon, transport targets of 9,000 fish have been consistently met over the past several years. Josua Holowatz said that the Coho Salmon run-size forecast is slightly lower than last year but is a number that makes him confident that targets will be achieved for broodstock, transport, and actions that are part of the Yale habitat preparation plan and nutrient enhancement. Over the past several years, approximately 40% of fish that arrive at Merwin Trap are transported upstream, with approximately 30% of those transported being of natural origin. Karchesky noted that one adult had already arrived at the Merwin Trap this year, and this and may be a record for the earliest arriving Coho Salmon.

## Merwin Upstream Collection Facility

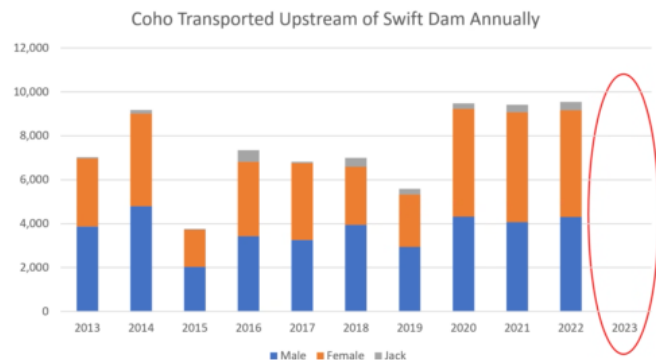
### Coho Salmon

- 2023 Preseason Forecast:

- ?

- Targets:

- Brood - ~1,300 Earlyies/~800 Lates
  - Upstream - ~9,000 total - Earlyies/Lates
  - Yale HPP - ~1,800 Earlyies
  - Swift Nutrient Enhancement - carcasses



Model Run MR2023-Preseason 2023 Projected Returns						
Early Coho				Late Coho		
Escapement	Goal	+/-	Goal	Escapement	Goal	+/- Goal
Elochoman (Beaver Ck)				1,742	1,387	355
Cowlitz Hatchery				34,484	1,934	32,550
Cowlitz Wild						
Toutle	5,188	93	5,095			
Kalama Falls				3,810	425	3,385
Lewis	29,401	4,820	24,581	12,761	7,664	5,097
Washougal				3,304	84	3,220
<b>Total</b>	<b>34,590</b>	<b>4,913</b>	<b>29,677</b>	<b>56,101</b>	<b>11,494</b>	<b>44,607</b>

Notes:

All goals are based on recent year averages of various hatchery metrics (fecundity, mortality etc).

Lewis goals include upstream adult goals of 3,750 for both early and late stocks.

The goal for Klickitat late coho is all included in the Lewis escapement goal.

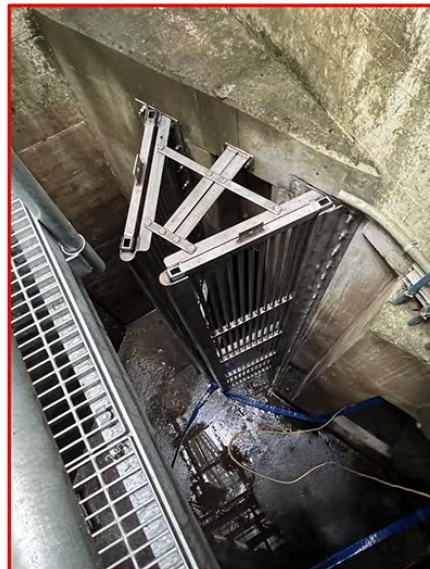
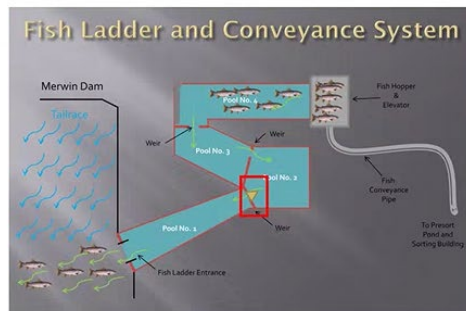
Washougal goal is on-station only. Collection for the Klickitat program will occur here also.

### Merwin Adult Fish Collection Facility Upgrades

The first phase of the Merwin Upstream Collection Facility upgrades is complete. This work included installing a new vee trap between ladder pools 1 and 2, as well as providing additional worker access into various sections of the fish ladder so that the trap does not need to be dewatered to perform maintenance. The next outage (Phase 2) is scheduled to occur next summer, which will extend into early to mid-September to upgrade the crowder portion of the conveyance system to avoid dewatering every time there is a maintenance or mechanical issue. Once all the modifications and upgrades are complete, adult trap efficiency studies can be discussed for re-evaluating the new structures. No problems were encountered in collecting summer steelhead broodstock; however, the outage did create an opportunity for anglers downstream of the Merwin Dam, where fish were waiting until the trap was turned back on.

### Merwin Upstream Collection Facility

- Phase 1 – upgrades complete!
  - Installation of new Vee-Trap and work platforms
  - Outage: July 5 to August 1, 2023
- Phase 2 – Scheduled for Summer 2024
  - Crowder upgrades



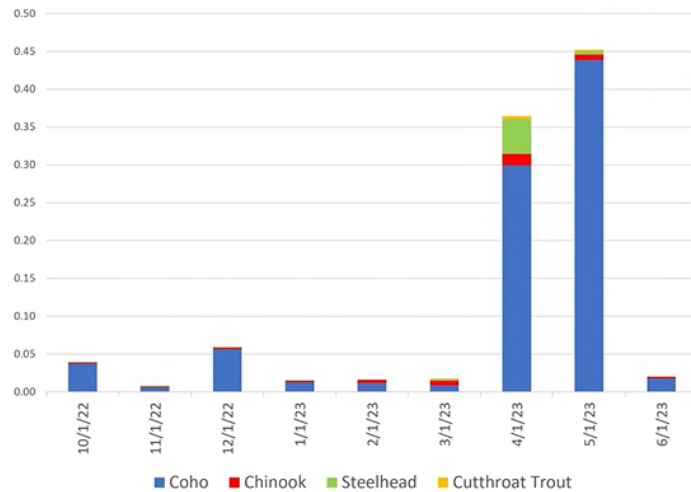
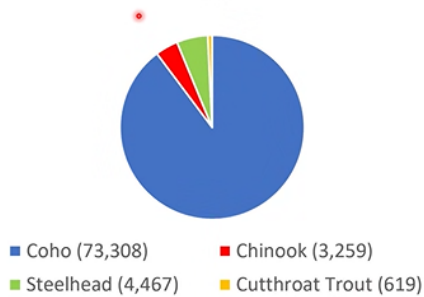


## Downstream Passage at Swift Floating Surface Collector

Relatively mild and cold conditions during the earlier portion of the year kept fish numbers down until the spring. In the past, there were large increases in collection with large inflow events; this year there has not been such large inflow events, so collection has been more consistent until water temperatures warm. Numbers of Coho Salmon have been relatively consistent over the years. Collection of spring Chinook Salmon has been slightly higher this year. Steelhead has been relatively consistent with 4,000 to 8,000 fish collected each year. There have consistently been 600 to 650 Cutthroat Trout collected each year.

### Swift Floating Surface Collector

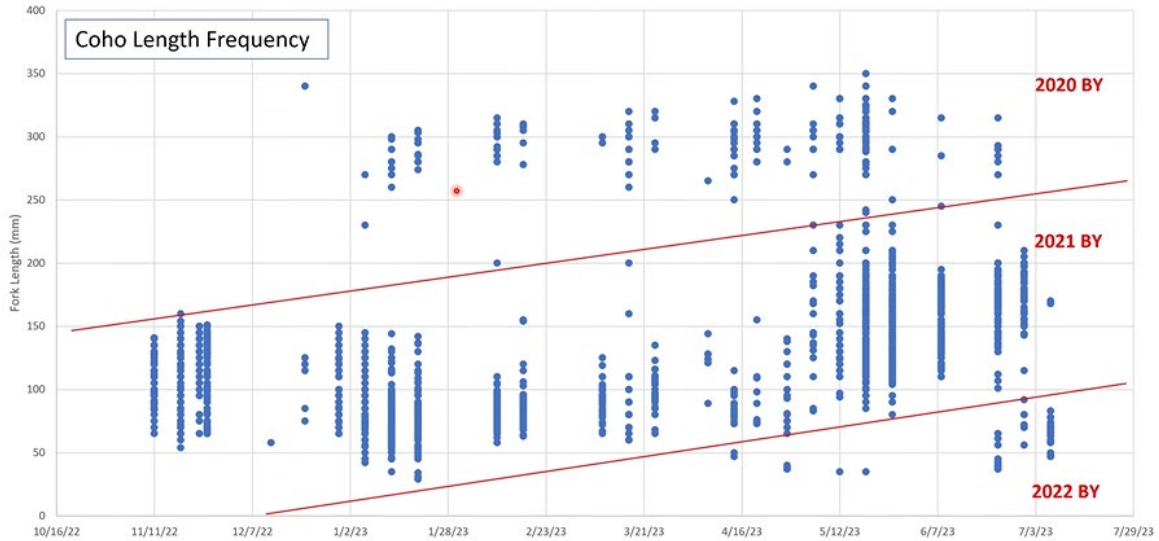
- 2022/2023 Season
  - October 22, 2023 – July 14, 2023
- ~84,000 out-migrants



With the revised Monitoring and Evaluation (M&E) Plan, the program is looking more closely at outmigration by brood year to tie numbers of fish to environmental covariates and factors that contribute to successful adult returns. Staff are working to refine the age structure and methods for estimating age of outmigration; they are using length frequency distributions at this time.

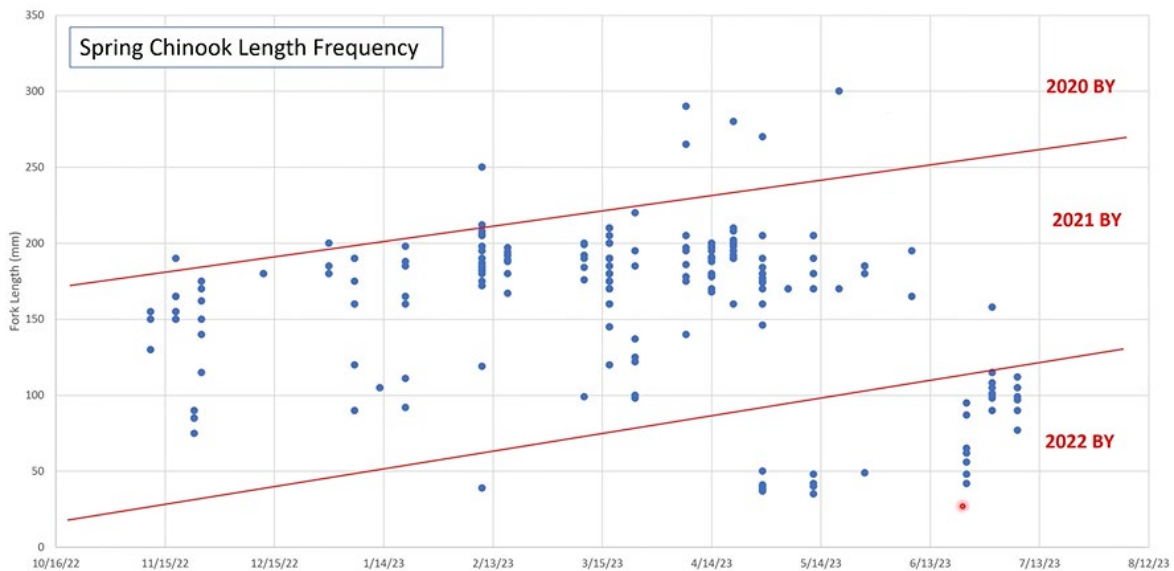
The largest Coho Salmon are referred to as “super smolts” and include fish that probably missed the previous season’s window for outmigration and are quite large once as they leave the reservoir.

### Swift Floating Surface Collector



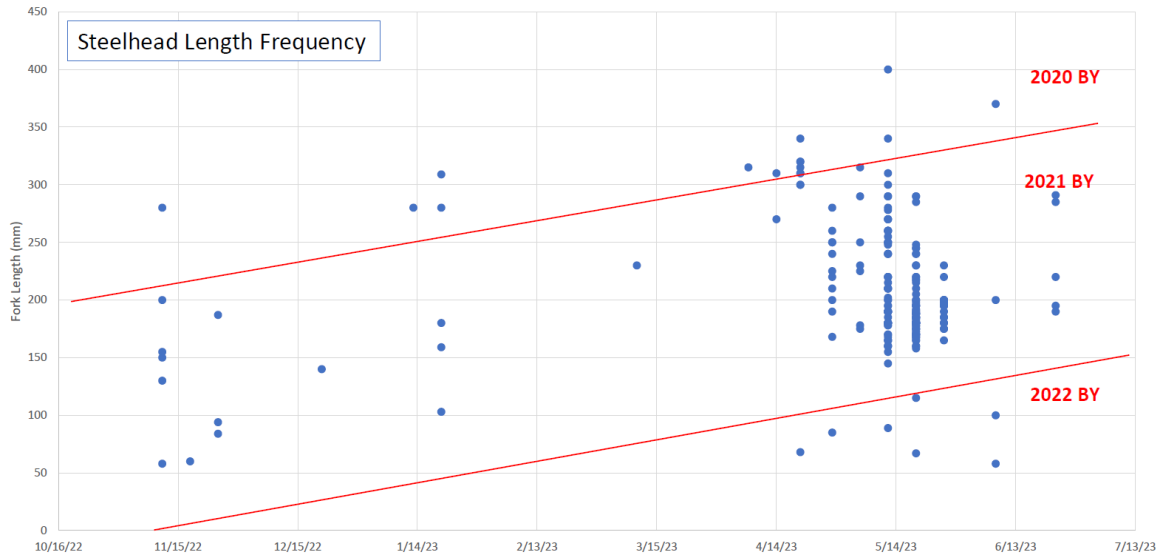
For spring Chinook Salmon, note that some small early migrants are observed each year during the May/June period.

### Swift Floating Surface Collector



Juvenile steelhead predominately migrate during April and May, and consist mostly of 1+ and 2+ fish, with very few smaller, 0+ fish.

# Swift Floating Surface Collector

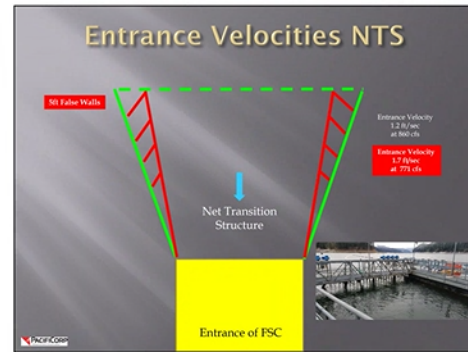
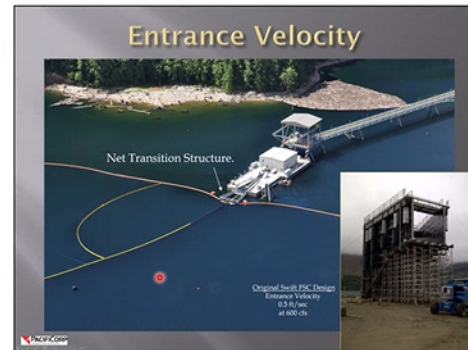


## Swift Floating Surface Collector Upgrades

As a reminder, work is also underway to address flows through the Swift Floating Surface Collector (FSC) Net Transition Structure (NTS). Since increasing flows into the structure in 2019, more fish are observed entering the channel. However, there are still a large number of fish turning around and rejecting the fish channel. A likely problem was the introduction of areas of deceleration when side walls were adjusted to maintain that similar entrance velocity by reducing the surface area of the channel. PacifiCorp is gathering more information on passage through the NTS before designing more permanent solutions. Work is starting next week to build the barge used for staging equipment and to float it downstream. Prefabricated walls will be inserted and bolted in place by divers. The structural additions will be more substantial than false floor inserted in the past. It is anticipated that work will be complete by mid-September and before the FSC is scheduled to be turned back on in early October.

## Swift Floating Surface Collector

- Making adjustment to the NTS to eliminate areas of hydraulic deceleration within the fish channel.
- This adjustment will allow for evaluation of passage success through the collection channel without the areas of deceleration at higher entrances velocities.
- Side wall adjustments to be completed during the 2023 summer outage season. Work starting August 14, 2023.
- Determine if areas of hydraulic deceleration are contributing to high rates of rejection in the fish channel.
- No acoustic telemetry study conducted in spring 2023; will resume in spring 2024 to evaluate fish passage metrics and behavior under the new conditions.
- End goal is to use information as we consider more permanent modifications to the entrance of the Swift FSC to improve collection efficiency.



Josua Holowatz asked whether efficiency trials were done. Chris Karchesky said that yes, a release of passive integrated transponder (PIT)-tagged fish was done this year, similar to the dual tagged releases typically done during the fish passage evaluations but without acoustic telemetry monitoring this year. Detections encompass all of the survival and passage metric (S1 in the downstream passage monitoring plan), but Karchesky said that he did not have those numbers in time to share today; however a number of tagged fish did pass through the collector, and those data will be included in the annual report. The evaluation was done with fish collected at the collector (not naïve fish) to be consistent with how it was done in past years to be able make inferences about effects of changes to the collector on collection efficiency and passage efficiency. For the reintroduction feasibility study, there are fish being collected at Eagle Cliff and PIT-tagged, and fish are being electrofished and tagged from the upper basin and throughout the tributaries to the reservoir. Holowatz said that he was glad to see that those three groups can be compared; those juvenile life histories are going to be very important to characterize moving forward.

Bryce Glaser suggested including an update for the ATS as well. There is a new research scientist joining WDFW (data analyst/biometrician John Best), and he will be helping the agency to better specialize in exactly this type of information and analysis. Karchesky agreed that the ATS is a good forum for this information and gave a reminder that the U. S. Geological Survey (USGS) will be attending the August 31, 2023, meeting to present their Integrated Population Modeling framework.

### Draft Yale Habitat Preparation Plan

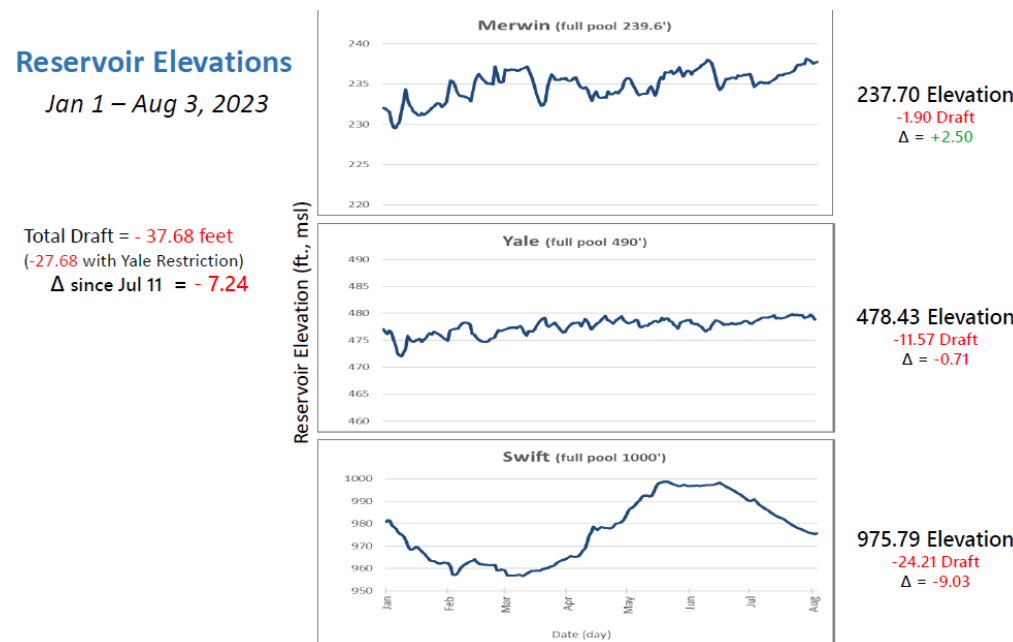
Chris Karchesky reviewed the process for a 30-day review of the Yale 2023 Habitat Preparation Plan (HPP), which was outlined in an email from Erik Lesko on August 4, 2023. This HPP will be discussed in the ATS meeting on August 31, 2023, and the ACC should respond with comments and revisions by September 4, 2023. Bryce Glaser asked whether there was a Decision Template document used last year, noting this is an example of a decision where it has been uncertain whether a Decision Template would be appropriate. Karchesky said that he would

discuss this with Erik Lesko and agreed that it would be helpful to get clarity on whether it was needed. He mentioned that it was a plan that was stipulated in the Settlement Agreement, and that we were simply fulfilling that request, similar to developing the M&E Plan. He noted that a Decision Document was not filled out once the M&E Plan was completed.

## Study/Work Product Updates

### Flows/Reservoir Conditions Update (see also Attachment B)

Chris Karchesky presented the reservoir elevations from June until present.



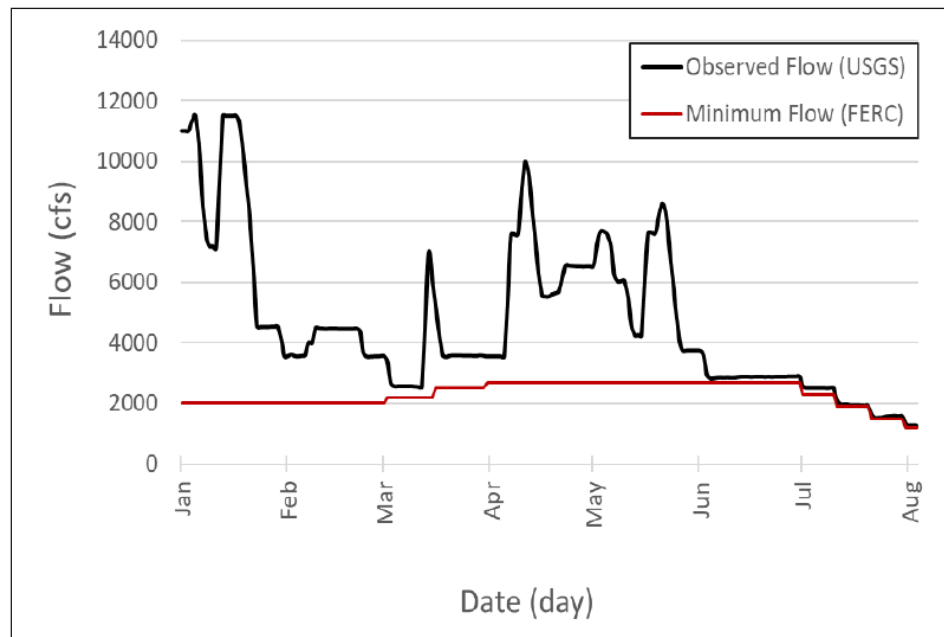
Swift Reservoir water levels were brought down to about 975 feet of elevation, to be held steady at that level. Todd Olson said that a media release was sent out to the public regarding limitations to boat ramp availability because of the low inflows and the need to meet FERC outflows in the lower river. Yale Saddle Dam boat ramp will soon be out of operation; Beaver Bay and Yale Park are still open, but Beaver Bay boat ramp is likely to be shut down in a few weeks. Operators are trying keep the Yale Park and the Swift Camp boat ramps open through at least Labor Day. There will be a need to quickly draft the Swift reservoir after Labor Day for the Swift spill gate dam safety project, so the Swift Camp boat ramp will be closed after Labor Day regardless.

Karchesky said that as part of actions in the Yale HPP, releases will be split between Yale Park and Saddle Dam; given water level considerations, Saddle Dam may not be an option for release; this can be discussed further at the next meeting.

Karchesky said that the river is operating at minimum flows downstream of Merwin Dam. Olson said that minimum flows from now until October are 1,250 cubic feet per second (cfs).

**North Fork Lewis River  
Stream flow downstream  
of Merwin Dam**

*Jan 1 – Aug 3, 2023*



## **Reservoir Shoreline Development Projects**

### Campers Hideaway

Steven Manlow said that he has no update on permitting from WDFW or U.S. Fish and Wildlife Service.

### Speelyai Parking Expansion

Peggy Miller said that an update was provided at yesterday's TCC meeting that the Speelyai parking expansion construction should be starting soon. This will occur during the August-to-September timeframe. It will be busy with construction equipment there.

## **Aquatic Technical Subcommittee (ATS) Update**

Chris Karchesky provided an overview of the highest concerns for PacifiCorp being discussed by the ATS, as follows:

- The next meeting will be held on August 31, 2023, in person with a hybrid option.
- The genetics monitoring strategy is still under revision; as part of the upper basin PIT-tagging effort, there are also genetic samples being collected from juveniles.
- The USGS team working on the Integrated Population Modeling effort, focusing primarily on historical Coho Salmon data, will attend and give a presentation in person.
- Work is ongoing on methods for monitoring steelhead abundance and proportion of hatchery-origin spawners in the lower river.

Bryce Glaser added:

- WDFW is working on developing hatchery genetic management plans (HGMPs) based on species transition plans and is engaged in review/discussions with PacifiCorp. WDFW has received comments on first drafts of the HGMPs and comments from their internal legal review. Staff are working to address biological and legal concerns and are pushing to finalize those soon.

- Now that transition plans have been approved, there is a need to revisit implementation timelines and understand how soon we should move on transitions. Coho Salmon are the most pressing, followed by steelhead.

### **Lewis River Fish Passage**

See Attachment C.

### **Swift No. 2 30-Inch Corrugated Metal Pipe Inspection (Farrar)**

Amanda Farrar gave an update on the planned, required FERC Dam Safety Inspection on the 30-inch corrugated metal pipe that provides flow to the constructed channel. The inspection did not happen because the gate valve dislodged from its anchor bolts on the concrete base, so the crew was unable to close the valve. The test is delayed due to the schedule for repair of the valve. Peggy Miller asked whether the amount of flow going through the channel has changed. Farrar said that the valve remains open to the correct minimum flow of 14 cfs; nothing changed with the position of that gate once the valve popped off.

### **Fish Passage Subcommittee (FPS) Update**

The Fish Passage Subgroup (FPS) meeting for this afternoon has been canceled; a short discussion follows on next steps for the FPS's focus following a decision on the Elements of Fish Passage Document.

Bryce Glaser said that in the charter for the group, it was determined that the FPS would provide technical guidance for implementation of the fish passage actions. The focus of the FPS should shift back toward more technical discussions, working toward 60% design. Glaser suggested revisiting the comments and responses received through the 30% review to understand how those would be incorporated into the 60% design. There are, as described in the Fish Passage Elements Document, some additional studies that need to be implemented and some plans, including the transport plan, to be completed. Todd Olson agreed that this group should shift focus to the evolution of the design and meeting the criteria, as called for in the Settlement Agreement. Chris Karchesky continues to work with the team to move the 30% design toward the 60% design; September would be a good time for the design team to show the changes from the 30% design. Olson noted that the group can focus on certain topics, or all comments can be reviewed. Glaser said that it is helpful to understand the next steps to re-engage the correct staff who are more focused on the fish passage engineering. Glaser asked whether there are any other topics the group feels they should address; no other topics were mentioned.

Because the next ACC meeting will be held in person, the FPS meeting will be rescheduled to start at 1:00 p.m. that same day. Some attendees may join in person; some may join remotely. The meeting room at WDFW has been reserved for the whole day.

### **Administrative Updates**

Chris Karchesky reminded the ACC that the September meeting would be in person with a hybrid attendance option. Josua Holowatz confirmed that the large conference room at the WDFW Region 5 office has been reserved.

### **Public Comment Opportunity**

None present.

**Agenda Items for September 14, 2023**

- Study/Work Product Updates
- Decision Template: Proposed Revision to Ground Rules
- Decision Template: Elements of Fish Passage
- Review and Approve the Habitat Preparation Plan
- Nutrient Enhancement Update

**Adjourn 11:53 pm**

**Next Scheduled Meeting**

September 14, 2023
In Person at WDFW Region 5 Headquarters and Teams Call
9:30 a.m.–12:00 p.m.

**Meeting Handouts & Attachments**

- Agenda from 8/11/2023
- **Attachment A** – Mid-Year Fish Passage Program Update
- **Attachment B** – Flow/Reservoir Conditions (June – July 2023)
- **Attachment C** – Merwin Adult Trap Collection Report (July 2023)
- **Attachment D** – Swift FSC Facility Collection Report (July 2023)
- **Attachment E** – Lewis River Fish Passage Report (July 2023)

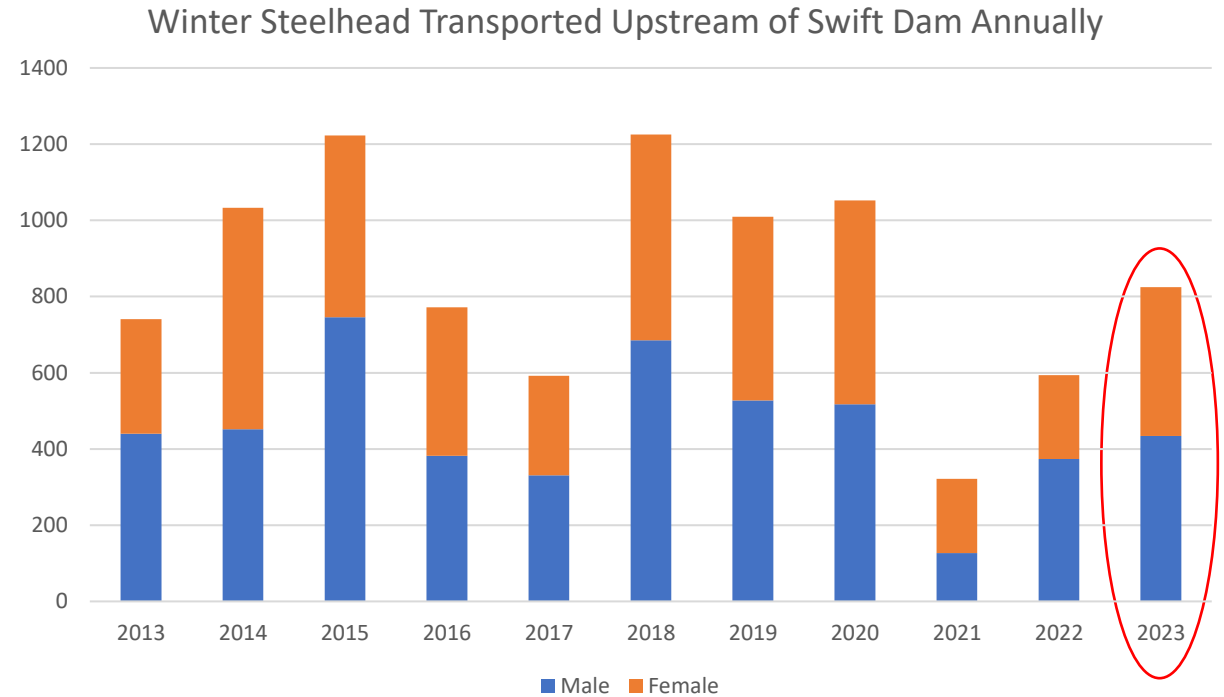


Lewis River Fish Passage  
Program Mid-Season Summary  
2023

# Merwin Adult Fish Collection Facility

- Late-Winter Steelhead
  - 886 Collected Overall (2022-2023 run yr)

Gender	Brood	Upstream	Downstream
BWT-Female	9	303	1
BWT-Male	12	337	0
Female (NOR)	16	88	3
Male (NOR)	18	97	2
<b>TOTAL</b>	<b>55</b>	<b>825</b>	<b>6</b>

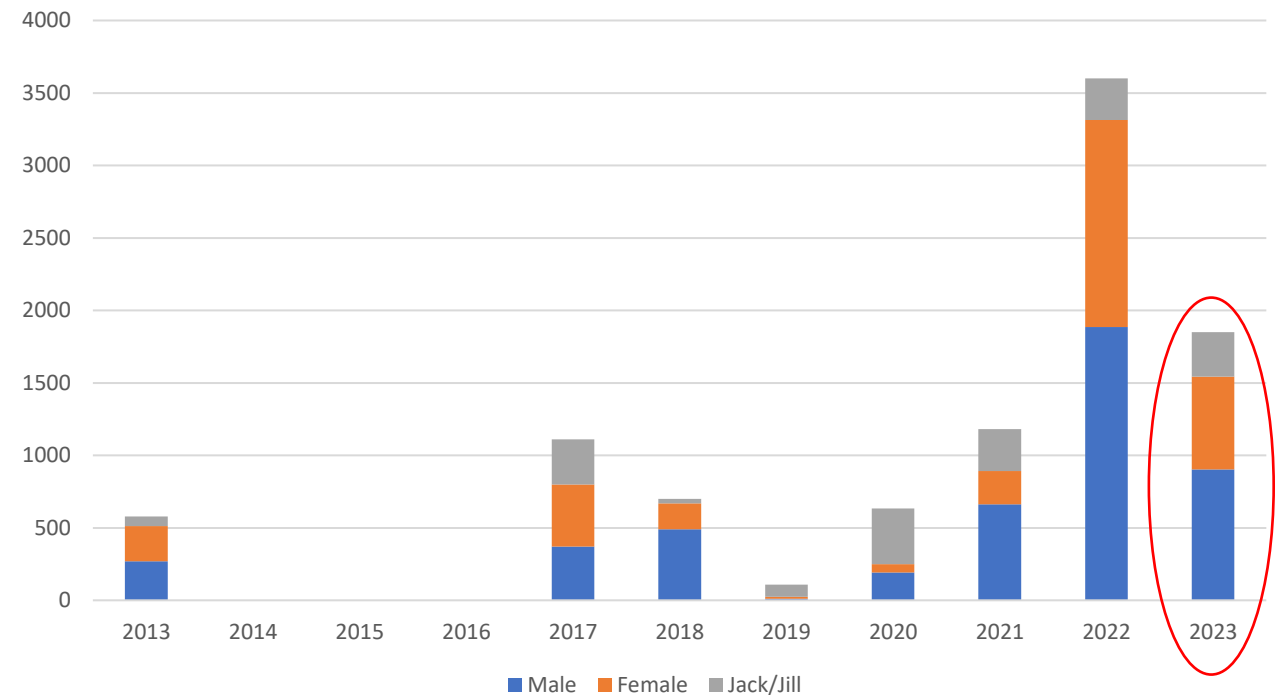


# Merwin Upstream Collection Facility

- Spring Chinook
  - 3,172 collected overall (2023 run year)

Gender	Brood/Surplus	Upstream
Female (HOR)	Brood Goal Met	528
Male (HOR)		767
Jack (HOR)		295
Female (NOR)	0	111
Male (NOR)	0	137
Jack (NOR)	0	13
<b>TOTAL</b>	<b>1,321</b>	<b>1,851</b>

Spring Chinook Transported Upstream of Swift Dam Annually



# Merwin Upstream Collection Facility

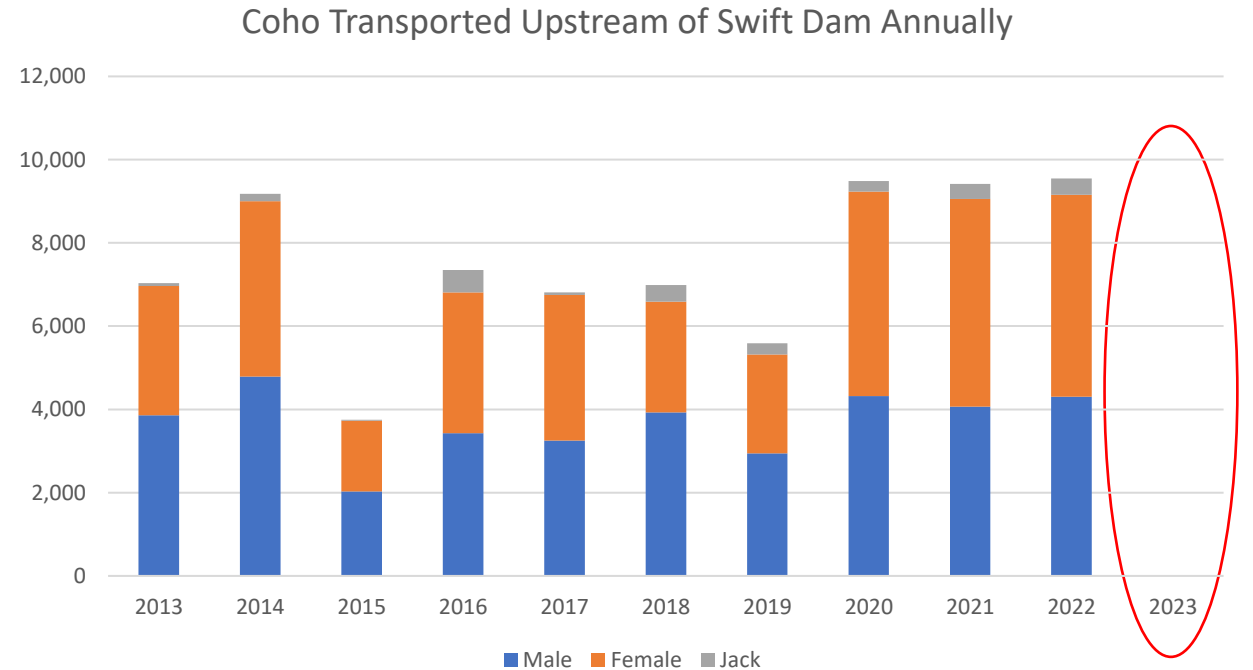
- Coho Salmon

- 2023 Preseason Forecast:

- ?

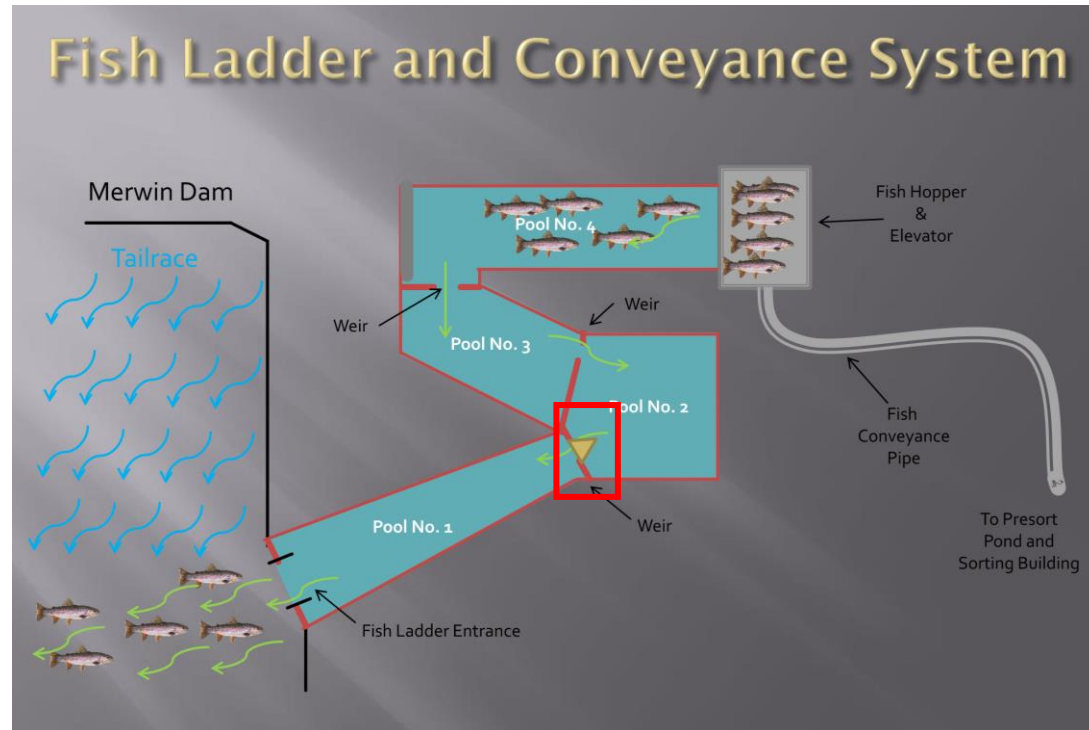
- Targets:

- Brood - ~1,300 Earlies/~800 Lates
- Upstream - ~9,000 total - Earlies/Lates
- Yale HPP - ~1,800 Earlies
- Swift Nutrient Enhancement - carcasses



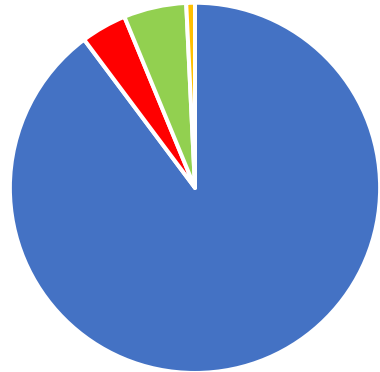
# Merwin Upstream Collection Facility

- Phase 1 – upgrades complete!
  - Installation of new Vee-Trap and work platforms
  - Outage: July 5 to August 1, 2023
- Phase 2 – Scheduled for Summer 2024
  - Crowder upgrades

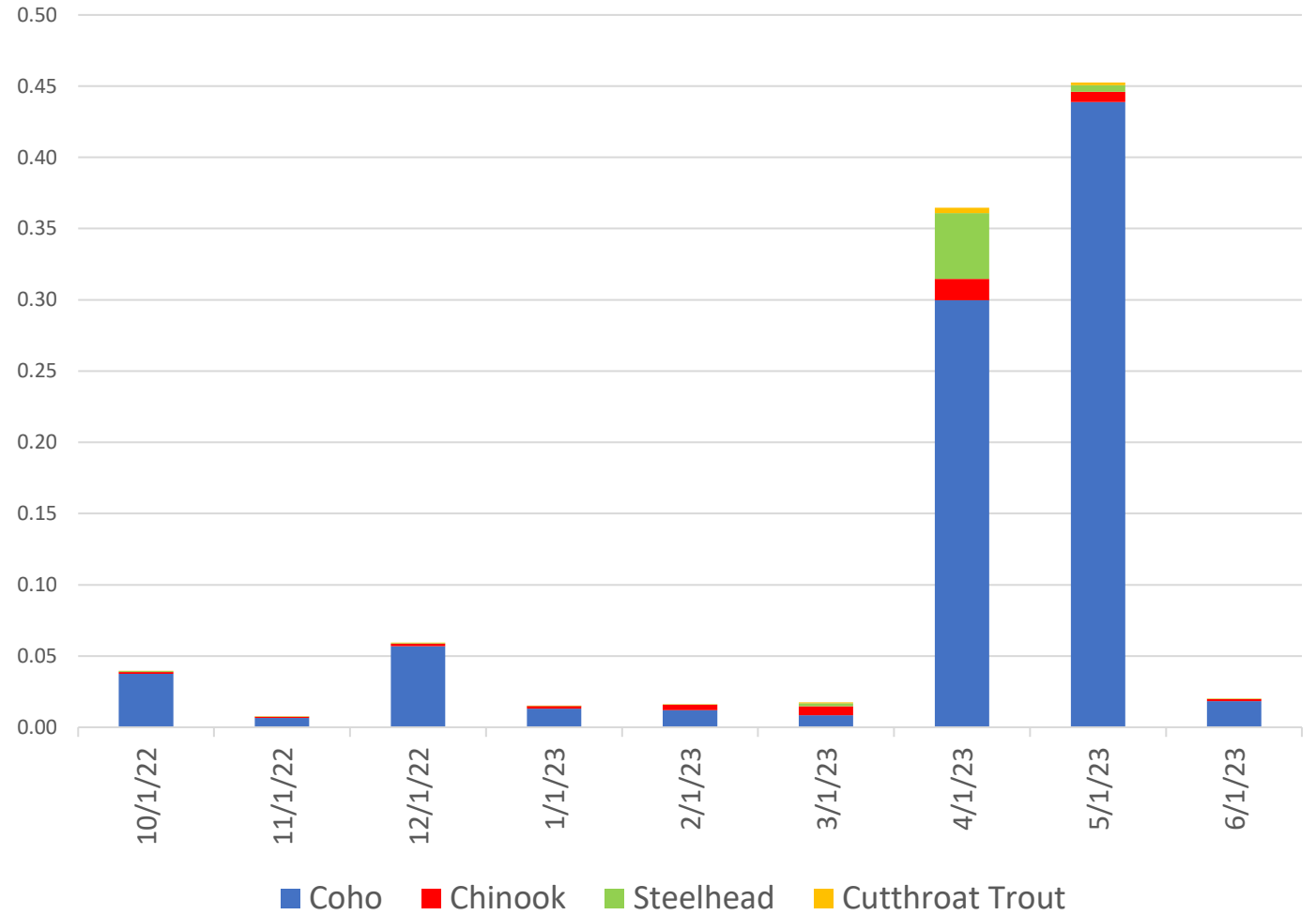


# Swift Floating Surface Collector

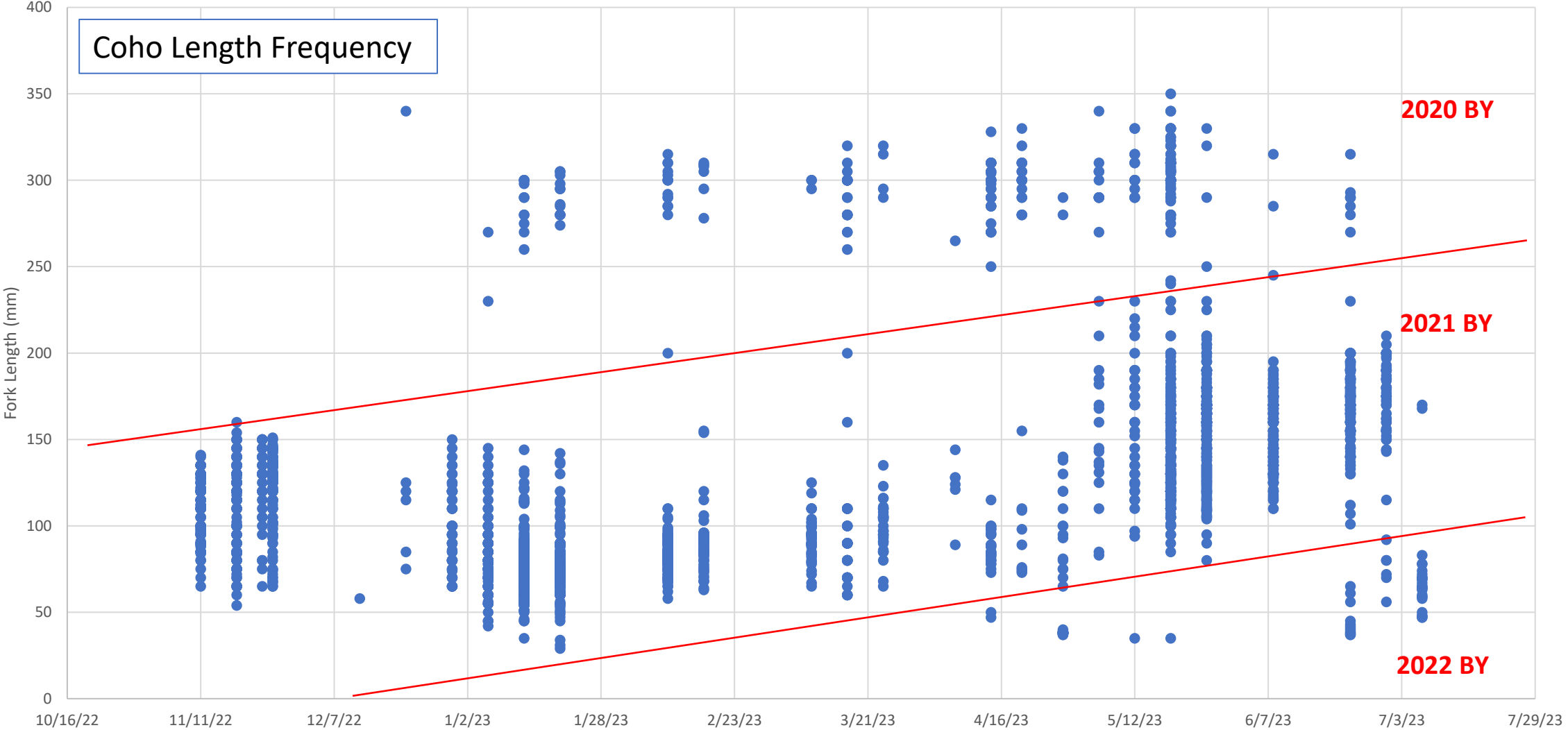
- 2022/2023 Season
  - October 22, 2023 – July 14, 2023
- ~84,000 out-migrants



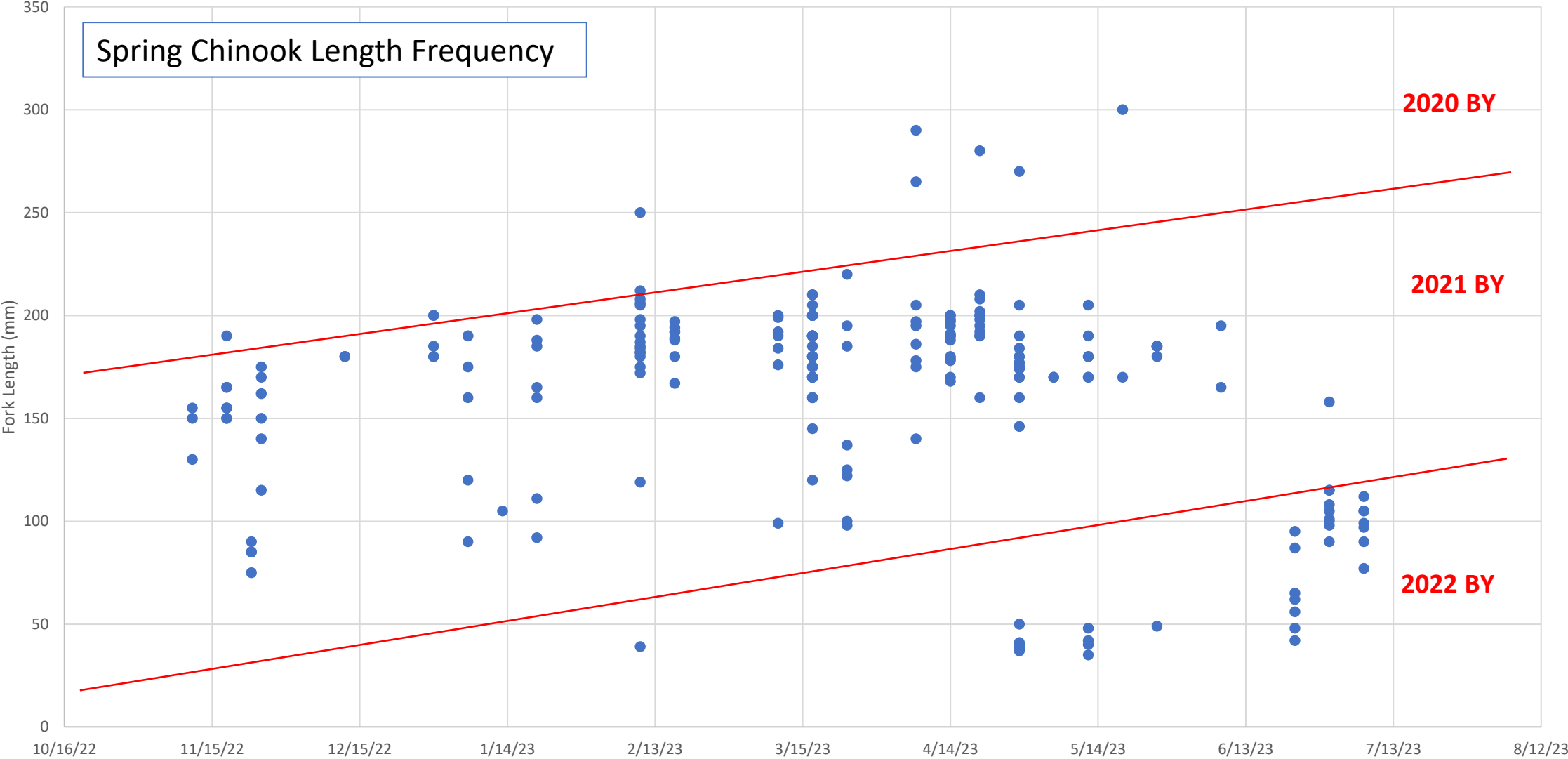
■ Coho (73,308)      ■ Chinook (3,259)  
■ Steelhead (4,467)      ■ Cutthroat Trout (619)



# Swift Floating Surface Collector

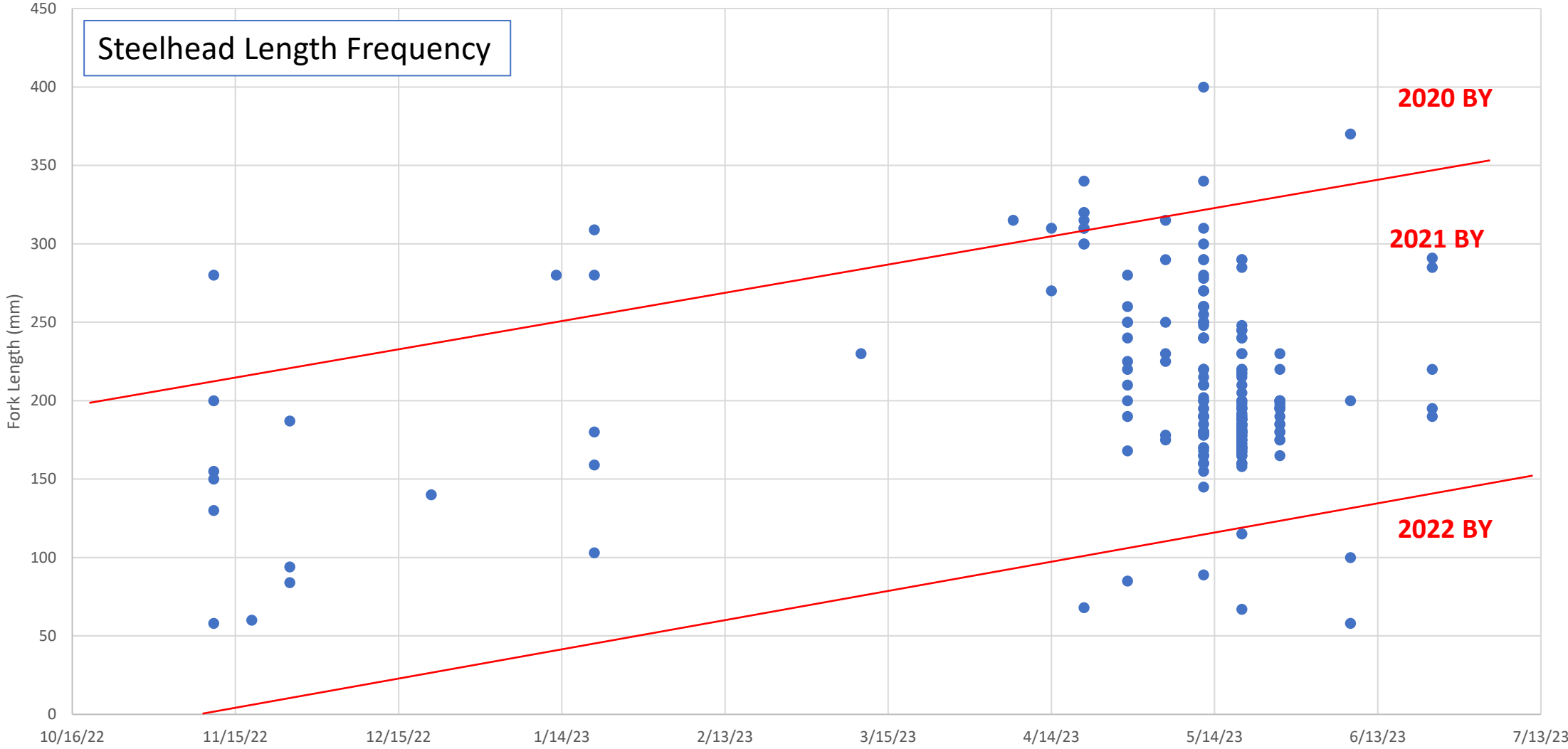


# Swift Floating Surface Collector



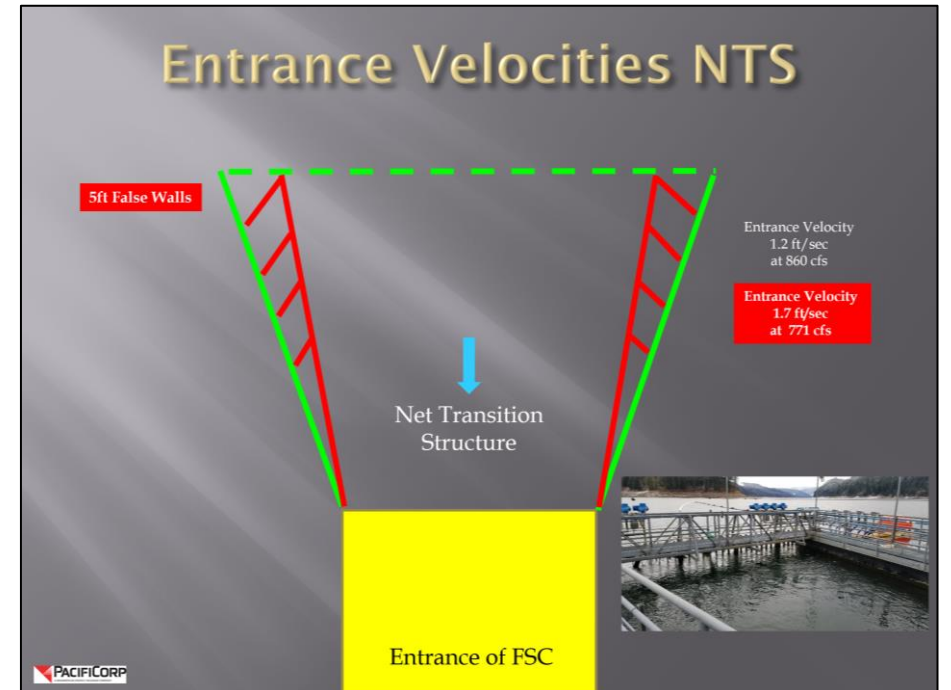


# Swift Floating Surface Collector



# Swift Floating Surface Collector

- Making adjustment to the NTS to eliminate areas of hydraulic deceleration within the fish channel.
- This adjustment will allow for evaluation of passage success through the collection channel without the areas of deceleration at higher entrances velocities.
- Side wall adjustments to be completed during the 2023 summer outage season. Work starting August 14, 2023.
- Determine if areas of hydraulic deceleration are contributing to high rates of rejection in the fish channel.
- No acoustic telemetry study conducted in spring 2023; will resume in spring 2024 to evaluate fish passage metrics and behavior under the new conditions.
- End goal is to use information as we consider more permanent modifications to the entrance of the Swift FSC to improve collection efficiency.

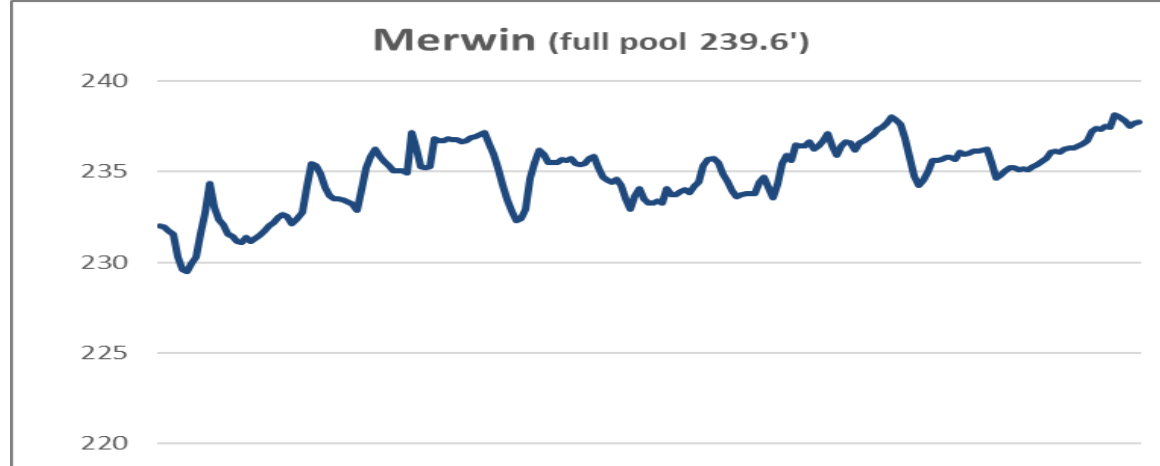


# Reservoir Elevations

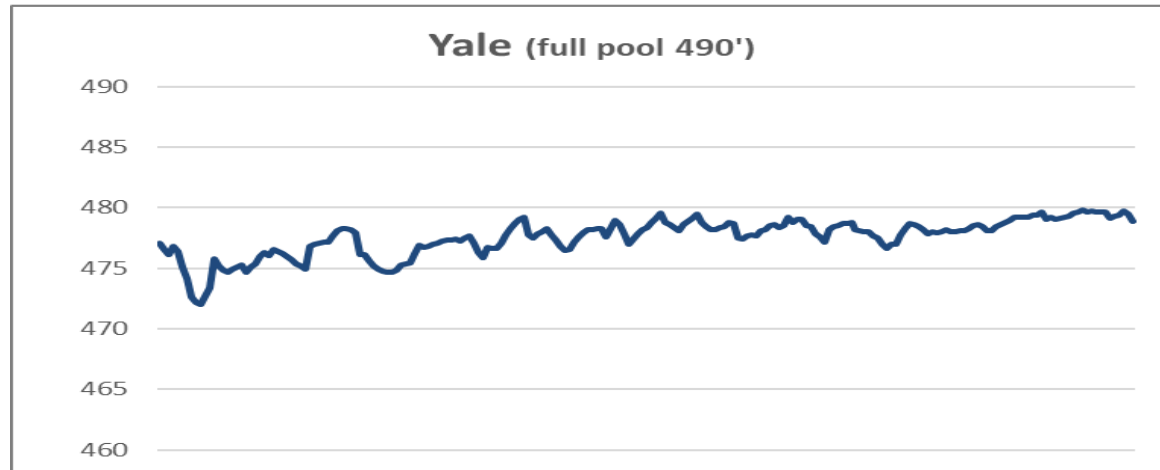
Jan 1 – Aug 3, 2023

Total Draft = - 37.68 feet  
(-27.68 with Yale Restriction)  
 $\Delta$  since Jul 11 = - 7.24

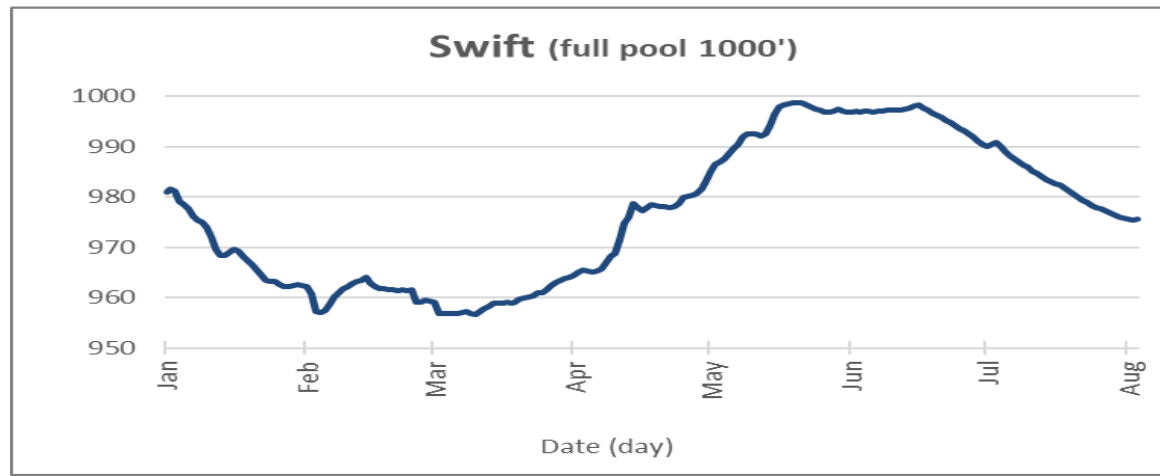
Reservoir Elevation (ft., msl)



237.70 Elevation  
-1.90 Draft  
 $\Delta$  = +2.50



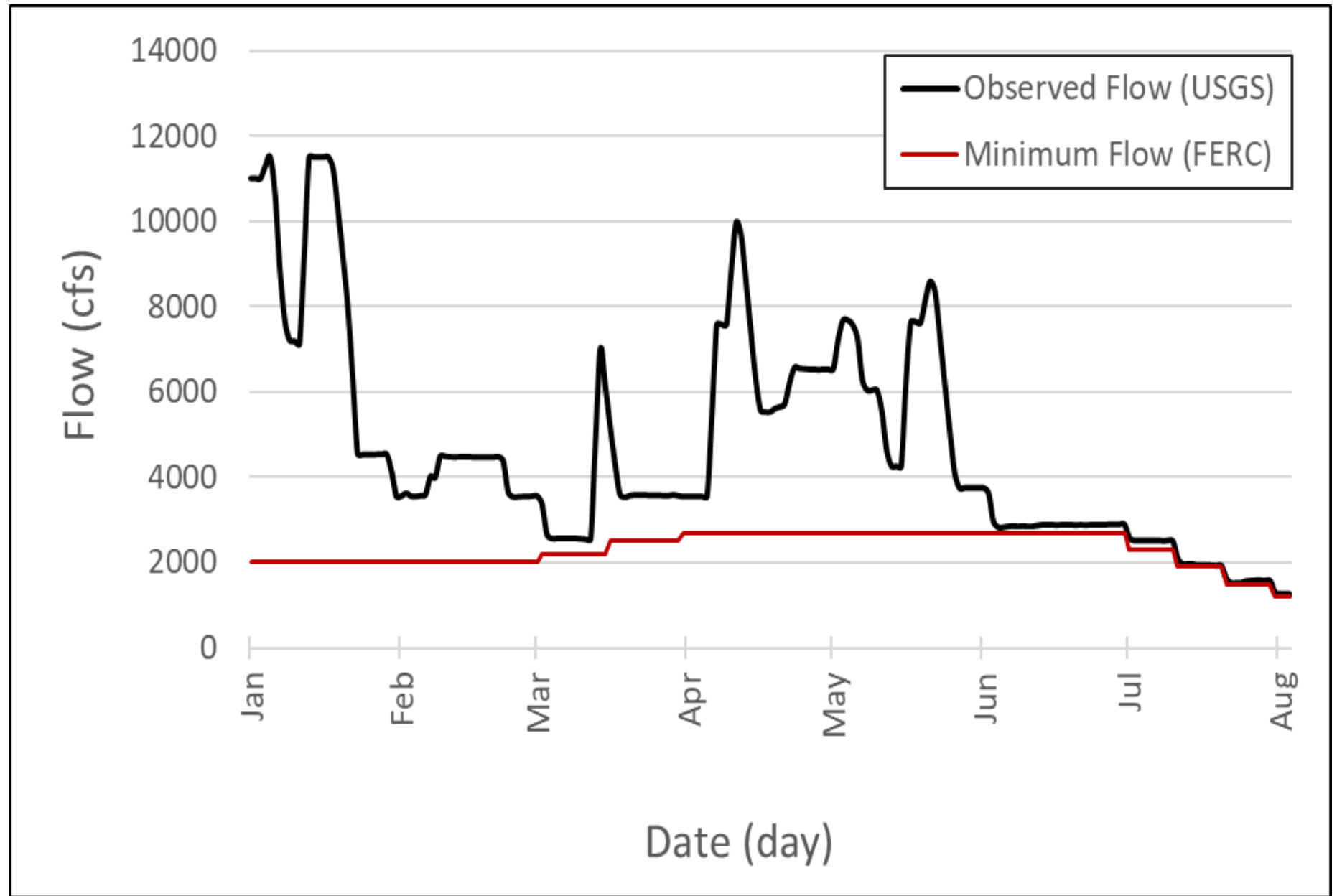
478.43 Elevation  
-11.57 Draft  
 $\Delta$  = -0.71



975.79 Elevation  
-24.21 Draft  
 $\Delta$  = -9.03

**North Fork Lewis River  
Stream flow downstream  
of Merwin Dam**

*Jan 1 – Aug 3, 2023*



# Lewis River Fish Passage Report

## July 2023

### Merwin Fish Collection Facility and General Operations

During the month of July, 190 fish were collected at the Merwin Dam Adult Fish Collection Facility (MFCF), which was down from June's total of 886. Summer steelhead (n= 173) were the primary species collected.

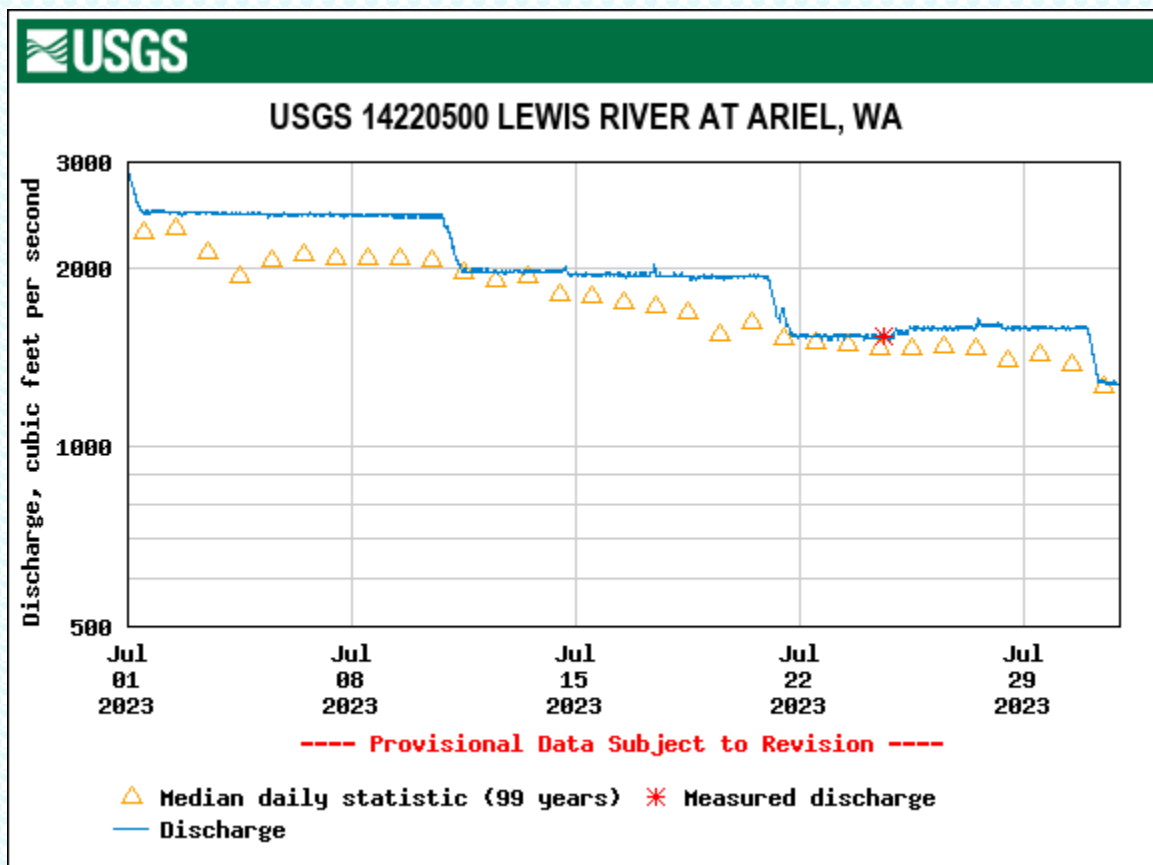


Figure 1. Flow in cubic feet per second recorded at the USGS Ariel, WA gauge (14220500) located immediately downstream of Merwin Dam.

The MFCF lift and conveyance system were taken out of service on July 6, 2023, so that improvements to the fish ladder area could be completed. This work included the installation of a new Vee-Trap weir and to create a safer work environment for maintenance staff, as well as allow some maintenance tasks to be completed without the need to dewater the fish ladder. Work on the MFCF was completed by the end of the month and it was put back in service on August 1<sup>st</sup>, 2023. Additional modifications to the Merwin Trap fish crowder are planned for next summer (2024). Flows below Merwin Dam were generally decreasing throughout the month, with flows going from approximately 2,800 at the beginning of July to 1,500 cubic feet per second at the end of July (Figure 1).

None of the fish collected at the MFCF in July had been previously PIT tagged. For calendar year 2023 to-date, a total of 38 previously PIT tagged fish have been collected at the MFCF (32 winter steelhead, three cutthroat trout, two spring Chinook, and one natural origin coho). Tagging history and detections of PIT tagged fish passing through the Lewis River Fish Passage Facilities are available through Columbia Basin PIT Tag Information System (PTAGIS).

### **Upstream Transport**

A total of 88 adult fish were transported upstream in July, all of which were adult Spring Chinook. Of the fish transported upstream in June, 2 were collected at the MFCF, while 86 were captured at Lewis River Hatchery. Year-to-date in 2023, a total of 1,840 spring Chinook (1,581 HOR and 259 NOR), 808 winter steelhead (631 BWT and 177 NOR), 38 late run coho, and 29 cutthroat trout have been transported upstream of Swift Dam.

### **Floating Surface Collector (FSC)**

The Swift Floating Surface Collector (FSC) was taken out of service on July 13<sup>th</sup>, 2023 for scheduled summer maintenance. It will return to service in early October. Fish collection totals had decreased substantially prior to taking the FSC offline, largely due to increasing reservoir temperatures.

A total of 1,653 fish were collected at the Swift FSC during the month of July, which is a 95.5 percent decrease from the June collection total of 37,347 (Table 1). The majority of the fish collected were juvenile coho (n= 1,499). Juvenile spring Chinook (n= 120), hatchery rainbow trout “Goldendales” (n= 16), cutthroat trout (n= 12), steelhead (n= 5), and Bull Trout (n= 1) were also collected in July. The Bull Trout was returned to Swift Reservoir after being PIT tagged, and had a fork length of 110 mm.

**Table 1: Total number of out-migrating juvenile salmonids (by species) collected at the Swift FSC during the month of July since the completion of the facility in 2013.**

Run Year	FSC Turned Off for Summer Maintenance	July Collection Numbers by Run Year at Swift FSC				
		Coho	Chinook	Steelhead	Cutthroat	TOTAL
2013	NA	190	17	1	16	224
2014	NA	383	95	20	10	508
2015	July 7	42	1	0	0	43
2016	July 14	340	0	30	4	374
2017	July 21	739	7	15	3	764
2018	July 16	429	52	18	6	505
2019	July 22	1,454	575	17	27	2,073

<b>2020</b>	<b>July 17</b>	<b>641</b>	<b>80</b>	<b>90</b>	<b>2</b>	<b>813</b>
<b>2021</b>	<b>July 12</b>	<b>756</b>	<b>66</b>	<b>18</b>	<b>6</b>	<b>846</b>
<b>2022</b>	<b>July 18</b>	<b>2,276</b>	<b>379</b>	<b>28</b>	<b>12</b>	<b>2,695</b>
<b>2023</b>	<b>July 13</b>	<b>1,499</b>	<b>120</b>	<b>5</b>	<b>12</b>	<b>1,636</b>





**Fish Facility Report**  
**Swift Floating Surface Collector**  
**July 2023**

Day	Coho			Chinook			Steelhead				Cutthroat		Bull Trout	Planted Rainbow	Total	
	fry	parr	smolt	fry	parr	smolt	fry	parr	smolt	kelt	fry	<13 in				> 13 in
1		6	277		7	5			1					0	11	307
2			479		15	0			2					0	0	496
3		4	174		8	3			0			1		0	0	190
4		2	276			1			1					0	1	281
5			32			13			0			10		1	0	56
6	7		0			25			0					0	0	32
7	5	31	19		10	6			0			1		0	0	72
8		7	76		3	1	1		0					0	1	89
9		1	45		1	1			0					0	1	49
10			13			3			0					0	0	16
11		3	14		10	0			0					0	0	27
12			15		6	0			0					0	0	21
13		3	10		2	0			0					0	2	17
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<b>Monthly</b>	12	57	1430	0	62	58	1	0	4	0	0	12	0	1	16	1653
<b>Total</b>	333	5140	63714	233	217	2587	3	43	4323	31	0	511	48	11	2035	79229