

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final Meeting Summary
May 7, 2024 from 9:30 – 2:30

FTC Representative Attendees:

Travis Nelson	TPU
Bryce Glaser	WDFW
Amy Kocourek	NMFS
Jonathan Stumpf	TU
Anne Baxter	ECY
Bill Sharp	Yakama Nation

Additional Attendees:

Thomas Starkey Owens	ECY
Josua Holowatz	WDFW
Brian Gale	WDFW
John Serl	WDFW
Kris Warner	WDFW
Todd Hillson	WDFW
Sean Toomey	WDFW
Doug Robison	WDFW
Kiza Gates	WDFW
Melora Shelton	TPU
Matt Peter	TPU
Eric Shoblom	TPU
Missy Baier	TPU
Saul Villarreal	TPU
Hien Ho	TPU
Linda Shmait	TPU
Steve West	LCFRB
Michael Boyles	BPA
Laura Wolfe	LCPUD
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Jack Tipping and Larry Pryor

2024 FTC Meeting Dates: In-person meetings will include a remote option. June 4 (in person at the Veteran Memorial Museum in Chehalis), Aug. 6, Sept. 3 (in person), Oct. 1, Nov. 5, Dec. 3 (in person)

Approval of April Meeting Summary

The revised version of the April FTC Meeting Summary was reviewed and approved with clarifying edits and will be posted for public review.

Updates

[Hydro Operations \(presentation emailed on May 6\)](#)

stranding risk during flow changes below 5,000 cfs and that they will discuss the need for fish stranding surveys with WDFW.

Saul Villarreal introduced himself as Tacoma’s new Hydro Resources Operations Manager, filling the role formerly held by Leah Marquez-Glynn. Saul was previously part of the Resource Planning Team at Seattle City Light. After introducing members of his team: Hien Ho and Linda Shmait, he walked through a presentation with detailed background information as well as refill probabilities under the different approaches. The original presentation was distributed to the FTC on April 28, updates were distributed following the meeting.

Cowlitz Refill Conditions to Date:

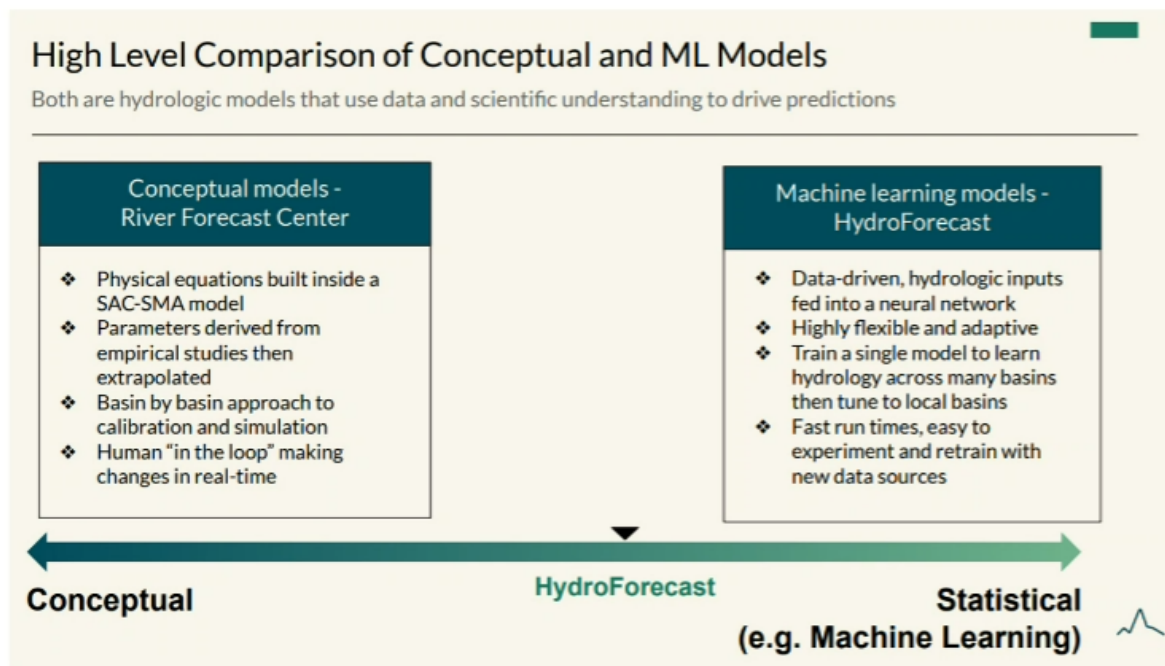
April 2024 is close to the 6th percentile of inflows (1981-2023). Since February, flows into Riffe Lake have been below average. Precipitation is a major driver for spring flows with near the 10th percentile. WA state declared statewide drought on April 16. The below average soil moisture conditions are similar to 2023 when above average snowpack resulted in lackluster runoff. Since February 19, they have been operating at minimum flow plus weekly fish transport flows. Mayfield discharge is running below the historic median.

Current Forecasts:

Tacoma has recently been using two forecast services: NOAA River Forecast Center and HydroForecast. They are currently showing very different inflow forecasts, with much lower inflows predicted by HydroForecast. A study conducted by HydroForecast from April to July showed their forecast has been more accurate than the River Forecast Center during Spring of 2024. This is why refill probabilities are based on HydroForecast for planning the proposed flow reduction. Saul shared updated inflow forecasts and refill probabilities as of May 6 with and without a flow reduction.

Forecasted Conditions

Upstream Tech Forecasting Methodology



Minimum Flow Scenarios and Refill Probabilities:

May 7, 2024 FTC Meeting Summary

The draft DD addresses ongoing evaluation of watershed conditions and forecasts throughout the proposed reduction period as well as plans for FTC coordination throughout. All have similar average discharge and improve refill and end of June reservoir elevations.

Discussion:

- Clarification that HydroForecast takes climate conditions such as El Niño into consideration, while NOAA RFC uses historical years that are equally weighted in their forecasts.
- Refill for this analysis is defined as achieving 748 ft by June 30, but the end of June elevation is also important. This is illustrated well in the refill probability traces. The mean of all traces is still below 748 ft, even with a flow reduction. Adjusted full elevation is 749 ft due to seismic limits.
- Alternatives 1 and 2 have 90% of refill, while Alternative 3 increases to 92.5%. Tacoma prefers Alternative 2 because a major rain event in May could change things. There will also be impacts of snow melt. All most scenarios draft below 748' before the end of June.
- Clarification that the 749' seismic limit currently is a hard elevation boundary due to cultural resource and Kosmos concerns.
- Anne asked about how each alternative would impact fish habitat and had additional questions regarding whether any side channel habitat would be available during a reduction (vs. single thread channel). Melora said that there would be, but that some areas do start to dewater as flows go below 5,000 cfs and can become completely dewatered and/or disconnected as flows further decrease Ecology would like more information and more time to review the DD before supporting any one scenario.
- Bryce noted that being able to achieve minimum flows for spawning is one of WDFW's biggest concerns in the fall. He suggested editing the DD by adding to the first paragraph that achieving full pool to the greatest extent possible gives the best chance of this through summer and fall.
- Bryce also noted that improved understanding of the benefit of fish transport flows, including benefit compared to detriment at low flows, is among the top priorities for the M&E team to evaluate.
- Salvaged fish would be returned to the free-flowing portion of the river per the M&E plan protocol for fish stranding surveys.
- The prior DD can give us guidance for language on stranding surveys and reports. It would also be good to include some language about regrouping to discuss next steps if refill is achieved sooner than expected. We also want to be mindful and learn from past experience.

Wrap Up / Next Steps: Tacoma proposed to reduce the required minimum flow on May 15 and start implementing one of the three alternatives at that time. To allow the FTC more time to review the DD before making a decision, they instead plan to meet again with FTC reps next Monday and potentially delay the flow reduction to the following week. Melora reminded all that Tacoma will stay in close touch with the FTC throughout the flow reduction process as well as coordinate internally with Resource Operations to manage the uncertainty around inflows and refill.

Action Items:

- Melora: Review the prior DD for language around coordination to include frequent discussions, weekly reports on stranding surveys following fish transport flows, including maps of dewatered reaches (if possible), and what action to take once substantive refill has been achieved.

- Melora: Coordinate the editing of the DD in track changes to include impact on fish habitat and coordination piece. Update refill probability percentages with Resource Operations.
- Travis: Set up a Cowlitz Flow Teams Meeting with FTC reps on May 13 at 3:30 re flow reduction alternative. Send out Saul’s PPT (which will be updated again in time for the May 13 meeting).

Water Quality

Matt P gave the following update noting there hadn’t been any spilling:

- Debris Management: Tacoma is developing a strategy for handling the wood in all their systems (burning less, donating more, using LWD for habitat improvements, etc.). The focus is on taking a more environmental approach.
- Boat barrier and north and south debris deflector: Tacoma is continuing to collect temperature data at the boat barrier and debris deflectors.
- The WQPP for the culvert replacement at the unnamed tributary to Mayfield Lake went out last summer and construction is scheduled for this summer.
- The Gravel Augmentation Long-Term Plan: The WQPP is out and permitting is underway.
- North Taidnapam Boat Launch Improvement Project: The WQPP has been completed. Matt reminded all there are two phases to this project. Some of the work is on hold pending FERC approval. Phase 2 (to improve ADA access in the lower-level parking area and trail, etc.) is out for permitting.
- Kosmos Cleanup: Tacoma continues to work on their feasibility study. They are still in the midst of the Remedial Investigation (RI) report with Ecology.
- CFNSC: Tacoma will send out weekly reports that include release site temperature data.

Fish Facilities

Separator:

Eric noted spring Chinook numbers are picking up and winter steelhead numbers are starting to drop.

Winter Steelhead: Hatchery and Natural Returns to Date

Run Timing: March 2024-October 2024			
Week	Total		
Ending	Returns	Hatchery	Natural
Season to date	491	467	24
3-May	241	232	9
Weekly 5-Year Average	141	122	19
Season 5-Yr. Average to Date	213	182	31

Winter steelhead NORs are improved this year. All summer steelhead are being retained for recycling; could start in mid-May.

Spring Chinook: Hatchery and Natural Returns to Date

Run Timing: November 2023-July 2024			
Week	Total		
Ending	Returns	Hatchery	Natural
Season to date	3,300	2,590	710
3-May	112	96	16
Weekly 5-Year Average	248	214	34
Season 5-Yr. Average to Date	3,859	3,393	466

Spring Chinook HOR return numbers are above the recent 5-year average and NORs are lower than the 5-year average. Staff are front loading broodstock collection one week ahead of the schedule.

In the chat, John thanked Eric and observed that “the hatchery steelhead seemed to have a bit of an early timed return this year as well.” He likes to see that and is “hoping for an even bigger early bump.”

Mayfield Counting House:

- The Counting House began operating again on April 1. Eric reported strong juvenile numbers so far. Steelhead numbers are increasing, and they expect coho to do the same in the next couple of weeks. Per the 2024 Protocol:
 - Chinook and coho smolts receive snout CWTs.
 - Steelhead and cutthroat receive dorsal sinus CWTs.

Rainbow Plants:

- 40K have been planted to date to the tune of 15.6K lbs between Swofford Pond near Riffe Lake and South Lewis Co. Park Pond in Toledo.
- May: 25K more will go to Mayfield (in addition to the 13.6 planted there in April).
- 5K will be reserved for the derby.
- 13.6K catchable trout (6.8K lbs) have been planted to date between Swofford Pond near Riffe Lake and South Lewis County Park Pond in Toledo.
- A total of 50K lbs of trout are planned to be planted annually to support local fisheries.

Cowlitz Falls Fish Facility:

- Operations began on March 15 and spillway flumes went online on March 25.
- 14K smolts have been collected to date along with 5.7K fry and 111 adults.
- Fry collection is a little slow.
- Steelhead Fish Capture Efficiency (FCE) is looking pretty good so far.

Hatcheries

- Coho released
- Spring Chinook released
- Winter steelhead released
- Summer steelhead released

Though they lost 7.3K summer steelhead juveniles, they still released above program goals.. WDFW has evaluated the circumstances that led to the loss and made corrections to protocols for future releases.

In future presentations Eric will add FCE numbers for Cowlitz Falls. Gabe is happy with steelhead FCE. This year we had some additional releases on the shoulder seasons. John noted they are getting an indication of what is happening before and after the run.

Mayfield Downstream Fish Passage Remodel

Tacoma is currently conducting survey work. This proposed project is on hold until the approach and funding is approved by management. Stay tuned.

Coho Net Pen Project

This will be discussed at the June meeting after Eric has discussed details about the CWT strategy with WDFW.

Cispus Release Site (Tom Music Bridge)

Laura reported the HPA is in review and should be complete at the end of June. Next steps include securing a contractor for work in late July if all goes according to schedule.

Monitoring & Evaluation Subgroup

Todd reported that while regular meetings of the subgroup have yet to resume, progress is being made on the overall M&E plan via email. There is hope the meetings will start again before long as Tacoma has now filled the Science and Research Manager position.

Downstream Adaptive Management Technical Work Group (TWG)

John reported they had a season update on how the new collection paradigm is going in terms of improving spring Chinook FCE. The LCPUD debris deflector will be undergoing maintenance at the end of May. This means losing the ability to collect fish at CF after Labor Day this year. LCPUD has delayed their sluice gate update until 2027. This should allow for active tag studies in 2025 and 2026, with the potential of using recollected tagged smolts in downstream fish transportation flow studies.

2024 FTC Protocols

Presenter: Travis Nelson

Travis reported discussions with Bryce and Josua, Peggy, and Eric on potential protocols for members of the public to make presentations to the FTC are ongoing. Stay tuned.

LCPUD Dam Operations

Presenter: Russell Page

Russell provided the following update via email. He welcomes any questions.

Current Conditions

- Cowlitz Falls is currently generating 40MW with a reservoir elevation of 861.5.
- Forecast flows of 9,800cfs, close to full load, by May 13th.
- We don't anticipate spilling at this point.

Outage

- Our current outage on U-2 is scheduled for July 15th, however, it is flow-dependent, and we will adjust the outage based on flows dropping below 5,000 cfs.
- Last 3-4 years, flows have been dropping off before July, and have not seen dual unit generation past July 2 since 2019.
- Historical flows prior to 2020 were generally higher through July, however, this lower pattern of flows has become more of the norm lately and we do not expect this year to be different.

Current and Upcoming Projects

- Debris Barrier Rehabilitation and Cathodic Protection
 - Current work is ongoing off the dam top deck and will continue throughout this month.
 - The tentatively scheduled debris barrier move is for mid to late August.
 - Our drawdown to below 845 is scheduled for September 1, with an anticipated reservoir level of 845 at noon on September 3. This could change slightly \pm 1 day.
 - The drawdown will last approximately 8-10 weeks.
- Concrete Defect Mapping
 - Coinciding with the drawdown for the debris barrier, CF will collect data on concrete defects both upstream and downstream.

- Cleaning of the dam concrete will occur between now and September on the exposed concrete and once the drawdown is complete, additional cleaning will take place on the additionally exposed concrete before Data collection.
- Downstream Tailrace Survey
 - The downstream tailrace Sonar survey will occur in early to late fall once flows are between 5,000cfs and 8,000cfs and the tailrace can be raised above 770’.
 - Survey will cover all underwater areas from the Cowlitz Falls outlet works downstream 750’-800’.
- Boat Barrier Replacement
 - Design is 100% complete and has been submitted to FERC.
 - Anticipate construction in late fall or early winter.
 - Design includes placing an anchorage in the middle of the reservoir upstream and two additional anchorages on the north and south bank.
 - The new Boat Barrier will be more robust and should be able to remain in place for flows above 35,000cfs.
- Sluice Gate, Gantry Crane Rail Extension, Spillway 4 Stability improvements
 - Current Design, DDR, and Stability Analysis is 100% complete and submitted for FERC review.
 - We anticipate being ready for solicitation for bids in early 2025 with construction activities commencing in 2026 through 2027, however, this is highly dependent on Permitting and contractor availability.
 - Schedule and determination of drawdowns will be communicated at a later point.

Cowlitz Restoration and Recovery Fund / Habitat and Production (HAP) Subgroup

Presenters: Steve West and Melora Shelton

Steve W reported on the project site visits and presentations that took place yesterday. The day started at the Cowlitz Salmon Hatchery. These included:

- Tilton River Knotweed by the Lewis Conservation District
- Cispus-Yellowjacket Phase 5 Design by the Cowlitz Indian Tribe
- Silver Creek Restoration Opportunity Identification by the Cascade Forest Conservancy (A private landowner is interested in Habitat and HAP.)

Next up: Final applications are due in late June and the TAC will score and rank the projects and turn it over to the FTC. Steve extended special thanks to Josua and Anne who attended the site visits and be part of the feedback process for the applicants.

Approval of DD 2024-02 Cispus Reconnection Amendment: This is an amendment to DD approved back in 2021. At the April FTC meeting, where we reviewed the draft DD, all were asked to send any edits/comments to Melora and Steve by April 23. Some minor comments were received from WDFW and were incorporated into the version reviewed at this meeting. The amendment includes cost (increase of \$168K), scope (to include sonic borings), and duration (extended from end of 2024 to March 15, 2025).

Remaining in the CRR grant fund is nearly \$18 million. The FTC has approved \$3.8 in CRR Grant funding so far.

Public Comment Period #1 - Agenda related

Larry: In low-water years, how will water quality/flows impact fisheries, and spawning grounds impact spawning, fish migration, etc.? Would be good to get a heads-up regarding releases. There is a need to educate folks on how water quality (temps, chemistry, etc.) impacts fish growth. We all need to learn about why Larry is asking about this.

Jack: Wants updates (old vs new methodology) on the 2023 fall Chinook escapement.

John provided peak aerial count numbers (7,135 NOR and 297 HOR) and carcass mark-recapture estimates (14,054 NOR and 775 HOR). He also noted the final fall Chinook estimates will all be included in the Annual Report that will be out at the end of June.

Jack: Are we getting closer to allowing harvest in years of abundance on the Lower Cowlitz River?

Bryce: The challenge is being able to update permits with NOAA Fisheries regarding ESA coverage to allow non-mark selective fisheries. WDFW is in the process of updating FMEPs. They have the staff on board to do this and the Lower Columbia River FMEP is their highest priority. WDFW hopes to submit a draft to NOAA Fisheries by the end of this year (December) before the end of the biennium in June 2025. They are not sure about the time NOAA will need to review and address this. Thomas Buehrens is working on a model for a management strategy evaluation approach that will be the basis of the FMEP. While WDFW only received one-time funding for this work, they are hoping to get ongoing funding to continue this work.

Jack: What is the status of chum assessment project? Was there an agreement to substitute a spawning channel for satellite rearing? This is something that CCA supported in lieu of a satellite rearing pond elsewhere.

Todd: Yes, the contract is in place. They are currently getting set up with the subcontractor.

Jack: What is the status of the satellite rearing pond at the hydro facility in the upper basin?

Eric: Tacoma is working with EN and Ecology re permitting needed for EN. The next step is working with the rest of the FTC to address their concerns.

Jack: Have we terminated releases of sea-run cutthroat from the Cowlitz Salmon Hatchery?

Eric: No. We release 120K each year.

Jack: Mayfield CWT numbers for 2022 CWT numbers in the RMIS (Regional Mark Information System) database show they are not valid tag numbers. One even showed it had been previously used in release from CSH in 2020.

Travis and Jamie Murphy are working on addressing the email Jack sent on this. Last year they tagged only one species per tag code – so this will be straightened out. In the past, there were a few species per code.

Jack: Has Gil pushed the updates to the RMIS database yet? It doesn't appear so.

Bryce: This has been done – it should show up very soon.

Jack: What is the status of netpens going into Mayfield for coho Juveniles?

Bryce: The pre-pilot study is on track. Details include how they would be monitored and the roles of DFW vs Tacoma. It is important to have an approach to get some CWTs for the different densities that would be reared there and what the evaluation would conclude to determine if we move forward with a full pilot next year. The pre-pilot is set to occur this fall (transfer 100K in early to mid-Dec. for release in May). Filling four net pens with two different densities will allow us to see what works better.

Jack: On the upcoming recycling this summer, Bryce had alluded to expanding recycling into September (September recycled fish had higher harvest rates).

Bryce: This is a potential topic for the M&E Team once it reconvenes. The idea was to expand recycling from mid-August to the end of August.

Larry: On April 24, Randy, Jack, and I met with Tacoma's Board to discuss our concerns. We got a good reception. He thinks the FTC has lost its mandate as advisory to Tacoma. Much of the information he has shared has been out there for a while. Why isn't it being used?

Topics for June 4, 2024 FTC Meeting at the Veterans Memorial Museum in Chehalis

- Updates incl. Hydro Ops, Water Quality, Others per the Work Plan
- Update on Flow Reduction
- Fish Facilities (including an update on fish runs), Cispus Release Site, Mayfield Downstream Fish Passage Remodel, Coho Net Pen Project
- LCPUD Cowlitz Falls Dam Operations
- FTC Protocols – Guidelines for public presentations
- Downstream Adaptive Management TWG (Charter)
- Monitoring and Evaluation Subgroup (Charter)
- CRR Fund / HAP Subcommittee
- Preview July FTC Meeting Topics

Public Comment Period #2 – Any topic

Larry: The modern training that is now available needs to be implemented to drive success.

Meeting Evaluation

- DD was approved by all voting FTC reps actually present!
- Good path forward to address the Flow Reduction DD
- Good discussions and presentations
- Nice to see use of the live PPT

Josua's Inspirational Quote

Josua mentioned he was pleased to be able to attend yesterday's CRR applicant tour. It was great to see the site locations and meet with the applicants. Slide decks are great, but nothing beats an onsite visit. "Vision without action is merely a dream. Action without vision just passes the time. Vision with action can change the world." Joel A. Barker

Closing Remarks

Travis asked all to be safe in the midst of the warmer weather. Use sun screen and if on the water, remember it is still very cold. And he thanked everyone for their participation and commitment to these meetings. As he has said in the past, he noted Tacoma couldn't do this without everyone's hard work and commitment.

Parking Lot

- Presentation by Tacoma's Power Management Group and/or from Grant PUD re improving SAR
- Review Steelhead Kelt Recycling Program