

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final MS Teams Public Meeting Summary
January 3, 2023 from 9:30 – 3:30

FTC Representative Attendees:

Travis Nelson	TPU
Bryce Glaser	WDFW
Anne Baxter	Ecology
Jonathan Stumpf	TU
James Archibald	NMFS

Additional Attendees:

John Serl	WDFW
Peggy Miller	WDFW
Brian Gale	WDFW
Sam Gibbons	WDFW
Todd Hillson	WDFW
Josua Holowatz	WDFW
Elliott Johnson	WDFW
Phil Sandstrom	TPU
Chris Foster	TPU
Eric Shoblom	TPU
Melora Shelton	TPU
Gabe McGuire	TPU
Laura Wolfe	LCPUD
Russell Page	LCPUD
Steve West	LCFRB
Ann Weckback	Lewis County
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Jack Tipping and Larry Pryor

2023 FTC Meeting Dates: February 7, March 7, April 4, May 2, June 6, (No meeting in July), August 1, September 5, October 3, November 7, December 5

Approval of December Meeting Summary

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

Announcements

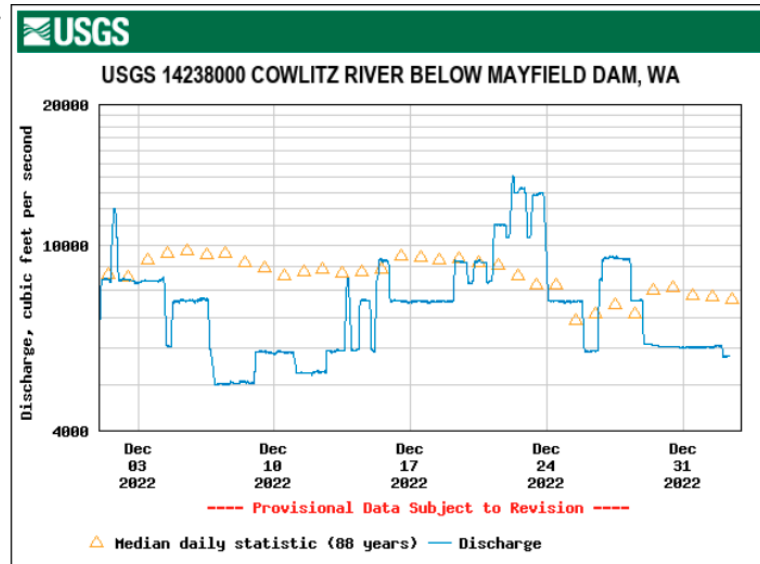
- This is Chris Foster's last day with us as he has accepted a position with USFWS in Orofino, Idaho. His final day at the Cowlitz Falls Fish Facility will be January 27. We appreciate his many contributions and wish him all the best in his new position as he works with the Nez Perce Tribe and supports federal trust responsibilities.

Updates

Hydro Operations (presentation emailed before the meeting):

- Inflows: December average daily inflows were 6,976 cfs (75% of the historical average). Inflows increased following a big storm event in late December; January 1 inflows were 11,330 cfs, well above the historical daily average of 9,427 cfs.
- Storage: As of January 2, Riffe Lake elevation was 703' which is more than 25' below historical averages. It is also 5' below what is required to access the boat ramp. This reflects fill since the December minimum of 676.3'. Mayfield continues to operate in its off-season band (420-424').
- Forecast: Snowpack continues to build and is at the 30-year average at Paradise and above average at White Pass. Some precipitation is expected in the next 10 days. Inflows are expected to be 6-8K cfs and outflows are expected to be 5-8K cfs through the week.

Outflow



Minimum flow 5,000 cfs. No flow or ramp exceedances.

Link to the USGS real-time Cowlitz River hydrograph:

https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060,00065

<https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Water Quality/Monitoring: No report at this time.

Fish Facilities:

Eric reported that December 31 was the last day of operations at Mayfield, and they are now in bypass mode. They just completed the first year of tagging at Mayfield and are anticipating another successful year.

Separator Collections:

- They have finished spawning cutthroat and are continuing to collect coho brood this month.
- They started brood for winter steelhead on December 1 in an effort to push that run forward per angler requests. They are floy tagging the earliest fish and will prioritize those when doing subsequent spawning in the ponds. Things are slowing down at separator.
- In February they will conduct the regularly scheduled ladder outage which will only require a single day this year.

Cowlitz Falls Fish Facility: Chris reported they plan to restart operations on March 15. There will be a DD with the planned decisions and recommendations for 2023. Tacoma recently learned the maintenance work LCPUD had planned to do this year for the debris deflector that would have impacted the collection seasonal studies will be delayed for another year. Discussions on this are

occurring at the Downstream Adaptive Management Technical Work Group. Tacoma is currently reaching out to contractors and seasonal staff to see if there is a need to advertise to fill vacancies. Chris noted his position is also currently being advertised through the TPU website.

Cispus Release Site: Since the last meeting Laura reported getting an email from Ken Wieman (USFS) saying he had requested a formal proposal on this. Travis reported he contacted his USFS Portland contact who said they had discussed it with their team, and they need to see a modified special use permit from the applicants. Laura noted she looks forward to collaborating with Tacoma and the Forest on this. She recently drove up to the site and observed over 10K cfs at the Cispus gage. These flows made the tail of the gravel bar a lot narrower. At the site there is still a high likelihood that fish would get stranded in the tail-out.

Discussion:

- Are we actively using the site for any proposed alternatives that affect forest lands? Eric responded yes when flows are high enough.
- Bryce expressed appreciation for the separator staff keeping an eye on when flows are high enough to make it accessible.
- 843 coho have been shipped to the Cispus to date.

Spring Chinook Forecast: Josua reported that WDFW is working on the preliminary spring Chinook forecast for the Cowlitz, Kalama, and Lewis Rivers. They will finalize and distribute the forecast in the next week or so. Roughly 9,000 Cowlitz spring Chinook are forecast to return to the mouth of the Columbia and 8,700 to the mouth of the Cowlitz. This is very encouraging as the hatchery program need is 1,300. Stay tuned. Josua also noted that the lower Cowlitz has returned to permanent rules.

Downstream Adaptive Management Technical Work Group (TWG): No update at this time. See below for Cowlitz Falls North Shore Collector Recommendations.

Monitoring & Evaluation Subgroup: Phil reported the last meeting was cancelled due to scheduling conflicts. The next meeting is scheduled for January 18. Work continues on the monitoring plans.

APR Process for 2023: John and Brian and others will work with Phil on the data gathering meeting to discuss what is needed for the upcoming annual Science Meeting (likely to occur in May/ June). They will meet to discuss this soon and provide a more detailed update at the February FTC meeting.

CF Northshore Collector (CFNSC) Evaluation Recommendations

Presenters: Chris Foster and Gabe McGuire

Chris introduced Gabe McGuire as his counterpart at the Cowlitz Falls Fish Facility. Gabe has been participating in TWG discussions and his input has helped to shape the Decision Document (DD). Chris reminded all the initial draft DD on these recommendations was sent out for a preliminary review on December 20.

Gabe walked everyone through the four actions Tacoma is proposing to improve operations and/or to test hypotheses re: salmon and steelhead Collection Efficiency.

There was considerable discussion around Action 1 which called for developing an agreement with LCPUD to address debris accumulation in front of its unit intakes and trash rack. This agreement will consider timing, frequency, and cost-sharing of the activity.

Discussion included:

- Will this be an ongoing agreement or a one-time thing? The long-term easement agreement with BPA, LCPUD, and Tacoma included a stipulation for developing a mutually agreed upon cleaning strategy and that is part of the conversation. The idea is to look for cost sharing opportunities on an annual basis (vs. every 4-6 years) in order to fund clearing out in front of

the Cowlitz Falls Dam intakes. In the past this has involved hiring a contractor who cleans out the debris and hauls it away in a dump truck. Discussions are ongoing.

- Will there be additional permitting needs if this moves to an annual process? Laura thinks this is covered under their license. Anne thinks the Corps would have to look at that. Does the Dam Maintenance HPA cover removal from in front of the intake of the generators? Peggy suggested Tacoma and LCPUD research this offline. “Follow local permitting requirements for in-water work.”
- Anne: If this becomes a yearly activity, can we call out when / how the FTC is informed for the annual dredging.
- John: Are there plans for doing any acoustic tagging this year since the debris barrier work is being put off until next year? No. LCPUD needs to access the top of the units so they will be pulling out the hatch covers. To access the hatch covers, the spillway flume collection system (Y-sections) need to be removed. This would still impact acoustic studies. There is also the complication of trying to secure the tags, etc.
- Matt B was going to look into secondary collection. Is this still happening? Yes, there is a need to understand the potential need for secondary collection. These discussions are occurring in the technical workgroup.

Next Steps: Gabe and Chris will review the DD and add some clarifying, contextual language as Gabe did on his verbal review of the proposed actions.

Action Items:

- Gabe: Send out revised DD by January 6 for all to review.
 - John: Send some tech edits for the Background section of the document (asap).
 - All: Review and provide any edits back to Chris and Gabe by January 20.
-

Satellite Rearing Program

Presenter: Phil Sandstrom

Phil began by reviewing DD 2022-07 with all. Bryce noted the FTC agreed to add two options to the original DD and the timeline has yet to be updated. (Phil updated and reviewed the table along with a clarifying edit with all before the end of the meeting.)

Discussion / Next Steps:

- Finishing the PPT presentation that details out the two potential locations for satellite rearing and what those programs might look like. This will include the kelt reconditioning information from Chris.
- Presenting the PPT at the February FTC meeting and later that month to the public for input.
 - Hold at a time that is most convenient for members of the public.
 - Bryce suggested also posting the information to the Tacoma website and provide a 30-day public comment period also for those unable to attend the meeting (either virtually or in person).
 - An update on this might also be provided at the APR meeting.
- Present again including public input to the FTC in March/April for final approval.
- Thanks to Peggy for involving Amy Kocourek and Bonnie Shorin from NMFS. Both were generally favorable about the program and discussions are ongoing. They said if we proceed at the EN site, EN would be the host of the site which would be operated by Tacoma, meaning Tacoma would need the consultation with NMFS.

Anne noted potential water quality impacts of the project will require EN to either apply for a 404 or to amend their Water Quality Cert for their project. She has discussed this with them.

Action Items:

- Phil: Rename the DD as 2022-07A and add "Final." Send out to all. (Done.)
 - Phil: Send the Satellite Rearing presentation PPT out for FTC review no later than Jan. 24.
-

LCPUD Dam Operations

Presenter: Russell Page

Russell reported high flows just after Christmas (over 17K cfs at Randall and just under 30K at the project itself) caused them to lose about a week of digging in front of the units. The digging has resumed and will finish on January 6. So far, they have removed 180 truckloads from in front of the units. As we move into spring, we will be able to reap the benefits of all that work.

They had a load of water with debris come down the Cispus which took out boat barrier again. Crews will be out to do the repair this week after which they will be able to open up the day use park. Note: Tacoma is actively releasing fish at the day use park.

There are no other updates re: project schedules. They are still awaiting information for 2023-2024 projects that will impact the Cowlitz River basin.

Discussion:

- Peggy asked if additional sediment occurred in front of the generators during the high flows. They lost some ground – about 8' of what they had dug. They were still able to get the unit up to speed with a low differential. The PUD is looking at doing this on an annual basis – in coordination with other parties.
 - They lost the TDG sensor at the end of the project immediately after fish collection. This will be replaced in the spring.
-

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

Presenters: Melora Shelton and Steve West

HAP Subgroup last met on December 13 to review the most current version of the application materials. The deadline for feedback on these is January 6. The grant round will start in February (aligning with the timing of the LCFRB grant round) with a workshop.

LCFRB work on the habitat side:

- Steve W reported on the Forest Road 2801 project, proposed by the Cowlitz Indian Tribe, and approved by FTC for funding. There is now an agreement in principle for the USFS to take that design project over. This makes sense as it is on USFS land, and the Tribe is understaffed.
- Potential projects for 2023: the USFS has a watershed assessment and restoration strategy for the Upper Cowlitz. They (JD Jones) will be proposing related projects at the LCFRB TAC meeting on January 11.
- Work continues on updating the LCFRB manuals. We believe that the SRFB allocation will be slightly higher than average (~\$4.5 million), but the actual allocation is tied to the state budget, so we will not know the actual funding amount until the budget is final. Also, there are no final dates on the calendar yet. Site visits / virtual tours will be late April-early May.

Melora thanked everyone for their careful review of these materials. The 2023 update to the CRR Implementation Strategy will replace previous versions of the CRR Implementation Strategy. The current update has been reorganized to more clearly describe the CRR Program (appreciation to WDFW for their suggestions), including HAP projects, and approach of parallel grant rounds for

habitat and HAP projects. It also includes substantial updates around benefits to target populations, incorporates updated HAP guiding principles, and addresses at a high level the approach of parallel grant rounds leading to a single FTC funding determination. Melora noted she anticipates this implementation Strategy will need to be updated going forward as needed.

Discussion:

- What were the additions to the list of project elements/activities ineligible for reimbursement or match?
 - Construction of buildings or indoor facilities (habitat projects only)
 - Operation or construction of fish hatcheries (habitat projects only)
- Can HAP projects be located away from the river in the Lower Basin? Might some potential projects be limited by this restriction?
 - There was agreement to flag this for the FTC to consider in the future.

Action Item: Steve W to send out description of USFS' two Watershed Restoration Action Plans (WRAPs) along with link to January 11 CLFRB TAC Meeting.

Public Comment Period #1 - Agenda related

Larry:

- Notification Process: The email distribution list needs to be updated to include Larry. Travis apologized for the oversight and will update the list.
- CRR Program - HAP: How is Tacoma recruiting for potential projects? Travis noted they are using the list they have for prospective projects and welcome suggested additions.
- Wild coho retention: Last October, Larry sent an email to Bryce on this, and subsequently emailed Travis and Matt B. When will fishermen be allowed to retain wild coho? Section 6 of SA identifies the reason for this. Is this a funding issue for WDFW? Can Tacoma help? Travis: WDFW is the fish manager. Tacoma has some limitations on what they can do. Bryce: WDFW's current permitting structure from NOAA Fisheries doesn't allow for retention of NOR fall Chinook or coho. The steps and information needed to update this permit is outlined in the FHMP Transition Plans, e.g., life cycle modeling to determine what constitutes harvestable surplus. WDFW is seeking state general funding to update all lower and upper Columbia permits. While funding was not included in the Governor's budget, they are hoping it might be added back in as the legislative session continues. WDFW would appreciate public support for this. Tacoma is helping as Transition Plans call for more robust life cycle modeling which will provide much needed information. WDFW is hoping to expand opportunity through updating this permit and entering consultation with NMFS. Phil: For future FTC meetings, we will add more time for the M&E Team report so more information on this can be shared.

Jack:

- Public comments in FTC Meeting Summaries: Will there be a chance to review these before the notes are finalized to ensure comments are correctly captured? Travis agreed that coming up with a process to ensure this is important and will work to address this.
- CRR Program – HAP: Is it true that matching funds are not required for hatchery programs in the lower river? Melora affirmed that while encouraged, there is no match requirement for any CRR program grants (HAP or habitat).

Topics for February 7, 2023 FTC Meeting

- Updates incl. Hydro Ops, Water Quality, Fish Facilities
 - LCPUD Cowlitz Falls Dam Operations
 - Update on Cispus Release Site
 - Satellite Rearing PowerPoint and Next Steps
 - Downstream Adaptive Management TWG
 - CRR Fund / HAP Subgroup
 - M&E Subgroup
 - 2023 APR Process
 - Preview March FTC Meeting topics – Appropriate to meet in person?
-

Public Comment Period #2 – Any Topic

Jack:

- Concern re: Lack of boat access on Riffe Lake when lake levels are down. Triploid rainbow trout are looking really good right now.
- Anglers report cutthroat fishing was relatively poor (though many returned to the Separator).
- Fall Chinook Spawning Survey in 2021 was new methodology. Was it repeated for 2022? (Yes. More on this at the Science Meeting in May.)

Larry:

- Inconsistency between WDFW and Tacoma escapement reports. Release numbers are hard to find. (Best data source comes out at the annual Science Meeting. WDFW and Tacoma both want to improve the way the data are reported / shared with the public.
 - Congrats to hatchery folks on another great return of Coho to the Cowlitz.
 - Columbia River buy-back program (Bryce can get Larry a contact for this if he would like).
-

Meeting Evaluation

- Good participation – happy to have all voting FTC members present
 - Got two Decision Documents approved. That represents a lot of work!
 - Thank you, Jack, and Larry for attending
 - Josua's quote for the new year: "What we call the beginning is often the end. And to make an end is to make a beginning. The end is where we start from." T.S. Eliot
-

Closing Remarks

Travis thanked everyone for their time and energy at today's meeting. He looks forward to being able to meet in person, with a hybrid option, when it is appropriate to do so, especially as this is preferred by members of the public. He will also update Tacoma's public website to facilitate public access to these meetings.

Parking Lot

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

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final MS Teams Public Meeting Summary
February 7, 2023 from 9:30 – 3:30

FTC Representative Attendees:

Bryce Glaser	WDFW
Anne Baxter	Ecology

Additional Attendees:

John Serl	WDFW
Peggy Miller	WDFW
Brian Gale	WDFW
Sam Gibbons	WDFW
Todd Hillson	WDFW
Josua Holowatz	WDFW
Phil Sandstrom	TPU
Eric Shoblom	TPU
Tim Hoffnagle	TPU
Matt Peter	TPU
Laura Wolfe	LCPUD
Steve Manlow	LCFRB
Steve West	LCFRB
Michael Boyles	BPA
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Randy LeDuc and Larry Pryor

2023 FTC Meeting Dates: March 7 (in person?), April 4, May 2, June 6, (No meeting in July), August 1, September 5, October 3, November 7, December 5

Approval of January Meeting Summary

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

Announcement

- This was Phil Sandstrom’s last day with us as he has accepted a position with WDFW as their Westside Hatchery Monitoring & Evaluation Lead Scientist. His last day at Tacoma Power will be February 16 and he starts with WDFW on March 1. We appreciate his many contributions including his guidance in the M&E meetings, great attention to detail, and his help with all the transition plans. We wish him all the best in his new position.

Updates

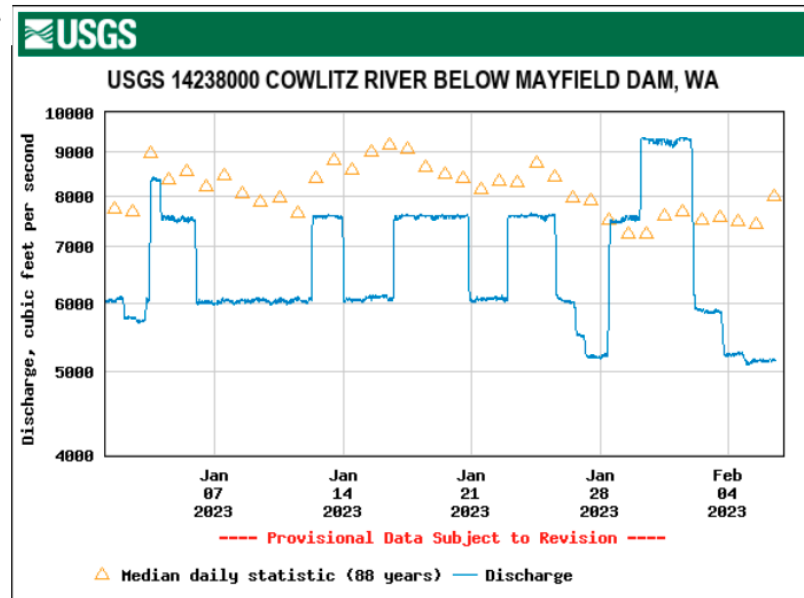
Hydro Operations (presentation emailed before the meeting):

- Inflows: January flows were at 67% of historical average. The NW River Forecast reports January precipitation in the Upper Cowlitz at below 50% of normal.
- Storage: Low inflows plus cold weather and demand for power contributed to the current Riffe Lake elevation of 694’ (down from 705’ on January 17). There hasn’t been access to the Riffe

boat ramp since late November. Mayfield continues to operate in its off-season band (420-424').

- Discharge at Mayfield is just above 5K cfs. Ramping restrictions will change on February 18 to 2" per hour at night and 0" per hour during the day.
- Forecast: Snowpack continues to build but slowly due to low precipitation. It may start building this week with the snow level at 2-4K'. Inflows will come up a bit and Riffe Lake will be close to the current elevation with discharges at close to minimum flows.

Outflow



Minimum flow 5,000 cfs. No flow or ramp exceedances (critical flow 6,000 cfs).

Link to the USGS real-time Cowlitz River hydrograph:

https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060.00065
<https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Water Quality/Monitoring:

Matt P described actions at North Taidnapam Lake to make the area more functional for a variety of folks. Plan to install an ecology block wall to address erosion concerns with material sloughing on the ramps that requires constant cleaning and extending the usability of the courtesy dock. SEPA and DNS is out for review with first public notice to be published February 16th. He also described a culvert replacement project under Cove Lane (which is currently a complete barrier and will be replaced with a bottomless arch).

Gravel augmentation. Tacoma is still trying to get some as-builts done so they can move forward with next steps. They are working to secure permits for areas on the left bank. Peggy reported the draft gravel augmentation plan that is currently undergoing WDFW review will be out soon.

Fish Facilities:

Separator Collections:

- Coho: Eric reported they placed 11.9K HOR coho and 7.4K NOR into the Tilton and numbers are slowing down. They are still collecting coho for brood to compensate for egg mortality issues.
- Winter steelhead: Nearly 300 winter steelhead have returned to the separator since the beginning of December including 117 last week. Eric reminded the group that they started in December instead of February this year and have already over half way to the brood goal!

- Tilton and Upper Cowlitz Stock: they just began winter steelhead broodstock collection this month per the usual schedule.

Ladder Shutdown:

- Eric noted the CSH ladder will be shut down February 15th for its annual inspection and maintenance on the holding pool and crowders.

Mayfield Counting House:

- This facility was shut down for the season at the end of last year. They are currently running 24- to 48- hour blocks on a monthly basis until the official start up on April 1.
- They opened Mayfield last week for 48 hours and had 15 Chinook and one steelhead smolt.

Cowlitz Falls:

- Eric was pleased to report they are now fully staffed with the exception of a 3-month day tech that is currently being advertised.
- Interviews are underway to fill Chris Foster's position.

Cispus Release Site: Eric reported this site is still unusable as flows are below 700 cfs – well below the 4,500 cfs required to use the site. Laura noted she submitted a formal proposal to the USFS at the end of January and is hoping to hear back from them soon. She will share the LCPUD proposal submitted to the USFS with WDFW and Tacoma so they can provide support/help to underscore the need. Discussion:

- What work is already covered by existing permits? Laura indicated that WDFW's Elliot Johnson described a timeline for an expedited HPA. He said it would cover 60 days and cannot be extended or renewed. Ideally, we could get something rolling in the next month or so as March is the peak for winter run steelhead hatchery fish.
- Is a Corps permit required? That would severely impact the timeline. Laura thinks not. They have offered to let Tacoma release fish at the Copper Canyon site – it is closer to the Cispus. That is another option. It is also possible to use WDFW's other truck to help with distribution.

Action Items:

- Laura: Send LCPUD's proposal to Bryce and Travis. Also share any USFS response she gets in the meantime.
- Travis: Add Elliot Johnson (WDFW Area Habitat Biologist) to FTC invite / distribution list.

Downstream Adaptive Management Technical Work Group: Matt P reported this group is getting information on Mayfield and monthly information for the CFNSC. They also discussed the Annual Report. Gabe recently got the report back from the consultant and it is currently under Tacoma internal review. The report will be out to the FTC for comment prior to the March meeting. The TWG review will be concurrent with the FTC. Time is of the essence as the season starts March 15. A Decision Document (DD) will also be coming out soon.

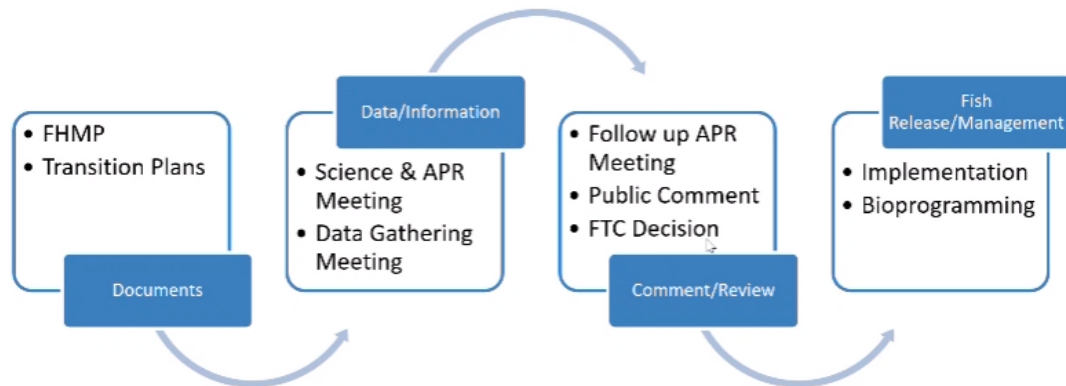
Monitoring & Evaluation Subgroup: Phil reported this group last met on January 18. They have been working hard on the monitoring plan. They have ranked list of suggested studies and are discussing how best to define next steps. The baseline studies are very extensive. Kudos to Todd's work with the Excel file and coming up with a classification system for the prioritization process. They are also working with Tim on the HGMP (developing a take table for monitoring).

2023 FTC Work Plan: In accordance with the 2022 FTC Work Plan schedule, Travis will have the draft 2023 Work Plan out for review by the end of Q1.

APR Process for 2023

Presenter: Phil Sandstrom

Phil explained the 2023 Cowlitz Annual Program Review (APR) will be similar to what Matt, Eric and John did last year. He walked through a PowerPoint presentation that outlines the process, including the guiding documents, Transition plans, etc. The plan is to once again hold the Science Meeting in the AM and APR Meeting in the PM where targets will be set for each program on the Cowlitz.



Phil noted that after we spawn winter steelhead for this year, each of the transition plans will have been implemented. The timeline is tight as the following needs to happen from February to August:

1. Data Gathering Meeting
2. Science / APR Meeting
 - a. Need to include pilot Coho program, etc.
3. APR Public Follow-up Meeting
4. Share Comment/Review to Public and Recommendations with the FTC
5. DD on Proposed 2023 APR Goals

CF Northshore Collector (CFNSC) Evaluation Recommendations

Presenter: Phil Sandstrom

Phil reported on this as Gabe McGuire is on vacation. The initial draft DD on these recommendations was sent out for a preliminary review on December 20. Per his action item, Gabe sent out the revised DD on January 5. He did not receive any feedback or suggestions for further edits. Anne apologized for not providing comments until this meeting. She explained Ecology is working with TP and LCPUD on many issues including turbidity and TDG monitoring for the spill coming out of the collector. There are outstanding Water Quality Protection Plans (WQPP) yet to be approved. Ecology would like to be included in discussions about some of the BMPs for dredged material replacement / debris collection. Phil assured her that Tacoma is ready and willing to work with Ecology on these actions. Phil added Ecology to the list of entities working together to develop the agreement to address debris collection in front of the PUD's intakes and trash racks. Anne has been expecting to have a conversation with Matt Bleich on temperature concerns. Phil assured her Tacoma is committed to ensuring Matt B and Anne have that conversation.

After discussing the intent of this DD and how the theory being tested (that debris buildup in 2022 negatively impacted CE) has to do with flow - not temperature - as the water is merely moved through the upper part of the trash rack and is not held or delayed, it was approved, as edited. It will be distributed for review and approval by FTC voting members not in attendance at this meeting.

Action Items:

- Phil: Send revised/approved DD to Lyn to distribute to all. (Done.)
- Lyn: Send out also specifically to absent voting FTC members to 7-day concurrence. (Done.)

Satellite Rearing (SR) Program

Presenter: Phil Sandstrom

Phil reminded all that DD 2022-07 was approved at the January meeting. He walked through the draft PPT and asked what should be changed in advance of sharing this with the public.

- Current state of salmonids in upper river
- Criteria considering in site evals
- Biological relevance components
- Sited being considered
 - Mayfield Net pens
 - Tower Rick U-Fish
 - Energy Northwest Power Pool (i.e., stilling basin)
- Criteria for each
- Benefits of EN Pool
 - Possibility to include Kelt reconditioning: Anne noted there are significant unresolved temperature issues (16-degree threshold July through potentially October) at the Packwood Hydroelectric Project stilling basin and tailrace.

The Mayfield net pen piece is still on the table for a pilot coho project. Bryce advised being clear about this with the public. Phil agreed and offered to go back to the R2 presentation showing all the potential projects, moving forward one project now, and the potential for the other two projects in the future.

Anne brought up water quality concerns with the Packwood Lake Project, including the potential for sediment buildup and turbid discharge. Bryce noted WDFW has submitted a series of comments on logistical details and have not received a response. This presentation is the step to loop in the public on conceptual designs. The public meeting is the next layer of information sharing that has to occur before approval of the DD. There will also be another DD after the input from the public.

Action Item: Phil - Send to FTC this PPT and APR presentation for 2-week comment period. (Done.)

LCPUD Dam Operations

Presenter: Russell Page

Russell was pleased to report projects currently scheduled e.g., debris barrier restoration, sluice gate, and crane rail extension are all awaiting permits / FERC approval and are scheduled for future years. The hatch cover seal replacement project is scheduled now with a contractor. The work on Unit 1 will start on May 19 and Unit 2 will start on July 14. The entire project is estimated to be complete in early- to mid-August. They will remove one flume collection system from each until as it is being worked on, leaving the other one in place. For the final three weeks of the project, when Unit 1 is in maintenance cycle, the flume collection above that will be in operation for Tacoma.

Lewis County is no longer funding USGS to post the Lake Scanewa elevation data on their website. The USGS reached out to the PUD to see if they were interested in continuing to post that data. Due to cost they declined. Russell has since been working with their IT Department to pull that information out of their SCADA system and post it to their website, which they hope to be able to do in the next month or two. Russell welcomes any additional requests for data they can pull from their SCADA system.

Action Item: Russell to let Tacoma know when the outage schedule has been established.

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

Presenters: Matt Peter and Steve West

Matt P reported the HAP portion of Tacoma's website has been updated and grant round is officially open. Tacoma will send out information on workshops and will address questions as they arise. Draft applications are due by noon on April 4. Feedback from Subject Matter Experts (SME) will be provided to applicants by May 15 and final applications are due May 26. The final funding decision for all projects will be made at the October 3 FTC meeting.

Steve W was pleased to announce that as of 3pm on February 3, the grant round(s) are officially open! Included are the LCFRB grant round and two other grant rounds – the CRR, as well as the Storedahl Small Grant, which is exclusive to a polygon in the East Fork Lewis River, Clark County. Virtual tours (site visits) will take place late April – early May.

They are working on contracting for the four CRR projects approved last fall. The Cispus reconnection project at the 2801 Road bridge was discussed, and the Cowlitz Tribe will retain that project through the entire design. All are welcome to go to website for more information.

All projects that have a SRFB nexus are entered via PRISM Online and the Salmon Recovery Portal (SRP), which is the map for the Recreation and Conservation Office (RCO). All public information is available through RCO's PRISM snapshot via the project number. For CRR, LCFRB staff will wait until all application materials are submitted by the posted due date. There is no mechanism to put the application materials on the LCFRB website as they come in. Steve M noted for this grant round, FTC voting members are invited to attend the virtual tour presentations where they can ask questions and provide comment to the sponsors. All pertinent questions will be included in the Lead Entity feedback, that the sponsor must address in time for TAC scoring.

Yellow Jacket Phase 3: Peter Barber will manage this project for the Cowlitz Tribe. Construction is anticipated to start this summer. There will be an update on this next month.

Public Comment Period #1 - Agenda related

Larry:

- Water Flows – What water flows are good for fishermen? Larry likes 4,500 cfs. Don Glaser preferred 6,500 cfs. In last 30 days water flow went from 9,300 cfs to 5,900 cfs and then down to 5,230. When there is a big crash in flows, that turns off the bite and also strands a number of the small juvenile fish in small pools. A “normal” river doesn't work like that.
Phil: Thanked Larry and noted it is important to consider what fishermen want. Tacoma's Natural Resources Department has discussed the importance of minimizing dramatic swings in flows with the Hydro Ops Group.
- Satellite Rearing: What are the goals? Up-river kelt reconditioning? The Yakamas are doing this as a contained broodstock as those fish don't survive very well. Is Tacoma talking about this? Trout Lodge and others do this type of kelt reconditioning all the time. Why not do kelt reconditioning at the hatcheries?
Phil: Tacoma looks at what they have available. They will reach out to Jeff Hudson of Riverence Brood (leading expert on broodstock management) on his experience / recommendations re kelt reconditioning.
- Mayfield Netpens: Larry understands they have fallen out of favor. A 2015 study showed lots of parasites at Mayfield. Is this still the case?
Phil: Yes, a recently started sampling program shows the parasites are still present. Mayfield Netpens are not off the table entirely but are not currently being considered for satellite rearing.

Randy:

- The Local CCA is in talks with WDFW re introduction of chum into the Cowlitz, specifically, using one of the satellite rearing facilities to have off-channel spawning areas for the chum. Jack Tipping (currently in Antarctica) has more information on this. Randy offered that they can put something together to present on this at the March meeting.
- Phil: Appreciated the suggestion.
- Bryce: Over a year ago, WDFW wrote a comment letter to Tacoma and the FTC regarding the satellite rearing ponds and suggested a chum channel in the Lower River could be one possibility when it is time to consider the other two SR options.

Larry:

- Chum: Willapa Bay raises 450 fish per pound (one gram) each. When they release the chum, they head out right away. SARs for chum are pretty decent.
- Bryce: WDFW is proposing an artificial spawning channel or reintroduction program with egg boxes or something other than net pens.

Topics for March 7, 2023 FTC Meeting – Appropriate to meet in person?

- Updates incl. Hydro Ops, Water Quality, Fish Facilities
- LCPUD Cowlitz Falls Dam Operations
- Update on Cispus Release Site
- Satellite Rearing
- Downstream Adaptive Management TWG
- CRR Fund / HAP Subgroup
- M&E Subgroup
- 2023 FTC Work Plan / Protocols
- 2023 APR Process
- Preview April FTC Meeting topics

Public Comment Period #2 – Any Topic

Larry:

- CRR Funding / HAP subcommittee: Did anyone talk to Randy re the CRR Program and submitting a proposal for funding? (Randy replied he hasn't been approached as of yet – would be happy to be involved.)
Matt P noted Melora has reached out to the same entities as last time – posted on Tacoma's updated website. Eric offered to go over the CRR funding with Randy.
- Any movement on Wild Coho retention? Any movement on the ability of fishermen to retain wild coho on the Cowlitz River?
Bryce: Not much has changed. WDFW is looking at funding to allow for NOR coho retention. They should know more this spring.
- Poor fall Chinook hatchery returns – Only 800 out of 3 Million? Why?
Bryce: This is on the list for the M&E team to evaluate.
Eric: Through the Fall Chinook Transition Plan they tried to improve rearing practices – mainly reducing densities in the rearing ponds. Unfortunately, not much has changed.

Meeting Evaluation

- Hoping to meet in person / possibly hybrid for next month.
- Were only two members of the public again, like last month. Thanks Randy and Larry
- Would be good to advertise these meetings being open to the public on a broader scale.

- The facilitator didn't have access to the Chat.
 - With only 2 voting FTC members, were still able to work through revisions and approve DD.
 - Josua's quote in light of Phil moving from Tacoma to WDFW: "New beginnings are exciting! They become exciting to us because they offer the promise of hope, the anticipation of change in our lives, and the prospect that our dreams will indeed come true!"
- Squire Rushnell
-

Closing Remarks

Phil thanked everyone for their time and energy at today's meeting. He expressed appreciation for being able to work together the past several years and wished everyone all the best.

Parking Lot

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

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final MS Teams Public Meeting Summary
March 7, 2023 from 9:30 – 3:30

FTC Representative Attendees:

Travis Nelson	TPU
Bryce Glaser	WDFW
Jonathan Stumpf	TU

Additional Attendees:

John Serl	WDFW
Peggy Miller	WDFW
Brian Gale	WDFW
Sam Gibbons	WDFW
Todd Hillson	WDFW
Josua Holowatz	WDFW
Anja Huff	WDFW
Melora Shelton	TPU
Scott Gibson	TPU
Matt Peter	TPU
Eric Shoblom	TPU
Tim Hoffnagle	TPU
Laura Wolfe	LCPUD
Russell Page	LCPUD
Steve Manlow	LCFRB
Steve West	LCFRB
Tyanna Blaschak	USFS
Ann Weckback	Lewis County
Michael Boyles	BPA
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Randy LeDuc, Jack Tipping, Larry Pryor, and Debbie Carlson

2023 FTC Meeting Dates: April 4 (in person), May 2, June 6, (No meeting in July), August 1, September 5, October 3, November 7, December 5

Approval of February Meeting Summary

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

Announcements

- We were pleased to welcome Tyanna Blaschak to the FTC. She is the Watershed and Hydropower Program Manager (Detail) for the Gifford Pinchot National Forest. She has worked for FS as a hydrologist and geologist for 10 years. She also does recreational caving. Oh, and she discovered a new species of pseudo-scorpion endemic to a specific lava tube. The paper describing it was published in 2021 or 2022.

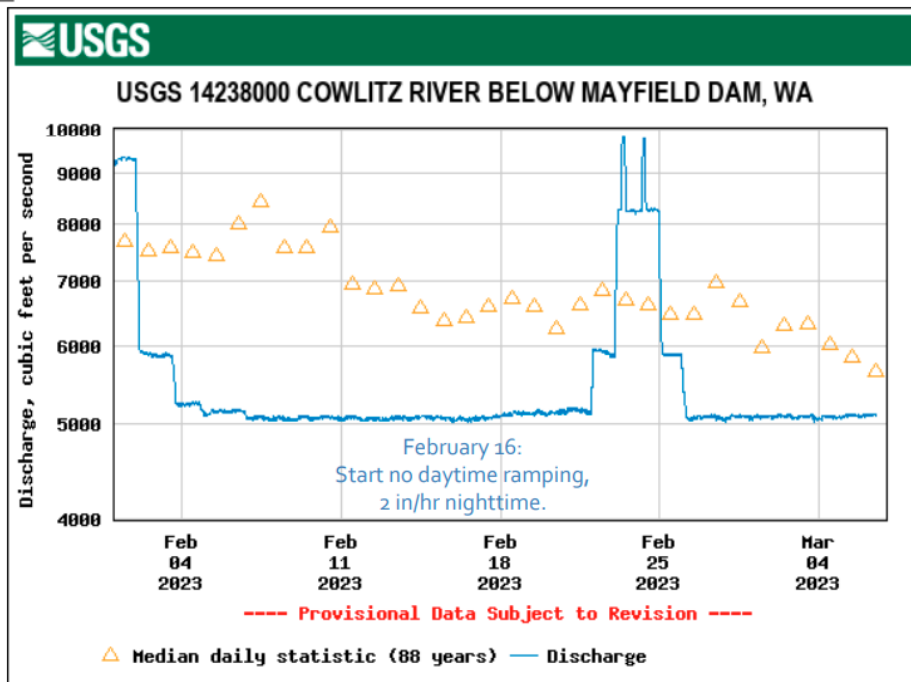
- We were also pleased that Anja Huff of WDFW is joining the FTC. Anja is the Hatchery Monitoring and Evaluation (M&E) lead WDFW's Region 5. She enjoys travel. She got her master's degree in Scotland (has that in common with Melora).

Updates

Hydro Operations (presentation emailed before the meeting):

- Inflows: Melora noted inflows have been consistently low through the 2023 water year: 51% of the historical average in February and below normal to date for March. Recent drivers include very low precipitation (January) and below normal temperatures (February) during which precipitation contributed more to snowpack than streamflow.
- Storage: Riffe Lake elevation has drafted from 696' to 686' since February 1. It is about 40' below the long-term historical average.
- Snowpack: Building steadily and currently at 93% of average at Paradise and 103% at White Pass.
- Outflows: Discharge near 5,000 cfs minimum flow, except during recent regional cold snap. No ramp or flow exceedances; ramp restrictions below 6,000 cfs changed February 16 to 0 in/hr daytime and -2 in/hr nighttime.
- 10-Day forecast: Cooler and wetter than typical with snow level variable below 2,500'. Riffe may continue to draft or start to stabilize. Weekly spring fish transport flows have started (~6,200 cfs this week). Otherwise discharge likely will be maintained near the minimum flow of 5,000 cfs.

Outflow



• Minimum flow 5,000 cfs. No flow or ramp exceedances (critical flow 6,000 cfs).

Link to the USGS real-time Cowlitz River hydrograph:

https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060,00065
<https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Water Quality/Monitoring:

Gravel: Matt P noted flows remain too high for gravel photos to show distribution. Stay tuned.

North Taidnapam Boat launch DNS was finalized March 6 and will go out for permitting along with JARPA.

Matt also noted Tacoma will try to keep full-spectrum material within the river system and not pull it out of the system. They are in contact with WDFW and Ecology on this.

Fish Facilities:

Separator:

- Eric reported this is a slow time of year with generally fewer than 30 fish per day.
- Winter Steelhead brood collection is generally going well, collecting Upper Cowlitz River and Tilton brood, completed Lower-Cowlitz collection.
- They are seeing primarily winter steelhead with a few spring Chinook trickling in. There were no spring Chinook this week though.

Mayfield

- Mayfield still shut down but will be re-opening on April 1st. Tags have been ordered, along with the tagging machines. Additional clean up and prep will take place the last week of March.
- On March 8, Tacoma will meet with consultants and staff from the Tacoma Hydro Project and Engineering Department to kick off the scoping of the Mayfield Juvenile Bypass remodel.

CFFF

- The hiring process is underway for Chris Foster's replacement.
- Seasonal staff have been hired and Tacoma is looking to hire an additional 3-month position for assistance during peak outmigration.
- The smolt transport tank was upgraded with insulated side panels (should be beneficial during Chinook outmigration in summer).
- Crews are wrapping up maintenance projects this week.
- The facility will be watered up this week in preparation for March 15 start up.

Cispus Release Site: Laura reminded all she has been meeting with the USFS to work through some edits to a special use permit. After that is finalized, they will meet with all involved parties and start the expedited HPA process (a regular HPA usually takes 45 days, but an expedited HPA will take 15 days) – hoping it lines up with when the timing of the special use permit. All parties are working hard to streamline the process. It will likely take a few weeks before everything is wrapped up. Stay tuned.

Monitoring & Evaluation Subgroup: The recent focus of this group has been coming up with a classification system for prioritizing studies for the monitoring plan. An issue has been identified with coho parr – more are being captured at Cowlitz Falls since CWT tagging was moved from Cowlitz to Mayfield. It may be possible to PIT tag a portion of parr and, through monitoring, figure out if it's better to release parr upstream of Cowlitz Falls or downstream of Mayfield going forward. The subgroup postponed discussion on this. They would like to see a more detailed proposal to determine if this is something that can be implemented this year.

- Action Item: Travis and Bryce to follow up with Matt B re Tacoma's thoughts on how best to move forward with the M&E Subgroup. How to move it forward.

2023 FTC Work Plan/Protocols: Travis sent out the updated draft prior to this meeting. The new draft includes the review schedule and notes all FTC meetings are now open to the public. Otherwise, he didn't propose any changes to the protocols since the major rewrite two years ago.

- Action Item: All to give Travis feedback on the 2-23 Work Plan before the April meeting.

Downstream Adaptive Management Technical Work Group (TWG)

Presenter: Matt Peter

John noted this group met briefly since the last FTC meeting. Gabe was on vacation and they didn't cover much new ground. The CF Fish Facility will open up March 15. They expect to get some smolt numbers by the April FTC Meeting. The report for the last smolt season should be out by March 10 for a 30-day FTC review (concurrent with the TWG). Matt P will follow up with Matt B on the DD.

Annual Program Review (APR) Process for 2023

Presenter: Matt Peter

No report at this time other than it will be similar to what Matt, Eric and John did last year. This means holding the Science Meeting in the AM and APR Meeting in the PM where targets will be set for each program on the Cowlitz.

LCPUD Dam Operations

Presenter: Russell Page

Russell reported the PUD is installing a new TDG monitor in preparation for data collection when Tacoma starts fish collection. Joe First is working with Ecology on how best to capture the data moving forward.

Operations update: They are moving forward on the three large construction projects:

- Debris barrier restoration – The coating replacement and protection project is planned for 2025-2026. They should receive the permit shortly. This will give them an idea of the schedule for moving the debris barrier to the moorage site and then doing the drawdown for that work.
- Sluice gate replacement – Design is nearly complete. Will then move to construct.
- Crane rail extension project – Going out for bid for contractors. Work to begin soon.

This year they will be removing hatch covers and replacing the seals on both units. On May 19 they will start work on Unit 1 and take out the fish collection above that unit. On July 14 they will move on to Unit 2 with completion of the entire project in mid-to-late August.

Action Item: Russell to let Tacoma know when the outage schedule has been established.

Satellite Rearing Program

Presenter: Eric Shoblom

Eric gave a presentation for the Satellite Rearing Ponds describing the preferred alternative at Energy Northwest's (EN) Packwood Project stilling basin, sideboards for consideration, production, and how proposed infrastructure will meet the sideboards and WDFW comments. He also reviewed the benefits associated with the EN site and how it mimics the observed life history strategy of NOR fish.

The FTC discussed how best to share the presentation with the public and the timetable for receiving public comments. Once public comments are received Eric will prepare a Decision Document recording the FTC selection of the initial site for the Satellite Rearing Pond along with supporting rationale, proposed operation and production, how comments / concerns from the FTC and the public were considered / addressed and also next steps such as incorporating kelt reconditioning as phase 2.

Eric also noted he is working on an easement and access agreement with EN and hopes to have all concerns addressed by/at the April FTC meeting.

Action Items:

- Eric: Send out WDFW's comments from the workshop with Tacoma notes to the FTC today.
 - Eric: Add clarifying language to the PPT shared with the FTC at today's meeting and send out to FTC and public by March 22. Include that future options could include kelt reconditioning. Mention the other the two sites originally considered and how the EN site has been selected as the preferred option.
 - All: Provide comments / feedback prior to the April FTC meeting
 - Eric: Introduce the Decision Document (DD) indicating that Tacoma is moving forward with the EN site at the April FTC meeting.
-

CF Northshore Collector (CFNSC) Evaluation Recommendations

Presenter: Matt P

Matt noted Tacoma is short-handed with getting the annual report distributed for review for Northshore Collector. Gabe will be sending out an updated timeline.

Annual Report: Gabe recently got the report back from the consultant and it is currently under Tacoma internal review. The report will be out to the FTC for comment prior to the March meeting. The TWG review will be concurrent with the FTC. Time is of the essence as the season starts March 15. A DD will also be coming out soon.

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

Presenters: Melora Shelton and Steve West

Melora reported Tacoma filed the CRR report with FERC. She also noted the Cowlitz Tribe's Cispus-Yellow Jacket Project Phase 3 will be moving forward this summer.

HAP: Grant round notice was distributed through FTC channels last month, and draft applications are due by noon April 4. Tacoma's Communications team will include information about the grant round in an electronic newsletter soon. Melora is keeping the HAP Subgroup meetings scheduled for coordination if there are enquiries from potential applicants.

Habitat: The Salmon Recovery Funding Board (SFRB) and CRR habitat grant round is in process. Steve W noted there are three more weeks in the schedule for pre-proposal meetings and reviewed the grant round calendar (previously distributed). Draft applications are due by noon April 3. Virtual site visits (when applicants present their proposals) will be on April 27, 28, and May 2-4. FTC members can attend CRR virtual site visits to hear presentations, ask questions, and provide feedback.

Steve briefly described four potential projects that may pursue CRR funding. Cascade Forest Conservancy and the Cowlitz Indian Tribe are both looking to fund next phases of work previously awarded CRR funds (Cowlitz Tribe likely with the USFS). There are also 2 potential projects below the barrier dam, a culvert replacement in a tributary confluence area (tidally influenced) and a chum assessment (WDFW).

Public Comment Period #1 - Agenda related

Larry (from the Chat during the meeting)

- Do you use any sedatives, salt, or other during transport?
Eric: We do not use sedatives but have used salt in transport at times when fish are highly sensitive, such as at Mayfield when Chinook smolts arrive in very poor condition.
- What water testing for influent has been done for the new site?
Eric: Water testing at EN is pending and will include temp, D.O., pH, and TDG.
- Will those fish be marked?
Eric: Yes, we're proposing to have 100% coded wire tag, but this is still a programmatic decision. We may use PIT tags as well.?
- What are the release numbers you're shooting for?
Eric: The current proposed program is 100,000 at 23fpp.
- What are your Adult Return Goals (ARGs) for the satellite facilities?
Eric: We do not have ARG's for satellite rearing facilities.
- Do satellite release numbers or poundage in any way effect lower hatchery release responsibilities?
Eric: Fish release numbers and poundage are not included in our FERC 650K lb. cap.
- Where do you get your eggs from?
Eric: The current proposal collects eggs from hatchery rack returns. HOR x HOR crosses first with integrated stocks planned for the future.
- Who's staffing the facility and who are their bosses?
Eric: The facility would be staffed by Tacoma and their contractors with potential to invite volunteers for community outreach. TBD.

Randy:

- Why is there no cover at the proposed SR pond? (Will check with Eric on this)
- Chum salmon reintroduction (In touch with Bryce and Jack on this. Save this discussion for a future meeting.)

Jack:

- EN Rearing Pond: Wants to see a minimum standard of success attached to this. If unsuccessful, what do we have?
Travis: Reach out to Eric on this and/or Jack. Tacoma will share the comment response matrix.
Bryce: WDFW supports Jack's efforts on this.
- In 2016 Keith stated the Cowlitz Trout Hatchery renovations would begin in 2018 – status?
Travis: Tacoma is trying to hire someone to be the lead on this. While this idea stalled when Keith left Tacoma; it is still on the priority list. Travis will ask Matt B to follow up.
- Fall Chinook spawning survey this past fall. Have the new methodology results come in? Was the old method undercounting?
John S: Still working on the analysis. The same pattern held as last year. The actual data will be out soon.
Bryce: WDFW is interested in continuing this work – figuring out the different variabilities
- With the HAP proposals, keep in mind that sport fishermen depend on WDFW to implement a hatchery program. This includes using netpens so fish can be reared to a larger size. Can WDFW submit a proposal for such?
Bryce: This is in the APR, and we should see an update on plans for this.
- Suggested agenda topic for April 4 FTC meeting: Include Chum spawning channel as part of SR. We are on year 23 waiting for first SR pond.
Anja: Thanks for bringing this up.

Bryce: WDFW is considering putting in a SRFB proposal for an evaluation of the Lower Cowlitz for chum channel opportunities. He offered to follow up with Jack and Randy. The comment letter from WDFW as a potential SR site option has been shared with the FTC. It is envisioned that would happen as we move into the second and third SR sites.

Larry:

- Water quality changes below dams – hydrogen, pH, water hardness, parasites, etc. He is interested in hatchery success and also as a fisherman.
Matt P: Work from pre-licensing studies and License article 410. Summary report list all the things being monitored. He offered to send the report to Larry. Tacoma has completed all water quality monitoring except for TDG.
- Program in Packwood: Happy to hear of how this will mirror what seeing out of CF. Adult return goals – what SARs are there for NORs? Will those fish be marked? Mass marked? Will this affect poundage?
Travis: Likely they will be index marked – implanted with a tag. The focus is on the fishery but not at the cost of recovery.
- Will the public be able to fish on the fish from SR? Will we ever be able to keep wild Coho? Is Anja's position a new position for Region 5?
Sam: Anja's position as a Hatchery M&E biologist is part of a first round of hiring Biologist 4 positions. Anja's hire is the first of eight positions. She will be coordinating and implementing the Westside Monitoring Plan. She will help with a number of different projects. She formerly worked with the Hatchery Evaluation and Assessment Team in Olympia.
- In M&E, what's her measurement of success?
Sam: Adult return goals, SARS, etc.
The plan for westside M&E will outline these things:
 1. In-hatchery survival
 2. Out-of-hatchery survivalThere will be programmatic goals for each of the plans. There is no one-size-fits-all.
Anja: That's right. There are different parameters for success depending on a variety of factors.

Public Comment Period #2 – Not Agenda related

Randy:

- There are issues related to the Riffe Lake boat ramp. Both Monika and Matt B said would send data on this. He hasn't received anything yet. Fishermen need this information. Something needs to be done to get permitting so the boat ramp can be accessible / conducive for older fishermen.
Travis will follow up with Monika and Matt B on this to ensure Randy gets the information he has requested.

Topics for April 4, 2023 FTC Meeting – In person? At the Vets Museum in Chehalis?

(No hybrid option at that location)

- Updates incl. Hydro Ops, Water Quality, Fish Facilities
- LCPUD Cowlitz Falls Dam Operations
- Update on Cispus Release Site
- Satellite Rearing
- Downstream Adaptive Management TWG
- CRR Fund / HAP Subgroup

- M&E Subgroup
 - 2023 FTC Work Plan / Protocols
 - 2023 APR Process
 - Preview May FTC Meeting topics
-

Meeting Evaluation

- Hoping to meet in person / possibly hybrid for next month.
 - Tacoma can be better prepared next time - dealing with transitions.
 - Excited to welcomed new members.
 - Good participation today
 - Four members of the public with us today – that’s a record!
 - Thanks for making these available for public participation.
 - Josua’s quote is from an intrepid explorer – someone who pushed the limits of technology, human ability, and stamina. The quote also pays tribute to International Women’s Day (March 8): “The most effective way to do it, is to do it.” Amelia Earhart
-

Closing Remarks

Travis thanked everyone for their hard work and for attending the meeting today. He noted the need for all stakeholders to have a voice in FTC activities. He also appreciated Josua’s quote and notes one of his favorite quotes is “Whether you think you can or whether you think you can’t, you’re right.” Henry Ford

Parking Lot

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

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final Meeting Summary
Veterans Memorial Museum, Chehalis
April 4, 2023 from 9:30 – 3:30

FTC Representative Attendees:

Matt Peter (for Travis Nelson)	TPU
Anne Baxter	Ecology
Bryce Glaser	WDFW

Additional Attendees:

John Serl	WDFW
Peggy Miller	WDFW
Sam Gibbons	WDFW
Josua Holowatz	WDFW
Leah Marquez-Glynn	TPU
Scott Gibson	TPU
Eric Shoblom	TPU
Joe First	LCPUD
Ann Weckback	Lewis County
Michael Boyles	BPA
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Randy LeDuc, Jack Tipping, Buddy Rose, and Larry Pryor

2023 FTC Meeting Dates: May 2, June 6, (No meeting in July), August 1, September 5, October 3, November 7, December 5

Approval of March Meeting Summary

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

Announcements

- Bryce announced John Best is a new hydro scientist just hired by WDFW. He will help provide technical support to Thomas Buehrens.
- Eric announced Chris Foster's former position as Manager of the CF Fish Facility has been filled by Gabe McGuire. Tacoma is now seeking to fill Gabe's prior position (Assistant Manager of the facility).

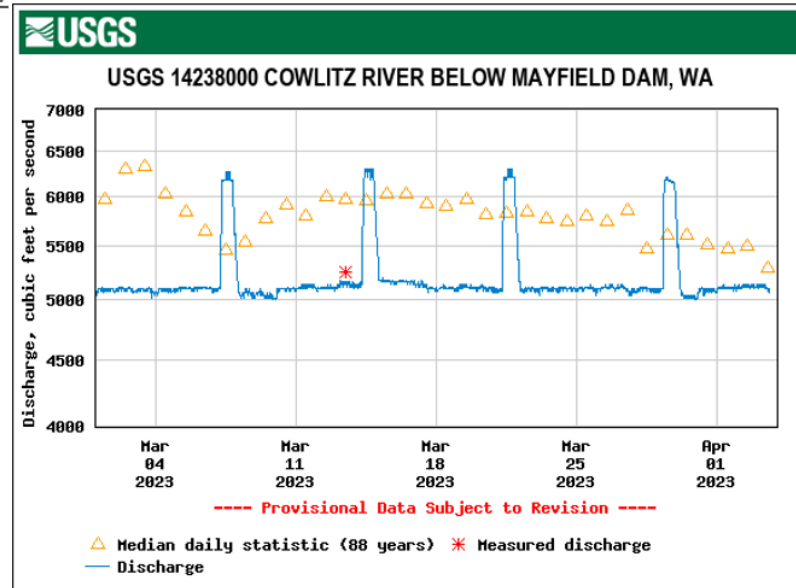
Updates

Hydro Operations (presentation emailed after the meeting)

- Inflows: Matt P noted inflows have remained extremely low. February precipitation for the Cowlitz Basin is 50-70% of normal. Moving into March, the picture improved in other areas – not as much in the Cowlitz. Temperatures are much cooler than the historical average. Any precipitation has been coming in the form of snow vs. flows. Average March discharge measured at Randle gage was the second lowest in the 29-year gage record, after 2019.

- Storage: Riffe Lake elevation on March 31 was 674' and is currently at 673' which is nearly 40' below the 2017-2022 average.
- Snowpack: This is near normal.
- Outflows: These have been just above 5K cfs with Fish Transport Flows (FTF) being provided on a weekly basis. There were no flow or ramp exceedances.
- Forecast: Cooler with typical precipitation. Inflows are expected to vary from 3-5K cfs and Riffe Lake will draft as snowpack builds. There will be FTFs today.

Outflow



Minimum flow 5,000 cfs + fish transport flows.
No flow or ramp exceedances (critical flow 6,000 cfs).

Link to the USGS real-time Cowlitz River hydrograph:

https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060.00065
<https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Spring 2023 Minimum Flow Reduction

Leah Marquez-Glynn, Resource Operations Lead for Tacoma, walked through PPT and associated DD sent out to all on March 28. Tacoma is proposing to lower the minimum flows in the Cowlitz River below Mayfield Dam to improve reservoir refill probabilities for this summer. The minimum flow would be reduced from 5,000 cfs plus fish transport flows to 4,000 cfs plus fish transport flows. This will be achieved by reducing flows over two nights to be scheduled as soon as possible following consultation with the FTC. Per the DD, Tacoma will coordinate with the FTC throughout the proposed flow reduction. (Note: Tacoma was able to reduce the flow in one night.)

The refill model used by Tacoma is based on the NOAA's Northwest River Forecast Center Model with a predicted 10-day forecast, and a variety of historic weather scenarios. As of April 3, there was a 45% chance of refill at Riffe with 5K cfs and FTF. Reducing outflows to 4K cfs on April 11 would increase the refill probability to 69%, protecting against the lowest inflows shown on the graph. In late May and June, it may be necessary to drop the reservoir level to make room for snow runoff. Tacoma will continue to update the model through the refill season.

Discussion:

- Bryce reported WDFW seeks a balance of fish protection and survival with recreational opportunities. Boat launch and swim beach usability are also prioritized.
- Tacoma has to balance impacts to recreation and power production. The highest power demand is typically in July and August. It is important to have the water available for production during those months. The 30' capacity reduction for seismic events is further limiting.
- The minimum flow set in the license is 2K cfs from July 1 to August 14 and August 15 to September 30 unless flow exceeds 5K for 5 consecutive days. Tacoma has rarely gone below 2K cfs during this license term.
- Is it still possible to go up to 6K for FTFs? Yes. We haven't done studies on the impact of FTFs on fry in the lower river. Scott noted a study done in 2006 with smolt timing from upper basin and salmon hatchery found no significant relationship with FTFs and timing of juveniles as they exit. (Note: the 2006 *Downstream Migrant Transport Flow Evaluation* considered travel time associated with FTF rather than potential stranding associated with FTF.)
- Side channels become deactivated at 4,800 cfs. When we utilize FTFs, the side channels get activated again which may result in additional fish getting stranded.
- Plan to do additional fish monitoring for stranding or eliminate FTF during this time?
- If FTF were temporarily discontinued, there would be a very small effect on refill probability – would increase by ~100 cfs.
- Monitoring for stranding would start with the flow reduction.
- Do FTFs help with adult collection? Concerned about Spring Chinook this year. Correlation between separator collections and FTFs?
- Scott noted it is unclear if there is a correlation between FTFs and fish coming into the separator.
- Larry wanted the FTC to know that from a fisherman's perspective, when flows go sharply up, level off, and then drop back down, it "turns the bite off."
- If inflows don't go down as much as anticipated, we wouldn't go as low as 4K cfs for reduced minimum flow. We would increase the "floor" as much as possible. It is unlikely the need for the reduction will go away.
- Tacoma is running all the scenarios through the model – it depends on how the inflows come off. Once they go to 4K cfs outflow, they don't plan on picking up again for at least a month. Elevation is completely dictated by what flows come into the reservoir. Leah noted if the 75% exceedance curve reaches 746', they feel pretty good. Tacoma committed to providing updates every two weeks to continue these discussions and they will keep rerunning the probabilities.
- Anne asked, since the climate is changing rapidly, if it would be valuable to use data based on the last 10-year average vs. the 1980-2022 data set. Leah responded the model used to run back to 1950 – but they stopped going back that far due to climate change. The River Forecast Center says running last 10 years is insufficient. Inflows are similar to 2019 except the snowpack is much higher than it was in 2019. Tacoma asked for a reduction to 2,900 cfs that year, which worked out well.
- The target for refill is June to mid-July. The aim is to have boat ramps accessible by Memorial Day. Mossyrock Park boat launch is usable to approximately 708' and Taidnapam North boat launch to approximately 719'.

The following change was made to the Coordination Need section of the DD: "TP will update the FTC on refill status and outlook every 2 weeks through a virtual meeting, conference call, or email. If

further reductions below 4K cfs are needed consultation with the FTC and an additional DD will be required.” The DD was approved by voting members present as edited.

Note: In reviewing and approving the DD via email after the meeting, Jonathan Stumpf of TU suggested: “At a future meeting, I would like to hear from Tacoma Power what, if anything, is being done or can be done to try and prevent this scenario from occurring in the future. I understand that based on the license, this was anticipated, but given the frequency of this happening 10 of the last 26 years, I’d like to hear more about what measures are being taken to mitigate for using this option and process as a tool.”

Action Items:

- Lyn: Send out revised DD for review and approval by absent FTC voting members.
- Scott: Send out 2006 Meridian Environmental Study of impact of FTF on juveniles.

Water Quality/Monitoring

- Cowlitz Falls temperature data associated with fish passage are included in the annual report as covariates and CFNSC temperatures are included in weekly reports.
- Long-term monitoring associated with the license and 401 WQC have been completed. TDG remains, but Tacoma has not been spilling recently so there are no new data to report.
- Courtesy dock extension and turnaround: Tacoma is working with Ecology to provide a Water Quality Protection Plan. Tacoma is in the permitting process with both WDFW and the Corps. Tacoma provided the Corps with a “no effect” letter which should facilitate an increased timeline for obtaining permit coverage. The project does not allow additional capability to launch at lower levels. It increases access to the courtesy dock at lower elevations and provides a turnout. Ecology blocks will be placed on the side of the site to mitigate sloughing.
- Kosmos: Weekly monitoring continues. Tacoma has completed the investigatory phase and is now in the ground water monitoring phase. They are still a few years out from clean- up action once they get remedial investigation report out of the way.

WDFW Fishing Regulations

- Josua noted current fishing rules extend through the end of June. Through the North of Falcon process, WDFW is proposing new rules for the Fall. These will include no fall Chinook retention in the Lower Cowlitz – only hatchery coho will be allowed to be retained. The PFMC (Pacific Fishery Management Council) #2 meeting is currently underway in California. WDFW will soon have a better sense of the management decisions and recommendations that come from the meeting when it concludes on April 7. This doesn’t affect the tributaries as much as the lower Columbia River. WDFW is working on updating permits to allow for NOR fish retention and has a proposal to the legislature to update funding – as outlined in the Transition Plan.

Fish Facilities

Separator:

- Eric noted steelhead numbers continue to increase with 277 returning the week of March 20 and 561 the week of March 27.
- Only six spring Chinook have returned so far with none so far this week. Bryce noted the return of spring Chinook is slow throughout the whole Columbia system. Sam reminded everyone we are still at less than 1% of the 5-year average return timing to date.

- When asked if the barrier Dam project impacted flows at the ladder entrance, Eric responded that flows do not appear to have changed. They are still operating the gates that push the flows through the ladder the same way.

Brood Collection:

- As of April 3, for the Tilton steelhead program, 10 males and 10 females were collected for broodstock. There have been 24 HORs and 37 NORs sent to the Tilton.
- As April 3, for the Upper Cowlitz River steelhead program, 19 males and 14 females have been collected for broodstock. 51 HORs and 91 NORs have been sent to the Tilton.
- Spring Chinook broodstock collection started last week. One has been collected for broodstock.

Mayfield Counting House:

- Mayfield re-opened on April 1 and the attraction pumps were turned on April 3.
- The 15 Chinook smolts that came in were not in good shape – some had distended bellies, some were emaciated, and many exhibited scale loss. A WDFW pathologist will assess the causes.
- On March 8, Tacoma met with consultants and staff from the Tacoma Hydro Project and Engineering Department to kick off the scoping of the Mayfield Juvenile Bypass remodel.

CF Fish Facility:

- The facility came online March 15 for the season, as well as the spillway flumes on March 31. Four flume gate sensors were replaced in the off season.
- 132 smolts year to date (mix of coho, Chinook, steelhead, and cutthroat)
- Greater than 3,300 Chinook fry; fry collection slowing down as of late.
- 10 steelhead adults thus far (8 fallbacks upstream, 2 kelts to Massey Bar).
- Water temperatures have been cold since startup (5.8 to 7.6 C).
- Discharge past the CF Dam has been approximately 2,700 to 3,700 cfs.
- John Serl noted: They started PIT-tagging the kelts at the weirs and we're PIT-tagging at both Cowlitz Falls and Mayfield, so we'll get good respawning data.
- The *Cowlitz Falls North Shore Downstream Fish Passage 2022 Annual Report* is out for FTC review with comments due May 1.

Cispus Release Site

Eric reported he has been working with LCPUD, the USFS, and WDFW to expedite a temporary repair to this site (for this year only). He expressed appreciation for the great teamwork and collaboration in this effort. They found that Tacoma was tied to the original USFS Special Use Permit so they are taking the lead after which the PUD will take over and work with the contractor to do the work (by mid-May if all goes well). Of course, much depends on flows in the Cispus (if flows are high, work could be delayed until August). Adam sent the HPA (Hydraulic Project Approval) application to Eric and John for comments. Elliot Johnson (WDFW habitat biologist) will issue the HPA. Anne noted that an Ecology Construction Stormwater permit would be needed. Joe responded the PUD will do that. If this gets pushed to August, it will obviously limit what we can do this spring – for spring Chinook transport. Stay tuned.

Monitoring & Evaluation Subgroup

The last meeting was canceled. There is a need to get this group together again and move forward on priorities that have been identified. Bryce offered that WDFW can organize the next meeting if that would be helpful.

- **Action Item:** Bryce to follow up with Matt Bleich (who is out until April 14) about the next meeting on April 19. There are some standing agenda items and also FTFs during this minimum flow period.

Downstream Adaptive Management Technical Work Group (TWG)

John noted there is no update from this group as the March 28th meeting was canceled.

Annual Program Review (APR) Process for 2023

Eric noted there is no update at this time other than this will be a “big data lift.”

- **Action Item:** Eric to follow up with Tim on the PPT and timeline.

Blue Creek at Spencer Road Fish Habitat Restoration Design

Presenter: Ann Weckback

Ann is Lewis County’s Environmental Planner. She walked through a presentation providing information on the proposed project for which they are seeking SRFB funding. She has yet to present this proposal to the Technical Advisory Committee (TAC). She looks forward to feedback from the FTC today. The goals of this proposed project are for Lewis County along with Tacoma Power to restore fish passage and enhance habitat for coho, fall Chinook, and winter steelhead. This project aligns well with the LCFRB’s 2010 Lower Columbia Salmon Recovery and Fish & Wildlife Subbasin Plan and other watershed plans. Project objectives are to remove two barriers and replace them with fish passage structures. The remaining low head dam would be modified to provide unimpeded fish passage into the upper reaches of Blue Creek. LWD would be installed to stabilize sediment. There is also the possibility of creating a side channel to remove flows from roadside ditches, reduce the scour of redds, and improve roadway safety.

Phase I: Preliminary design for habitat elements and infrastructure components – 2023 SRFB (Budget: \$348K)

Phase II: Final design and permitting – 2025 SRFB

Phase III: Construction – 2027 SRFB

Discussion:

- Bryce thanked Ann for the presentation. He noted sometimes the fish creating the redds are HORs (of hatchery origin). WDFW is working with Tacoma on that challenge and how to reduce pHOS (the proportion of HORs on the spawning grounds) through that zone by increasing fishing opportunities and/or putting in a temporary weir at certain times of the year.
- Tacoma is planning to cut a notch in the dam down to the sill – the super structure around it would remain. They also are seeking to improve pHOS.
- WDFW is working internally on some improved distribution models. It looks like this is an opportunity for increased habitat usage.
- Ann asked if any members of the FTC might provide a Letter of Support for the Blue Creek at Spencer Rd Fish Passage Project. It was noted that it would be a conflict of interest if organizations with members on the TAC wrote letters.
- Anne noted Ecology might be able to provide letter of support. They are already looking at water quality monitoring in the Blue Creek subbasin (upstream dairies and poultry farms).
- Eric will also see about providing a letter of support.

Ann reported she is working on presenting a project for SRFB funds that she has discussed with Eric Russell, Eric Shoblom, and John Serl to aid in sediment management and fish passage in Blue Creek. Eric recently mentioned that one of the reasons the dam at the hatchery in Blue Creek is still

in place is because the WDFW might want to modify it in the future with a weir to keep the hatchery fish from utilizing Blue Creek. She was hoping to get any design requirements for the modification as the structure is included in the grant application for potential removal or modification. Travis invited her to give a presentation to the FTC on the proposed project and then discuss this particular structure and future plans for it more in depth. She described a map showing the structure. It is Site 981318. Her PowerPoint is also available for review at <https://cloud.lewiscountywa.gov/owncloud/index.php/s/kR9IkX5Q1KvB3NM>.

Action Item: All to consider writing letters of support for this proposal.

LCPUD Dam Operations

Presenter: Joe First

We were pleased to welcome Joe First to the group to provide this report on behalf of Russell Page. Joe reported the baffle panels have been installed and the fish flumes are operational.

LCPUD is reviewing the sluice gate 60% design. The 90% design will be completed in late July / early August and the 100% design in late November / early December. Construction is slated to begin in 2025.

They plan to draw down to run-of-river to put in a coffer dam to allow for work to be performed in front of the dam. The coffer dam would likely be in place for a few weeks and would allow flow through one sluice gate at a time.

Trash racks: They will get divers to repair the bent bar on slot 4 on Unit 2.

Generator hatch cover seal replacement project: The plan is to remove one flume collection system from each until as it is being worked on, leaving the other one in place. For Unit 1, they are scheduled to dewater and remove the fish flumes on May 22. On July 17, they will move to Unit 2 and the whole project is expected to be complete in the August / September timeframe.

Debris barrier restoration project: The PUD is coordinating with the Corps on this project. They will probably get a determination this spring and then will do the project in 2024. They plan to remove the sediment around the blocks for two-three weeks in February and then do the work post fish collection season in mid-September and lower the reservoir by 20' for a period of 10 weeks. They will then sandblast, repaint, and recoat the floating debris barrier, refill the reservoir, and move it back in place in front of the dam.

Action Item: Russell to let Tacoma know when the outage schedule has been established.

2023 FTC Work Plan/Protocols

Presenter: Matt Peter

The updated draft of the FTC 2023 Work Plan was sent out to all on March 28. After review and discussion, Tacoma agreed to review and update the plan including:

- Needing to complete the Monitoring and Evaluation Plan.
- APR dates may slip.
- Transition plans – should say “Implementation updates”.
- For 2023 in-person meetings, offer a hybrid option.
- Table 2: Add all months.
- Gravel Augmentation – Discuss at April, May, and June

- Add monthly Hydro Ops Report to Monthly Update section along with the other usual FTC Meeting updates.
- Add Downstream Adaptive Management Report (not required by FERC, but still part of the Work Plan).
- Move CF Fish Facilities updates to Monthly instead of Scheduled. Do the same with CF Northshore Collector.
- Add Mayfield Downstream Fish Passage Remodel.
- Add Gravel Augmentation and Satellite Rearing.

Action Items:

- Matt P: Coordinate with Eric and Travis an internal review and updates with Tacoma folks and then Travis to send revised draft Work Plan out to all prior to the next meeting.
- Lyn: Review the FTC Protocols and edit Sections 5 and 6 to match our current modes of meeting and send out prior to the next meeting.

Satellite Rearing Program

Presenter: Eric Shoblom

Eric noted he is working on revising the timeline for this – pushing things out a month. His first priority is getting it out for public feedback. He has revised the public presentation to capture more history and the reasoning behind the recommendations to date. It is being reviewed internally and he hopes to get it out to the public in the next couple of weeks. He will subsequently draft a DD that includes that feedback. He is still currently working on the Easement/Access Agreement with Energy Northwest (EN) to understand nuances of the option. There are still some questions as to how the project would fit into the current license agreement of EN and he is waiting for those discussions to take place between EN and their regulators. He has a survey crew ready to go to acquire more information about the site and further develop plans. He will distribute a new timeline when he receives more information.

Discussion:

- Bryce suggested Eric present a PPT at the APR meeting along with Watershed science portion of the meeting. Provide a summary there and then provide a link to a more in-depth description of what is being proposed.
- How does this project fit with EN and their regulators?
- Anne noted Ecology sees key details missing in terms of what Tacoma is actually planning to do and where. The Cowlitz River system can get really warm in the summer which is a concern (a factor that needs consideration especially with regard to nutrient input). Ecology needs more details so they can weigh in appropriately as to whether water quality conditions can be met. Anne hasn't heard anything at all from EN.
- Bryce noted WDFW would also appreciate more details on the plans.

Action Items:

- Eric: Set up a joint meeting with EN and Anne to discuss the project in detail.
- Eric: Send out the revised timeline as soon as the presentation is out to the public.

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

Presenter: Steve West (via email)

Steve reported this year the LSFRB has received 19 total projects for SRFB and CRR. For the CRR, they received two project applications- both from Cascade Forest Conservancy:

- Hall Creek Restoration
- Upper Cispus Tributary Restoration- Woods and Crystal

Project Presentations:

Although the itinerary is still considered draft, the LCFRB is reserving May 4 for the two CRR proposals. The itinerary should be finalized by April 7. Please also note that on May 4th, WDFW will be presenting their Cowlitz chum Assessment and their region-wide chum monitoring proposal. (These are SRFB proposals only, not CRR proposals, but may be of interest to FTC members.)

The remainder of this week, LCFRB staff will be reviewing all applications for completeness, so expect those to be ready for review April 7. They anticipate posting CRR proposals to our website with links to our Google Drive. Steve will send out the link once they are posted.

A few notes about the Project Presentation meeting, aka “virtual tours” or “site visits”:

- These meetings are considered public; anyone can attend.
- This is the forum for all interested folks to hear presentations and for FTC members, or their delegates, to ask questions to understand projects and inform CRR priorities.
- In prepping for this meeting, it is helpful to review the applications ahead of time to inform any questions or comments. If you have questions or comments for LCFRB staff, please do not hesitate to contact them.
- Questions from FTC members during these meeting will be incorporated by LCFRB into formal feedback (‘lead entity feedback’) for applicants to respond.

Ongoing projects:

- Cispus Yellow Jacket Phase III: Construction is on track for this summer. The wood is decked. Contractor selection is underway, with three bids received. They anticipate reimbursement requests to start coming in soon.
- USFS Rd 2801 Cispus Floodplain Reconnection needs an updated contract due to changes in deadlines.

HAP: The deadline was noon today (April 4). No inquiries or requests for pre-application coordination were received. The April 4 HAP Subgroup meeting was cancelled, and further meetings and work will depend on whether drafts are received.

Public Comment Period #1 - Agenda related

Larry:

- So, the Chinook coming out of the Mayfield Collector are looking pretty bad?
Eric: Yes, as he noted earlier. It is not uncommon to see Chinook in poor condition coming out of there this time of year.
Scott: These are fall Chinook – 2 different species of gill worms – the infection rate from parasites can be up to 90%.
- Water Quality – are those parasites getting into the hatcheries?
Scott: No. This impacts reservoirs. We don’t see them in riverine environments.
- Water quality is key in regards to fish health. Environmental DNA, (eDNA) can be useful to see how it impacts fish in hatcheries as well as wild fish (NORs). Anne is an expert in this area. What can we do to improve fall Chinook return? Tacoma has obligations through the Settlement Agreement. From the MyTPU website: last year’s NOR coho returns were 21K. Fishermen should be able to retain coho NORs. Need to improve the harvest of both HOR and NOR fish.

Jack:

- What's the update/status of Cowlitz netpens for coho – with CRR funding?
Bryce: Hoping Tacoma can fund a pilot study - would be part of this year's APR process - to help set production targets for the year. Timeline to get a pilot test going?
Sam: We could move coho in the winter if the pens were in place. Would probably implement the additional spring Chinook in the 2024 brood year – or rear some to a larger size. There are logistical considerations with coho – would be helpful to do a pilot project so we could learn from that. Jack was thinking one pen and 20K coho as a pilot test. Eric thinks this would be doable. Bryce suggested teeing this up at the next APR meeting, so it doesn't get left behind.

Larry:

- Would the coho do well in net pens there? Consider water quality, etc.
Bryce – Yes, that's why we want to do a pilot study. Would take HOR coho up in fall – early winter and rear them until their release in April. The water will be cold and there will be a lower rate of pathogens. Coho are more disease resistant than Chinook.
- Anne: It would be helpful for Tacoma to share more water quality data at these meetings, including collected temperatures, fish status / disease reports. Eric noted much of that information is included in the weekly CF reports. She suggested sharing the temperature data collected at the hatcheries and at the dams.
- Production vs. adult return mentality. As posted on MyTPU, the return timing of spring Chinook has shifted to later than the 10-yr average (June/July vs. May).
Bryce: We are getting more NOR production out of the Upper Basin. There is a shift happening in the Columbia system. The delay is due to colder water.
Sam: Run timing is variable. For spring Chinook and all the programs, we look at the running average of all returns and collect representatively over the curve and multiply times total brood need and that says how many fish we can take out. In a normal year, we want to have broodstock collected in July – sometimes have to go later. We will keep watching this. It may be environmental. The trend is also in the Columbia.

Randy:

- Will you be putting bird netting on the site up at Packwood?
Eric: The original plan was not to. Eric may have large cages for the fish so they can dive down and get predation exposure. If they netted the entire structure, it would change the scope of the project a lot. Also, the densities of fish will be low given the size of the facility.

Buddy:

- The linear relationship of the reservoir levels is associated with flows downstream. The capacity of the reservoir is not linear in relation to the depth. It gets much larger as you increase the depth.
Bryce: That's exactly right. Recently, due to reduced capacity, impacts due to reduced inflow are exaggerated. The exposed reservoir is growing timber as we speak.

Jack:

- Will Tacoma be modifying Mossyrock Dam to make it seismic compliant?
Matt P: Yes, an update is coming out on that any day now. This is a high priority for Tacoma.

Topics for May 2, 2023 FTC

- Updates incl. Hydro Ops, Water Quality, Fish Facilities
- Riffe Lake Seismicity
- LCPUD Cowlitz Falls Dam Operations

- Update on Cispus Release Site
 - Satellite Rearing
 - Downstream Adaptive Management TWG
 - CRR Fund / HAP Subgroup
 - M&E Subgroup
 - 2023 FTC Work Plan / Protocols
 - 2023 APR Process
 - Preview May FTC Meeting topics
-

Public Comment Period #2 – Not Agenda related

Larry:

- Has a presentation to share re SuperSmolt® Feed Only. The technology contributes to the production of earlier and bigger smolts, reduces mortality, betters fish welfare, and leads to significantly higher growth performance after sea transfer. He recommends WDFW (Sam) look into this. This program is being used in Europe and folks in Idaho are starting to look at this. He sees it as a great tool for hatchery management.

Randy:

- Something needs to be done to get permitting so the Taidnapam boat ramp can be accessible / conducive for older fishermen. Many older CCA fishermen are unable to access the Taidnapam boat ramp. They are losing a whole year of fishing. He has repeatedly asked for information on what can be done about this. No one from Tacoma has gotten back to him. Eric and Matt P committed to set up internal TPU review to review how they might be able to make the Taidnapam Launch lower parking lot more accessible.
-

Meeting Evaluation

- Several people were unable to attend this meeting due to a lack of a hybrid option.
 - Appreciated the catered lunch, breakfast treats, and Dove chocolates
 - More extension cords with covers.
 - Good participation and information sharing today.
 - Josua's quotes: He started by sharing a couple of quotable quotes from Dove chocolates: "Hands are meant to be held." "When life isn't going right, go left." He then shared this quote from Zonya Brewton: "Friendship is essential in the best and worst of times, whether realizing an achievement or struggling with a success."
-

Closing Remarks

Larry noted his definition of success is how many fish he catches. For him it is adult returns.

Matt P thanked everyone for attending this in-person meeting today and assured everyone he will see that the next in-person meeting has a hybrid option.

Parking Lot

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

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final MS Teams Meeting Summary
May 2, 2023 from 9:30 – 3:30

FTC Representative Attendees:

Travis Nelson	TPU
Anne Baxter	Ecology
Peggy Miller (for Bryce Glaser)	WDFW
Jonathan Stumpf	TU

Additional Attendees:

John Serl	WDFW
Sam Gibbons	WDFW
Josua Holowatz	WDFW
Brian Gale	WDFW
Matt Peter	TPU
Scott Gibson	TPU
Eric Shoblom	TPU
Melora Shelton	TPU
Tim Hoffnagle	TPU
Laura Wolfe	LCPUD
Tyanna Blaschak	USFS
Ann Weckback	Lewis County
Michael Boyles	BPA
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Larry Pryor

2023 FTC Meeting Dates: June 6, (No meeting in July), August 1, September 5, October 3, November 7, December 5

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.

Announcement

- Eric reminded all Tacoma will soon be posting the opening for Gabe McGuire's former position (Assistant Manager of the CF Fish Facility). All were asked to let any potential candidates know.

Updates

Gravel Augmentation Plan

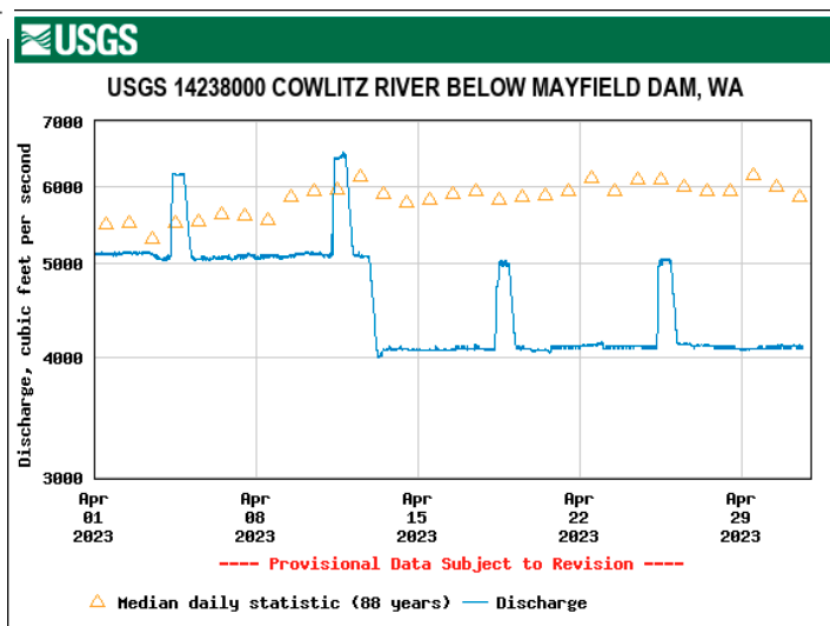
Melora asked everyone to be the lookout in the next few days for an updated Gravel Plan supplement for 30-day review. She provided a brief overview of plan development and review since the FTC finalized DD 2021-01, which described long- and short-term actions to License Article 10 obligations. This included FTC review of document structure and initial draft in 2021, and further coordination with WDFW in 2022. Tacoma appreciated very much Peggy working with them to address comments. Tacoma will send out the draft plan for 30-day review by May 5 and looks

forward to discussions at the June FTC meeting. At that meeting Tacoma will bring a draft high-level DD for FTC consideration. The final DD will be presented for approval at the August meeting and sent with the Plan supplement to FERC.

Hydro Operations (presentation emailed on May 1)

- Inflows: After low monthly inflows for WY 2023 through March, April came in at 98% of average. April precipitation likely contributed more toward snowpack than inflows until the end of the month due to colder than normal weather. Tilton sideflows were above the median for most of the month.
- Storage: Riffe Lake elevation on May 1 was 699' which is well below the 2017-2022 average. This deficit should be made up soon due to melting snowpack.
- Snowpack: This is near or above normal and has begun to melt at some locations.
- Outflows: The minimum flow was reduced from 5K to 4K (both with Fish Transport Flows, FTFs) on April 12, in accordance with the spring flow reduction DD approved at the last meeting. Weekly FTFs are pulsing from about 4.1K to 5K. There were no flow exceedances. There was a ramp exceedance on April 11 during an unplanned unit transfer, resulting in a brief 1.6" downramp over 45 minutes. The cause and measures to avoid this in the future will be included in the annual Article 402 report to FERC.
- Forecast: Initially drier/warmer, then typical temperatures and precipitation for the next ten days. Boat access to Riffe Lake should resume in the next 1-2 weeks. Tacoma will update the public accordingly.

Outflow



Minimum flow reduced to 4,000 cfs + fish transport flows on 4/12.
No flow exceedances (critical flow 6,000 cfs).

Link to the USGS real-time Cowlitz River hydrograph:

https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060,00065
<https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Spring 2023 Minimum Flow Reduction

Tacoma has been operating under a minimum flow reduction since April 12. Per the decision document, Tacoma Power and the M&E group have been performing fish stranding monitoring

following transport flows during the minimum flow reduction period. Results of these surveys will be shared with the FTC weekly. A separate update on refill is coming every other week. Melora shared this summary slide:

Flow Reduction, Riffe Refill

- Reduced flows helped to conserve April precipitation and runoff
- Riffe Lake is up more than 27 ft since 4/6 (low of 671.3 ft)
- Mid-April rain and late-April snowmelt improved conditions; snowpack is at/above average
- Near-term outlook indicates substantial inflows
- NOAA CPC Climate outlook leans warmer and drier through July
- Current refill probability (RFC Inflow, Weather Years 1981-2022) is 95% (only one scenario in which 748 ft is not achieved)
- If near-term inflows materialize and Riffe continues to fill, Tacoma Power may increase the reduced minimum flow or end the minimum flow reduction before June 30th.

Discussion:

- Anne requested the update also include a comparison of the charts with predicted refill probabilities from Leah's presentation at the June meeting to the current. Peggy requested the updates include exceedance curves. Melora responded that Tacoma will take these requests into consideration.
- Melora reiterated the flow reduction is doing what everyone hoped it would do - increasing the probability of refill under a number of different scenarios. After the next two weeks, Tacoma will be in a better place to determine if they can make adjustments to return more water to the river. Sometime before June 30 we can look at eliminating the reduced minimum flow. Peggy asked if there would be a need for a DD to return to 5K cfs. All agreed this would not be necessary. Anne noted while she very much appreciates all the work Tacoma is doing trying to keep the flows at the 5K minimum, she also thinks there is room for improvement.

Water Quality/Monitoring

- Kosmos: Matt reported Tacoma is in a pattern of weekly monitoring including ground water monitoring at least through the end of the year. They will eventually move to clean-up action.
- Dredging Operations: Intake dredging is planned at the Cowlitz Salmon Hatchery and also at the ladder at Blue Creek to keep the water from going over the banks. These operations will require HPAs.
- North Taidnapam Boat Launch: Currently awaiting a permit from the Corps. This project likely won't be complete until after the summer as reservoir levels will reduce again. Tacoma is exploring the lower-level parking. There are potential cultural resource concerns there which they hope to be able to work through so they can address the accessibility concern for older fishermen expressed by Randy LeDuc at the April FTC meeting).
- Tacoma installed vertical temp monitoring arrays off the debris deflector in front of the CF dam. Matt will give an update on this at the June FTC meeting.
- Gravel augmentation associated with the barrier dam construction will be captured in the Gravel Augmentation Plan which is coming out soon for review. Peggy suggested Tacoma start working on 2024 Corps permits as soon as possible.

Fish Facilities

Separator:

- The drop in last week's steelhead numbers (to 305) was a bit earlier than normal.
- 43 spring Chinook returned last week. Those numbers are expected to continue to increase.

Brood Collection:

- WDFW has reported we have enough winter steelhead on hand to satisfy all three brood programs.
- 175 spring Chinook have been collected so far for broodstock. It looks like we are in good shape to catch up to where we want to be by the end of the week.

Mayfield Counting House:

- Eric reported on the new tagging protocol where all Chinook and coho are getting snout tagged and steelhead and cutthroat are getting dorsal tagged.
- Collection is off to a slow start due to the colder temperatures. As occurred at Cowlitz Falls, expectations are for a jump in collection associated with warmer temps and increased flows.
- Chinook smolts are currently looking much healthier. Nematodes are likely responsible for their poor condition noted at the April FTC meeting.
- WDFW planted 1K juvenile (10-12") tiger muskies in Mayfield on May 1.

CF Fish Facility:

- Tacoma moved into 750 cfs tailrace discharge on April 29. LCPUD spilled up to 2,500 cfs over turbine capacity that same day. This impacts the floor geometry setting. The protocol is to revert back to the baseline and pause the study when such events occur.
- The current FCE so far for 3 release groups is at 50%.
- Crews are busy dealing with a lot of fine debris (pine needles, etc.).
- Flows exceeding 15,00 cfs at Randle over turbine capacity this weekend would trigger additional spill.
- More release groups of steelhead and coho for the FCE will occur this week.
- Comments on the Annual Report, after a 30-day review, were due May 1. Eric expressed appreciation for the feedback received from WDFW. The final report, including those comments, should be out by the end of May.

Cispus Release Site

Eric reported he has been working with LCPUD, the USFS, and WDFW to expedite a temporary repair to this site (for this year only). Last week they got a USFS Special Use Permit for work at that site. He expressed appreciation for the great teamwork and collaboration in this effort. Next steps: LCPUD will reach out to a contractor. Laura noted they haven't secured the HPA yet. LCPUD is making sure they have all the necessary permits for working on federal land. They may have to go through the SEPA process. At this point, it looks like this will occur in summer. For the work to occur, flows need to be as low as possible.

Monitoring & Evaluation Subgroup

The last meeting was canceled. Another meeting has been scheduled. Tacoma is planning to bring in Four Peaks to help with this effort. Stay tuned.

Downstream Adaptive Management Technical Work Group (TWG)

At the last meeting of this group on April 25, John brought up the performance metric passage in the Biological Opinion that was incorporated into the license. The group thought the full FTC group should review and determine the meaning and direction of this passage related to the issues of secondary collection and timelines to meet performance goals. This could be a discussion topic at the June FTC meeting.

Annual Program Review (APR) Process for 2023

Presenter: Eric Shoblom

Tacoma is still finalizing the contract with the contractor to help with the APR meeting and the Science Meeting (usually held on the same day). The contract is being routed for approval. That contractor will help establish the timeline. Could the Science meeting which is usually in person count as one of the quarterly FTC in-person meetings?

Riffe Lake Seismicity

Presenter: Travis Nelson

On April 27, Travis emailed out a link to the first edition of Tacoma's Cowlitz River Project eNewsletter. The newsletter included an update on Mossy Rock seismicity studies. [Read about them here](#). Travis reminded all Tacoma's objective is to bring Riffe Lake back to full pool.

Current Status:

- Tacoma consultants submitted their Seismic Hazard Analysis, along with a time history analysis, to FERC. They are revising both based on the regulator's comments.
 - Tacoma created a preliminary computer model and is incorporating the results from conducting physical performance testing at Mossyrock Dam to improve the model.
 - They are evaluating other items that could delay raising the lake, including a seismic analysis of the dam's embankment, the Kosmos Flats site cleanup, and shoreline vegetation management. Although some progress has been made, they are years away from having a definitive solution and don't anticipate any type of potential construction to occur until at least 2030. In the meantime, they are exploring alternatives to mitigate risk.
-

LCPUD Dam Operations

Presenter: Russell Page

This report is deferred to the June FTC Meeting as Russell was unable to attend this meeting.

Action Item: Russell to let Tacoma know when the outage schedule has been established.

2023 FTC Work Plan/Protocols

Presenter: Travis Nelson

Work Plan: Travis noted the updated version sent out on May 1 included edits suggested at the April FTC meeting. This was approved by voting members.

Protocols: The updated version of the Protocols (to indicate all FTC meetings are open to the public and will be held in person on a quarterly basis) was sent out on April 25. This document was also approved with Peggy's suggestion we add a section to distinguish between public participation and attendance. She also suggested we update the Decision-making flow chart to reflect our current process.

Action Items:

- Travis: Send both documents out to voting members not at this meeting for electronic concurrence.
 - Lyn: Update the flow chart in the Protocols.
-

Satellite Rearing Program

Presenter: Eric Shoblom

Eric sent out the public presentation which incorporated history and context for review. He appreciated receiving a letter of support from Randy LeDuc (CCA). Tacoma is continuing to work on an access agreement with Energy Northwest (EN) and will be meeting with regulators soon to get their perspective on EN's obligations, etc. Last week Tacoma sent a survey crew out to EN to help inform the design. The timeline for construction of the facility depends on how long it takes to get easement going and feedback from regulators.

Eric walked through the draft Decision Document (DD) 2023-03 which supplements DD2022-07a, 2022-07, and 2021-07. He expressed appreciation for the feedback provided by Bryce. The decision for consideration regards the pursuit of rearing sub-yearling spring Chinook and kelt reconditioning in addition to Options 2 & 5 (provided by R2). This DD seeks support to focus on the development of a Satellite Rearing (SR) facility at the EN site in Packwood while retaining the option to utilize the Tower Rock site as a contingency.

Discussion:

- Josua asked about including information on the intent of kelt reconditioning including whether they would be released upstream or downstream. Eric responded they aren't even sure kelts can be raised at this location given the water temperature and therefore he recommended to leave such specifics out of the Decision Document. As we learn more, we can continue these discussions.
- Anne noted she has not yet been contacted by EN. She also asked if Tacoma could nail down the dates and describe the program itself – not just the facility. She expressed concerns about the impacts on water quality which would change depending on the time of year. Eric responded he was intending for this Decision Document to support the decision to proceed with the development of the site and leave program specifics out of it to maintain flexibility for program variations, depending on when and how we use it. Further discussions will occur at the regulatory meetings.
- The schedule is largely unchanged. It shows the FTC recommendation in June and procuring material and starting construction this October and concluding in October of 2024.
- Anne asked about next steps if all of a sudden it is determined that this site is a no-go. Should the need to pursue a different option be included in the timeline? Eric noted that should the EN site be unavailable for any reason, Tacoma would engage the FTC to concur on next steps. Additionally, conversations about the other two sites will continue while the EN site is confirmed and developed. WDFW has also suggested some alternate paths for Satellite Rearing, including net pens, potential chum programs, etc.

Action Items:

- Eric: By later today (May 2) email out an edited version of the DD for all to review prior to the June FTC meeting. Set up a joint meeting with EN and Anne to discuss the project in detail.
- All: Review and try to get comments to Eric and copy Travis by May 19 if possible.

**Cowlitz Restoration and Recovery Fund / Habitat and Production (HAP) Subgroup
Presenter: Melora Shelton**

Melora reported there were no major updates since the April meeting. There are applications for two projects seeking CRR funding. Both are from Cascade Forest Conservancy:

- Hall Creek Restoration
- Upper Cispus Tributary Restoration- Woods and Crystal

She then reviewed the agenda for the May 4 LCFRB Project Presentation hybrid meeting. This meeting is open to the public. Updated Teams links were emailed on April 27. Questions from FTC members during this meeting will be incorporated by LCFRB into formal feedback to which applicants will be asked to respond.

All CRR Project information is housed on a Google Drive, including new information on project benefits to fish. Links were emailed on April 17. The FTC will reengage with this process starting in August when we hear back from LCFRB on the final proposals for funding. A DD to approve funding will follow. Note: Just after this meeting concluded, Melora emailed the budget breakdown for the CRR ask and the total project amount.

Public Comment Period #1 - Agenda related

Larry:

- Are there goals for the satellite facility(ies)? I always ask about adult return goals- how many adults returning are you shooting for?
- What's an official route to request a response from the public to Tacoma Power? Over the past several FTC meetings, I have addressed and requested information re coho NOR retention as for several years now the returns have been strong enough. On April 4, I addressed and asked again, Bryce did make comments as to their position. I reiterated that according to the FERC Tacoma Power Settlement Agreement, this looks like a Tacoma Power financial responsibility. What is the official route to request this? Travis and Matt? Through an online comment to FERC? To the Tacoma Power Board? As you should know this is an ongoing concern of mine and others that should be addressed. My concern also gets to other core responsibilities.
- Travis: WDFW offers opportunities for the public to recommend regulation changes. There is also the North of Falcon process.
- Josua: The budget from the recently concluded legislative session was just announced. WDFW had sought long-term funding but received only a two-year allotment. They are just now looking to prioritize how to work on the Fisheries Management Evaluation Plan (FMEP) for the Lower Columbia. Seasons are set in North of Falcon process and WDFW must operate under ESA rules.
- Jonathan: Shared NW Sportsman Magazine link to article that noted “The other great Columbia news is that WDFW was budgeted just under \$1.4 million to hire more staffers to complete or update a number of fisheries management and evaluation plans, or FMEPs, that otherwise could be the subject of lawsuits and potential shutdowns – and not just salmon and steelhead fisheries, but trout, walleye, bass, you name it in the basin’s anadromous zone.”

Topics for June 6, 2023 FTC

- Updates incl. Hydro Ops, Water Quality, Fish Facilities
- Gravel Augmentation Plan Draft DD
- LCPUD Cowlitz Falls Dam Operations
- Update on Cispus Release Site
- Satellite Rearing DD
- Downstream Adaptive Management TWG
- Significance of Performance Metric
- CRR Fund
- M&E Subgroup

- 2023 APR Process
 - Preview August FTC Meeting topics
-

Meeting Evaluation

- Technology worked great
 - Finalized 2023 Protocols and Work Plan
 - *Good participation and information sharing today.*
 - Josua's quote: Time to go fishing. Josua adapted this quote to make it more inclusive: "Teach everyone to fish, but first teach everyone to be fair. Take less, give more. Give more of yourself, take less from the world. Nobody owes you anything, you owe the world everything." Suzy Kassem
-

Closing Remarks

Travis thanked everyone for attending this meeting helping to make sure we are implementing our license properly. He appreciates everyone's technical expertise. He also encouraged everyone to take good care of themselves. He disclosed that he missed the April meeting due to an emergency appendectomy. He also said he will see that the next in-person meeting has a hybrid option.

Parking Lot

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

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final Meeting Summary
June 6, 2023 from 9:30 – 3:30

FTC Representative Attendees:

Travis Nelson	TPU
Anne Baxter	Ecology
Bryce Glaser	WDFW
Jonathan Stumpf	TU

Additional Attendees:

Peggy Miller	WDFW
John Serl	WDFW
Sam Gibbons	WDFW
Josua Holowatz	WDFW
Brian Gale	WDFW
Matt Peter	TPU
Scott Gibson	TPU
Eric Shoblom	TPU
Melora Shelton	TPU
Tim Hoffnagle	TPU
Leah Marquez-Glynn	TPU
Laura Wolfe	LCPUD
Russel Page	LCPUD
Steve West	LCFRB
Denise Smee	LCFRB
Bill Sharp	Yakama Nation
Michael Boyles	BPA
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Randy LeDuc and Jack Tipping

2023 FTC Meeting Dates: (No meeting in July), August 1, September 5 (in person), October 3, November 7, December 5 (in person)

Approval of May Meeting Summary

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

Announcements

- Tim Hoffnagle announced this is his last meeting with the FTC as he is retiring the end of July. We wish him well and appreciate his guidance with FHMP and HGMP.
- Eric announced interviews are underway for the Assistant Manager of the CF Fish Facility.
- North shore access for fishing at Mossyrock Dam: Travis announced the ADA trail is temporarily closed (on the highway side) until safety issues related to a rock slide there have been addressed. Stay tuned.

- Jonathan Stumpf sent apologies for not being able to attend today's meeting as it conflicted with an in-person Seattle City Light Skagit Project relicensing meeting.

Updates

Gravel Augmentation Plan - Melora

Travis emailed the draft Gravel Plan Supplement to the FTC for 30-day review on May 5. The extended due date is June 9 to allow for questions at today's meeting. The DD describes the coordination and consultation that went into developing the Plan Supplement and requests FTC support for adopting it. The Plan Supplement includes all previous, related decision documents as well as the original Gravel Augmentation Plan and FERC Orders for reference.

The final DD will be presented for approval at the August meeting and filed with FERC as an attachment to the Plan Supplement.

Action Items:

- Melora: Send draft DD asking for support to adopt the Gravel Plan and Supplement.
- All: Review and send feedback on the DD to Melora by July 14.
- Melora: Incorporate edits and redistribute by July 25 for August approval.

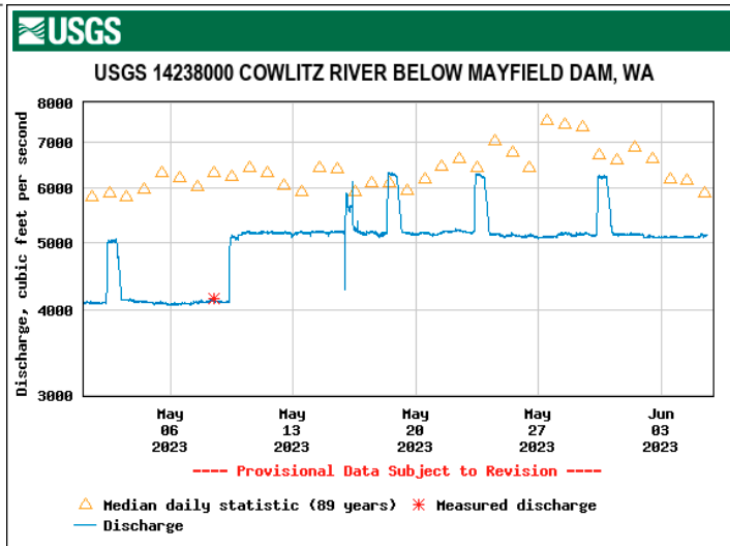
Hydro Operations – Melora (presentation emailed on June 5)

- Inflows: May inflows were at 124% of the historical average. This was despite very low precipitation and followed unseasonably high temperatures. Runoff peaked in mid-May and was followed by declining streamflow.
- Storage: Riffe Lake has filled 40' since the last FTC meeting (740' on June 6, near average for 2017-2022). This may reflect most of the spring runoff. All Tacoma Power boat ramps reopened by mid-May.
- Snowpack: White Pass melted out the end of May. Paradise is at 67% of average with some high elevation snow remaining higher up in the watershed.
- Outflows: Flow reduction to 4,000 cfs through May 9, then normal operations near minimum flow. There were three exceedances during the plant outage caused by a lightning strike that took all generation at Cowlitz offline. Causes and corrective actions will be included in the annual Article 402 report to FERC.
- Forecast: Initially drier/warmer, then typical temperatures for the next ten days. Inflows should be ~5K cfs, with Riffe Lake remaining fairly stable. The public has been notified that boat access to Riffe Lake has resumed.

Scott Gibson provided an overview on fry stranding surveys during the spring flow reduction. The FTC also received emails following each survey. Tacoma conducted fry stranding surveys on Apr. 14, 19, 26, and May 3 at 12 locations from Barrier Dam to just below the Toledo bridge. They observed stranding at five of the sites. Over 8,600 fish were recovered (mostly coho and Chinook fry) using seines and dipnets. Four mortalities were observed, but predation may have occurred prior to salvage. Tacoma also conducted fry stranding surveys on May 17 after the flow and ramp exceedances; no stranded fry were observed. Surveys were scheduled as soon as possible following fish transport flows and the exceedance events.

There was additional discussion on a number of points, including that stranding in general may be a future topic for the M&E team.

Outflow



Through May 9, flow reduction (4,000 cfs + FTF); starting May 10 5,000 cfs + FTF. Plant outage with flow and ramp events May 15/16 (critical flow 6,000 cfs).

Link to the USGS real-time Cowlitz River hydrograph:

https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060,00065

<https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Action Item: Scott: Let Josua know if any of the stranded fish were adipose clipped.

Water Quality/Monitoring

- Temperature monitoring: Matt reported Tacoma monitors the vertical temperature monitoring arrays on the boat barrier upstream of the barrier dam and at the debris deflector in front of CF dam on an hourly basis. The monitoring is increased to every 5 minutes when doing acoustic 3-D modeling work. They also collect temperature data upstream in the mainstem and in some of the creeks as well. He noted Tacoma did some full transects there five years ago. Gabe's weekly report also includes fish facility (inside the tanks) temperature data at the fish facilities including Mayfield. Peggy asked that the report include specific temperatures in excess of 14 °C rather than just reporting they exceeded that number. Bryce noted another topic for the M&E team would be exactly where the truck drivers measure water temperature.
- Anne asked about the presence of any invasive vegetation. Responses: Fortunately, not much. No big algae blooms. There is some Milfoil at Scanewa. Swafford Pond has a lot.
- North Taidnapam Boat Launch: Tacoma anticipates making planned improvements when the reservoir is sufficiently low. These include making the courtesy dock usable at a lower elevation and putting in a turnaround. Per Randy LeDuc's request on behalf of older fishers, a lower-level parking will ultimately (phase 2) be included; however, it is not part of the first phase. They hope to resolve potential cultural resource concerns there.

Fishing Boundary

Josua announced WDFW has moved the fishing boundary from the 300' mark to the 100' mark below the Barrier Dam.

Fish Facilities

Separator:

- HOR and NOR spring Chinook numbers are dropping off as we pass the peak of the run. A total of 1,717 were collected as of June 2, 92% of which were HORs.

- Winter steelhead numbers are also diminishing, with a total of 4,068 (90% HORs).
- Summer steelhead: 163 have been collected to date. Recycling began in late May and will continue this week.

Brood Collection:

- Spring Chinook: 382 males, 280 females and 48 jacks so far brood collection is on track.
- Summer steelhead brood collection will begin in July.

Mayfield Counting House:

- 137 Chinook were collected last week (similar to the preceding week). The run is expected to peak in the fall.
- Coho numbers are increasing as expected with 4,100 juveniles last week (2,800 the preceding week).
- May was the big month for steelhead. Nearly 2K juveniles were counted this week (nearly 5,000 over the past 3 weeks).

Eric welcomes any questions on these numbers. He will forward the Mayfield weekly report (noting these are preliminary data) to Travis to share with the FTC and the public.

Dredging: Tacoma plans to perform this periodic maintenance at the Salmon Hatchery intake, both Salmon and Trout Hatchery boat launches, and the ladder in Blue Creek the first half of August.

CF Fish Facility:

- Over 100K smolts in 2023.
- Steelhead smolt numbers are declining to the point where there may not be enough to get one more tagged group out.
- So far, FCE is 50% for coho and 60% for steelhead.
- Water temperatures have surpassed 13 °C. With warmer weather, flows are expected to increase from 5K cfs to 6.5K cfs.

Cispus Release Site

Laura reported LCPUD finished the JARPA permit application and is waiting to hear back. She will keep us posted. Bryce reported the Copper Canyon Creek kayak takeout is being explored as a secondary release site option. Efforts are underway to start some temperature monitoring there. Eric reported he has asked Jamie and Missy to visit that site this week to see if it is viable. Laura noted that the site is still 5' deep even during drawdown. John will keep Peggy apprised of efforts and any issues raised by the public.

Monitoring & Evaluation Subgroup

This group has not met for the last three months. Matt reported Tacoma has hired Four Peaks to help with this effort. Efforts are underway to schedule a meeting this month. Bryce reminded all, per FTC protocols, there is a need to establish a charter and have a DD outlining the purpose, etc. He said WDFW would be willing to chair this group as needed. Stay tuned.

2023 APR Process

The same contractor will be assisting with this effort. Bryce will talk with Matt B about how best to support the Science meeting/APR meeting per the Work Plan. Stay tuned.

Downstream Adaptive Management Technical Work Group (TWG)

John reported there needs to be an assessment by the FTC of the implications of the variation in language addressing Fish Passage Survival (FPS) in the SA and BIOP. It is noted in various places in the SA and also in the Bi-Op that was issued in 2004.

Action Items:

- John: Send the various FPS definitions to Lyn by June 9 to distribute to the FTC.
- Matt B: Check to see if a charter was ever developed for this group, If so, it's time to revisit it to see if it needs to be updated. This, along with the FPS calculation can be discussion topics for this group.

Spring 2023 Minimum Flow Reduction Update

Presenter: Leah Marquez-Glynn

Leah reminded all that on April 3, Tacoma executed the minimum instream flow (MIF) reduction to 4K cfs with fish transport flows (FTF). They stayed at 4K for almost a month and the refill outlook improved. They went back up to 5K cfs when there was a heat event forecast. Snow melt contributed to 70% refill probability. The reservoir elevation will likely reach 741' based on current forecasts. Inflows were below average from last October to March and are expected to be below normal June - August. Leah anticipates Mayfield discharge from September to October to be 2.4 - 2.5K cfs. She is confident there will be sufficient water in the reservoir to meet MIFs in the fall. FTFs have only a very slight impact on refill probability.

Tacoma uses River Forecast Center models (weather from 1981 to the prior year) to determine refill probability. There is always room for improvement. Tacoma is investigating employing a second forecast. It is clear that climate change negatively impacts the amount of snow we get on average. Tacoma appreciates very much everyone's collaboration and support on this.

LCPUD Dam Operations

Presenter: Russell Page

Outage: LCPUD plans to take a single unit outage when flows drop sufficiently – likely late July - early August. The unit would be out for a month and then come back and generate in time for the fall runoff.

Debris barrier restoration process: Russell was pleased to report they finally got the permits for this project. He will provide an estimate of the start date at the August FTC meeting.

Sluice gate redesign / retrofit: This project will begin in 2024, in combination with other projects in order to minimize impact to river system.

Generator hatch cover seal replacement project: LCPUD removed Tacoma's #1 and #2 fish flumes and pulled the hatch cover to execute the repairs. They hope to finish the repair and reinstall the hatch cover and fish flumes on June 26. They will verify the seals are holding. The same process will be employed for the Unit 2 hatch cover. The whole project should be complete in the August / September timeframe.

2023 FTC Work Plan/Protocols

Presenter: Travis Nelson

These will be sent out again for a final review and electronic approval. The Protocols were updated to reflect the FTC's current decision-making process.

Satellite Rearing Decision Document

Presenter: Eric Shoblom

Eric noted he received a much-appreciated letter of support from CCA. At the last meeting, Eric introduced the DD for the first satellite rearing facility, asked for feedback between meetings and presented it again at this meeting for approval. Eric walked through the document which seeks support to develop a facility at the EN site at Packwood, while retaining the option to use the Tower Rock site as a backup.

After much discussion, there was consensus to hit the pause button and reintroduce the document after some hurdles, including permitting and water quality concerns (with the in-water option), have been cleared and detailed plans developed. Anne noted that Ecology's recommendation to pause and pursue other alternatives including an upland hatchery facility at the stilling basin (vs. and in-water facility) stems from the uncertainty around Packwood Lake's temperature modification activities associated with their Attainment Plan.

Note: The prior DD already gives Tacoma the approval to explore this option.

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

Presenter: Melora Shelton, Steve West, and Denise Smee

Habitat Grant Round: Steve W reported the two Cascade Forest Conservancy habitat restoration proposals previously introduced (Hall Creek Restoration, Upper Cispus Tributary Restoration) were presented to the LCFRB's TAC and some FTC members on May 4 . Final applications are due to the LCFRB on June 26; the Project ranking meeting is July 19. The LCFRB meets on July 28 to review/approve the list of projects for SFRB or CRR funding in 2023.

After some discussion, it was agreed that the LCFRB will present on the two CRR projects and introduce a draft DD at the August 1 FTC meeting and the FTC will vote on that DD in September. This is earlier than the schedule because there is no SFRB match, which allows streamlined process on the LCFRB's side for putting forth a recommendation and initiating award contracting. Bryce noted Peggy will be the designated WDFW proxy at the August meeting.

Cispus Yellow Jacket Phase III Project: Melora reminded all this project is underway with in-water construction scheduled for this summer.

HAP Subcommittee: The subcommittee has identified some challenges and lessons learned for the 2022/2023 HAP grant round, even though no proposals (draft or final) were received in 2023. A big takeaway: It is clear most applicants will need substantial assistance from the subcommittee to propose and ultimately implement these projects. And it is still difficult to articulate exactly what constitutes a "good" project. It was suggested the subgroup identify some target projects or types of projects. Applicant engagement was low despite outreach through workshops and the FTC website. Melora will reconvene the subcommittee before the August FTC meeting to formulate recommendations to the FTC about the best path forward.

Bryce agreed that coming up with a list of potential ideas the FTC could support would be helpful to applicants. Peggy suggested investigating awarding CRR funds to support the creation of this list, rather than relying solely on subcommittee members. Bryce also reminded all there is currently a gap that used to be filled by FOC (Friends of the Cowlitz) that may have led to low participation. He also suggested at the upcoming APR meeting a coho net pen pilot project would be discussed. If successful it could be transferred over to another organization through the HAP process. There was consensus that though there were no applicants for this grant round, it is important that we provide the opportunity and move the process forward for another round.

- **Action Item:** Melora to set up a July HAP Subcommittee meeting to formulate recommendations to share at the August FTC meeting.
-

Public Comment Period #1 - Agenda related (No comments)

Topics for August 1, 2023 FTC Meeting

- Updates incl. Hydro Ops, Water Quality, Fish Facilities
 - Gravel Augmentation Plan DD
 - LCPUD Cowlitz Falls Dam Operations
 - Update on Cispus Release Site
 - Satellite Rearing
 - Downstream Adaptive Management TWG
 - Significance of Performance Metric
 - CRR Fund / HAP Subcommittee Recommendations
 - M&E Subgroup
 - 2023 APR Process
 - Preview September FTC In-Person Meeting topics
-

Meeting Evaluation / Inspirational Quote

- We weren't able to get into the building until 9:20. Sheesh! Appreciate everyone's patience
 - Appreciated the hybrid option. The Owl worked great.
 - Kudos to Travis for weathering the tech challenges with grace and humor.
 - Great dialogue - Everyone spoke freely.
 - Not enough sauce on the pizza!
 - Good frank discussions. Learned some information that may affect the SR program.
 - Josua expressed appreciation for the polite and considerate communication at the meeting and offered the following quote: "Sometimes people are going to be rude. Instead of responding harshly, keep a calm spirit." Dawn Klinge
-

Public Comment Period #2 – Any Topic

Randy:

- What are we going to do to improve fishing opportunity? There are many issues that negatively impact the fishery and it seems like the FTC should be working to address them. This doesn't seem to be the case. There are predation issues with pinnipeds and birds. With climate change, there will be a lot more of these problems. Bureaucracy always bogs things down. How can we deal with the situation timely before the damage is done? Hope to see the FTC deal with things in a timely manner. There are always so many delays to the point that nothing changes – or things get worse.
- When the chum enhancement program was proposed by WDFW Randy volunteered his boat and his time. Nothing happened. There are outside resources that are available. People are volunteering to help. They are not being utilized. This is very discouraging. Also, chums are nearly extinct. Something has been neglected. We need a strong ecosystem. Chums had their place in nature.
- Riffe Lake boat launch accessibility issue: Randy is still waiting for information on what can be done on this. He has brought this up repeatedly and has not heard anything back. The older folks are looking for change. They are communicating through Randy and really want to see results. (Travis will follow up.)

- One positive thing: After five attempts, he caught a steelhead. The steelhead recycling program has been somewhat successful.
- Misses the Ad Hoc Meetings that were focused on fishing issues. Attendees used to get projections, returns, and actuals. Would love to see fish being more of the focus at FTC meetings.

Anne: Maybe we can find a way to incorporate volunteers into the HAP funded projects.

Travis: We really appreciate the angling community attending these meetings. For Tacoma the FTC is an advisory group to help them implement their license requirements. The State has made efforts to address marine mammal predation. It is important to continue to hear from the angling community.

Bryce: Thanks for the issues you are bringing up. The challenge is that the responsibility of the FTC is relatively small. The Settlement Agreement doesn't address chum recovery. There is no requirement there. There is overlap, but it is not a major focus of the group. Some of the issues are under WDFW purview. WDFW will share more announcements and information with FTC in the future on these topics. The emphasis of the Settlement Agreement is ecosystem integrity and the restoration and recovery of wild, indigenous salmonid runs, including ESA-listed and unlisted stocks, to harvestable levels. There are places where we can do better at plugging in volunteer groups into the work we are trying to do. HAP projects may be one of the ways volunteers can help.

Anne: Thanks very much for raising these issues including the frustration with bureaucracy. We understand your concerns.

Closing Remarks

Travis asked everyone to let him know (email, phone, etc.) how they feel about the value of holding in-person meetings on a quarterly basis. He also thanked everyone for their time and efforts supporting the work of the FTC. Tacoma Power needs everyone working together collaboratively to continue to successfully implement their license.

Parking Lot

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

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final Meeting Summary
August 1, 2023 from 9:30 – 3:30

FTC Representative Attendees:

Travis Nelson	TPU
Anne Baxter	Ecology
Peggy Miller (for Bryce Glaser)	WDFW

Additional Attendees:

John Serl	WDFW
Matt Peter	TPU
Scott Gibson	TPU
Melora Shelton	TPU
Tim Hoffnagle	TPU
Laura Wolfe	LCPUD
Russell Page	LCPUD
Steve Manlow	LCFRB
Denise Smee	LCFRB
Stephen Lewis	BIA
Michael Boyles	BPA
Ann Weckback	Lewis County
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: None today.

2023 FTC Meeting Dates: September 5 (in person – location TBA), October 3, November 7, December 5 (in person)

Approval of June Meeting Summary

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

Announcements

- Sam Williams has joined Tacoma as the Cowlitz Falls Fish Facility Biologist working under Gabe. Sam hails from NE Oregon and has worked many years with the Nez Perce Tribe.
- This is Tim Hoffnagle’s last meeting with us as he retires from Tacoma in two weeks. We all thanked him for his excellent work over the past few years. We wish him well.

Updates

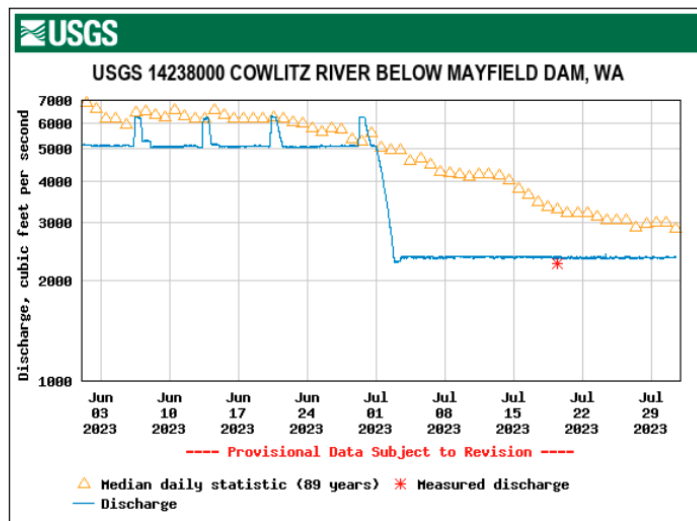
Hydro Operations – Melora (presentation emailed on July 31)

- Hydro status update covered two months (as there was no July meeting).
- Inflows: After the May runoff, inflows returned to well below the historical average (47% in June and 42% in July) with minimal precipitation. Daily average flows for July were 1,700 cfs.
- Storage: The 740’ elevation at Riffe reported at our June meeting has been the highest so far this summer. The current elevation is 727’ which is 15’ lower than the average for the last five years. Tacoma is confident about being able to meet minimum flow obligations through the

rest of the summer. There could be discussion in the fall regarding minimum flow resets (Article 13).

- Snowpack: White Pass melted out the end of May and Paradise did the same in early July.
- Outflows: On July 1 they transitioned from 5K cfs plus (Fish Transport Flows) FTF to 2,360 cfs. This the above the 2,000 cfs minimum flow, but slightly below the typical 2,400 cfs summer operating basement. All ramping is within limits.
- 10-Day Forecast: Typical - warm and dry. The freezing level is above 13K'. Outflows are expected to be 2,360 cfs unless there is a load demand due to extreme heat. Inflows should be ~1.3K cfs.
 - Boat ramps: Due to continued drafting some boat ramps may not have access through Labor Day. Tacoma will continue to coordinate in advance with WDFW on this.
- Melora explained that load is the total amount of energy demand. During times of increased demand (usually August and September) Tacoma may need to respond to an emergency or if market prices are exceedingly high. Tacoma plans ahead to have enough buffer in the system to cover increased demand while, to the extent possible, maintaining recreation levels. This year has been challenging.

Outflow



From May 10, 5,000 cfs + FTF. Transition to 2,360 cfs starting July 1. All ramping within limits (1 inch/hr day and night starting June 16).

Link to the USGS real-time Cowlitz River hydrograph:

- https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060,00065
- <https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Water Quality/Monitoring

Milfoil in Lake Scanewa: Stephen observed this and asked if Tacoma was taking measures to minimize its spread. John noted LCPUD has worked to address Milfoil and other noxious weed species in Lake Scanewa but in any event, there are limited location with suitable habitat for milfoil in Lake Scanewa so it is self-limiting. Swofford Pond is really full of Milfoil. This is beyond the purview of the FTC

Temperature Monitoring: Matt shared some charts on hourly data gathered from June 13 to July 25 for the Cispus at the Copper Canyon Creek Whitewater Takeout site (kayak takeout) and Scanewa Day Use Park Boat Launch.

- Copper Canyon takeout: Max = 20.5 °C; Min = 8.5 °C (daily mean temp 9.6 °C -17.3 °C)

- Lake Scanewa: Max = 24 °C; Min = 11.6 °C (daily mean temp 9.6 °C - 22 °C)
John reported that after doing some temperature monitoring with a regular thermometer at the kayak takeout, he observed that the water at the release point was 2 °F lower than at the TPU temperature logger site and this likely explains the 4 °F daily water temperature variance observed on the temperature logger. He is confident that the site gives fish access to cooler water even in the summer. This is great news! He will share the data when they are ready for posting.

Temperature profile data collected in Cowlitz Falls Dam forebay from March 8 to July 6:

- Boat Barrier Temperature Profile: Max = 20.7 °C; Min = 4.5 °C
 - Debris Deflector South Temperature Profile: Max = 20.7 °C; Min = 4.5 °C
- Matt explained the temperature loggers hang off the debris barrier – but are not touching it. Temperatures on the north deflector loggers are warmer at depth, as predicted by Tacoma. They haven't observed temperature influencing fish behavior.

North Taidnapam Boat Launch: The work on the dock will be completed in the fall when the reservoir elevations are sufficiently low. The boat launch will be closed when they do the construction (would be closed anyway due to low elevation).

North Shore fishing trail adjacent to the Mossyrock Dam: Matt reported they will start the SEPA process. They will be getting permits to do some stabilization work there.

Large Woody Debris: LWD placement at the Blue Creek Boat launch has begun.

Dredging projects: Permitting has been obtained and notifications will be sent out when ready to begin these projects at the Blue Creek weir and Cowlitz Salmon Hatchery intake.

Regarding temperature data from the Mayfield Juvenile Collection Facility, Anne asked if these are surface temperatures. Scott answered in the affirmative. Stephen asked if Tacoma can get more of a vertical temp profile vs. only surface temps. He noted that not all migrating fish are treated equally. It was agreed to save this for further discussion.

Action Item: Matt P to ensure temperature data reports from the Mayfield Juvenile Collection Facility are clearly labeled (surface temperatures, etc.).

Cleanup at Kosmos: Anne reported that Cam Penner-Ash is Ecology's Cleanup Project Manager who has been working with Tacoma on this site. He has agreed to attend FTC meetings quarterly, starting in September, to give members updates on the status of the process and be available to answer questions people might have. Since Tacoma still has more samples to collect, he has agreed to give an update/background on the clean-up process itself as a start.

Action Items:

- Anne: Send Cam's email address to Lyn and Travis to add to the FTC distribution list.
- Travis and Lyn: Update the distribution list accordingly.

Gravel Augmentation: The remaining 813 cubic yards of gravel will be placed this year. Stay tuned.

Fishing Boundary

John announced WDFW has moved the fishing boundary below Barrier Dam back to the 400' mark as of today to prepare for the expected low fall Chinook return.

Fish Facilities

Scott reported on Eric's behalf that the Cowlitz Facilities Team is currently in the process of hiring three seasonal PSMFC Fisheries Technician positions to assist at the adult separator and Mayfield counting house. They hire these positions annually.

Separator:

- There was a small drop for both Spring Chinook and summer steelhead returns over the last week. They are 90% of the way through the spring Chinook return and expect to see 200-300 more through October. There was a slight increase in cutthroat trout collection. They are also seeing a good increase in the cutthroat return which should also extend into the fall
- Tacoma is hauling around three loads of fish to the LCPUD Copper Canyon Creek Whitewater Takeout site each week. They took 17 loads to the release site in July, starting on July 5. 450 spring Chinook have been transported to that site so far.
- 1,391 summer steelhead have been recycled to the I-5 boat ramp so far this year. Total first-time arrivals are ~2K. We are about 55% of the way through the run.

Brood Collection:

- Spring Chinook broodstock collection is complete for the year.
- They are currently collecting summer steelhead broodstock. Going well.
- Fall Chinook and cutthroat broodstock collection should start around the beginning of August. Coho will start in Sept. All HOR fall Chinook and a proportion of NOR fall Chinook will be retained for broodstock. NOR fall Chinook that are not retained for broodstock will be transported and released into the Tilton River.

Mayfield Counting House:

- All Chinook and coho are getting snout tagged and all steelhead and cutthroat are getting a dorsal sinus tag.
- Total numbers have dropped a little over the last couple of weeks. This is normal for this time of year. We will start to see those numbers climb again in September.
- We are currently seeing about twice as many Chinook as coho. There have only been a few steelhead each week for the last couple of weeks.

Dredging: Tacoma will dredge the Cowlitz Salmon Hatchery intake to disturb/remove *C. shasta* (parasite) habitat on August 8. They will dredge below the Blue Creek weir for flood control on August 10. Both Anne (Ecology) and Elliot (WDFW) have been notified of the project dates.

CF Fish Facility (as of July 25):

- Approximately 210K smolts have been collected to date
 - 30K Chinook
 - 170K Coho
 - 9.4K Steelhead
- Approximate FCE
 - Steelhead 66%
 - Coho 75%
 - Chinook 55% (PIT tagging is ongoing)
- Discharge at CFD: John noted that the minimum generation for the Cowlitz Falls Dam turbines used to be 1,800 cfs which only allowed the turbines to be operated part of the day during the low inflow periods (pooling). This caused the flow in the reservoir to stop and flow back upstream once per day and likely had a negative effect on Chinook smolt collection. It was thought that operating the turbines below 1,800 cfs caused damaging cavitation and

vibration. LCPUD subsequently discovered that the turbines will begin operate smoothly again as flow decreased to around 1,000 cfs, which is much better for fish collection because Lake Scanewa can flow continuously 24 hours/ day now.

- Spillway Flumes 3 and 4 have been removed for LCPUD’s unit maintenance and are expected to be back online the week of August 7.

Copper Canyon Creek Takeout Release Site

Tacoma has been able to make several hauls to release fish into the Cispus at the Copper Canyon Creek Takeout site as temperatures have remained sufficiently low.

Spring Chinook																		
Run Timing: March 2023-October 2023				Upstream Transportation								Lower Cowlitz		Broodstock		Surplus	Mortality	
Week	Total			Tilton River		Lake Scanewa		Cowlitz @ Packwood		Copper Canyon								
Ending	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Hatchery	Natural
Season to date	3,500	3,097	403	0	0	1,147	269	372	48	293	86	0	0	1,268	0	14	3	0
28-Jul	111	86	25	0	0	0	0	0	0	79	25	0	0	0	0	7	0	0
Weekly 5-Year Average	121	96	25															
Season 5-Yr. Average to Date	2,269	1,916	353															

Cispus Release Site (Tom Music Bridge)

Laura reported LCPUD is still working through the JARPA with state and federal agencies. There was a mistake on the initial document that led to it not being reviewed by WDFW, so that is being dealt with. They are also considering the potential involvement of the Army Corps of Engineers. She understands the delays are frustrating, but that’s the current status.

Monitoring & Evaluation Subgroup

This group has met to discuss how to develop the M&E Plan. Tacoma has hired Four Peaks to help with this effort.

2023 APR Process

The same contractor will be assisting with this effort. Matt P announced the Science Meeting has been scheduled for August 22 at the Veteran’s Memorial in Chehalis. Stay tuned for more details. Travis noted Tacoma is in the process of hiring some additional staff to assist with this.

Action Item: Matt P to ensure proper notification of the August 22 meeting are shared.

Downstream Adaptive Management Technical Work Group (TWG)

John reported there was a meeting that mostly focused on operations at the CF Fish Facility, how fish are being collected, etc. The spring report from the group will be out to the FTC internal review. Collection at CFFF is going well. He also noted Mayfield collection is proceeding with nothing unusual to report.

LCPUD Dam Operations

Presenter: Russell Page

Generator hatch cover seal replacement project: LCPUD completed the repairs on Unit 1, along with Tacoma’s #1 and #2 fish flumes. They now are doing the same with Unit 2 and Tacoma is doing repairs on #3 and #4 fish flumes. The reinstall is scheduled for August 22.

Sluice gate redesign / retrofit: This is currently at 90% review and will go to bid in the spring of 2024 so it can be combined with the stability and crane projects which are scheduled to start in September of 2024 in order to minimize impact to river system.

Peggy asked if the sluice gate work will go down to riverine conditions or the same elevation as debris barrier work? Russell replied this is still under consideration. They may install a bulkhead in front of the gates, so they don't have to go down to riverine conditions. He will follow up with Peggy on this in the next couple of weeks.

Debris barrier restoration project: With permits in hand, LCPUD is planning on doing the first drawdown in Q1 of 2024. They anticipate it requiring 3-4 weeks to repair the moorage site. The second drawdown will occur in Q3 of 2024 after the fish collection season, with a forebay elevation of 842-825'.

Outage: The Unit 1 outage will occur August 1 through October 2. It no longer appears that any divers will be needed, and they won't have to spill during fish collection season.

Trash rack repair: This work will likely occur in October of this year.

Anne noted Ecology wants to ensure sludge discharge from sediment are minimized. They want to be sure LCPUD has proper monitoring protocols, etc. in place. Russell assured her he will discuss with Joe First and coordinate with Ecology to ensure there won't be any water quality issues during the drawdowns.

Gravel Augmentation DD

Presenter: Melora Shelton

Melora reviewed the background on SA-10 (gravel) implementation since placement was put on hold in 2017. This information is included in the DD, the 2023 Gravel Augmentation Plan Supplement, and associated attachments. A two-path approach to resuming gravel placement was finalized in early 2021 (DD 2021-01): initially in conjunction with the Barrier Dam construction project and then moving toward a long-term plan, leaving flexibility for future discussions. Tacoma has worked over the last two years with the FTC and WDFW to formalize long-term activities into the 2023 Supplement. The proposed final DD and 2023 Plan Supplement were distributed to the FTC for final review, and no comments were received. Melora walked through the final DD on screen. It will be attached to the 2023 Supplement to document this FTC consultation. There were no additional questions or suggested edits.

There was a consensus approval of the document by FTC voting members at the meeting.

Action Item: Travis to send out the DD and 2023 Supplement approved by consensus at this meeting to other FTC members not at the meeting for electronic approval.

Satellite Rearing Decision Document

Presenter: Travis Nelson (for Eric Shoblom)

Travis reported Tacoma is continuing to research potential configurations for satellite rearing facilities at the Energy Northwest (EN) site. While it is unclear if the EN site will work out due to some complicating factors, it remains on the list. They are also analyzing the option of Tower Rock and the feasibility of Mayfield net pens. In addition to locations, they are also reviewing several

facility options (earthen ponds, etc.). Tacoma is committed to getting something constructed in the time window prescribed. It has not been determined that an additional DD is needed. Stay tuned.

Cowlitz Restoration and Recovery Fund / Habitat and Production (HAP) Subgroup
Presenters: Denise Smee and Melora Shelton

2023 CRR Habitat Grant Round:

Denise Smee (LCFRB) reviewed the two proposals being recommended for CRR funding. Both proposals are sponsored by Cascade Forest Conservancy. No SRFB funding was requested, but there were other matching funds for both projects. The LCRFB Board met on July 28 and accepted the TAC’s recommendation that the FTC fund both projects.

Project Number	Project Name	CRR Requests
CRR-2023-01	Restoration of Crystal & Woods Creeks Using Low-tech Structures	\$168,098
CRR-2023-02	Riparian and In-channel Enhancement of Hall Creek	\$61,048
TOTAL CRR REQUEST:		\$229,146

Denise introduced a draft DD for CRR funding recommendations (2023-05). The document includes active links to LCFRB’s Google Drive folders for both project applications along with a description of any changes since the virtual site visits. This includes links to the recorded virtual site visits. These links were also emailed to the FTC last week.

CRR projects landed in the middle of the scoring results using the SFRB’s scoring. The projects scored similarly using both scoring approaches, but Hall Creek was slightly higher under CRR (CRR priorities related to upper basin) and Crystal and Woods were slightly higher under SFRB (more regional perspective). The projects were recommended equally without ranking among them. We may want to discuss the distinctions between scoring and ranking further going forward. More info on TAC member CRR scores will be shared with the FTC when the DD is sent out. The SRFB and CRR evaluation questions will also be shared.

Travis expressed thanks to the LCFRB for all their support and coordination with us. Peggy agreed. She found the presentation to be very informative and easy to follow.

Action Items:

- Melora: Send out this DD for all to review in anticipation of review and approval at the September FTC meeting.
- All: Send any comments to Melora by August 22.

HAP Subcommittee:

As discussed at the June FTC Meeting, this group has reengaged to look toward 2024. They met on June 26 and July 18. Discussions included ideas for improving applicant guidance. They worked together to make minor updates to program materials to support the 2024 process and will share them with the FTC. Melora walked through the draft DD 2023-03 to guide the HAP element of the program and subcommittee work for the coming year. The subcommittee will continue to work under the existing charter and SOW. They look forward to discussing with the FTC how to improve project guidance. They will formalize a meeting schedule starting the week of August 14.

CRR Program, General:

There have been many conversations about approving projects for funding. Melora reminded all that the Cispus Yellow Jacket Phase III Project is underway with in-water construction scheduled for this summer and work for other projects is starting up. CRR funds are going out the door to reimburse project sponsors now. It is very exciting that this is finally happening!

Melora noted that the LCFRB and Tacoma are exploring a CRR-focused field trip in the September/October timeframe. Stay tuned for details.

The LCFRB will conduct a lessons learned session with the SRFB and also with CRR. There may be some wording in the Implementation Strategy related to assessments that should be changed to add clarity. They will be looking for feedback from the grant sponsors and the FTC. Any updates to the Implementation Strategy will go through the decision document process.

Peggy suggested that in September FTC meeting Melora share how much funding remains in the CRR Account.

Action Items:

- Melora: Send out CRR DD and materials for all to review.
 - All: Send any comments to Melora by August 22.
-

Public Comment Period #1 - Agenda related

Randy LeDuc contacted Travis to let him know he had a conversation with fishing guides last Saturday. They reported 7 of the 26 fish caught were operco-punched (recycled) fish. That's good news on the recycling program! Travis extended congratulations to Scott and the team on making this happen. These are good successes and opportunities for our angling communities. Randy also reported that a chum salmon was caught recently in the lower river. Scott noted we have both summer and fall chum arriving in the Cowlitz.

Topics for September 5, 2023 FTC Meeting

- Updates incl. Hydro Ops, Water Quality, Fish Facilities
 - Gravel Augmentation Plan DD
 - LCPUD Cowlitz Falls Dam Operations
 - Update on Cispus Release Site
 - Satellite Rearing
 - Downstream Adaptive Management TWG
 - Significance of Performance Metric
 - CRR Fund / HAP Subcommittee Recommendations
 - M&E Subgroup
 - 2023 APR Process Debrief
 - WDFW Topic: Fish Passage Survival (tentative)
 - Preview October FTC Meeting topics
-

Meeting Evaluation

- Got out early
- Good Participation
- Need more time for updates
- For in-person meeting, make the breaks longer

Inspirational Quotes

- Steve M offered this quote from Einstein: “We can’t solve problems by using the same kind of thinking we used to create time.”
 - Anne shared another Einstein quote: “I have never looked upon ease and happiness as ends in themselves -- this critical basis I call the ideal of a pigsty. The ideals that have lighted my way, and time after time have given me new courage to face life cheerfully, have been Kindness, Beauty, and Truth.
 - Tim offered this farewell quote from Bertrand Russell: “In all affairs it's a healthy thing now and then to hang a question mark on the things you have long taken for granted.”
-

Public Comment Period #2 – Any Topic

No comments.

Closing Remarks

Travis remarked on the recent loss of some young people (in their 20s) in an ATV accident. This is very difficult for the families and for the community. Stay safe. Be mindful. Don't be in a hurry. Be cognizant of your surroundings. Life is precious.

Parking Lot

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

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final Meeting Summary
September 5, 2023 from 9:30 – 3:30

FTC Representative Attendees:

Travis Nelson	TPU
Anne Baxter	Ecology
Bryce Glaser	WDFW

Additional Attendees:

Josua Holowatz	WDFW
Peggy Miller	WDFW
John Serl	WDFW
Brian Gale	WDFW
Kristopher Warner	WDFW
Cam Penner-Ash	Ecology
Matt Peter	TPU
Eric Shoblom	TPU
Scott Gibson	TPU
Melora Shelton	TPU
Steve Manlow	LCFRB
Denise Smee	LCFRB
Steve West	LCFRB
Michael Boyles	BPA
Ann Weckback	Lewis County
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Jack Tipping and Randy LeDuc

Remaining 2023 FTC Meeting Dates: October 3, November 7, December 5 (in person)

Approval of August Meeting Summary

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

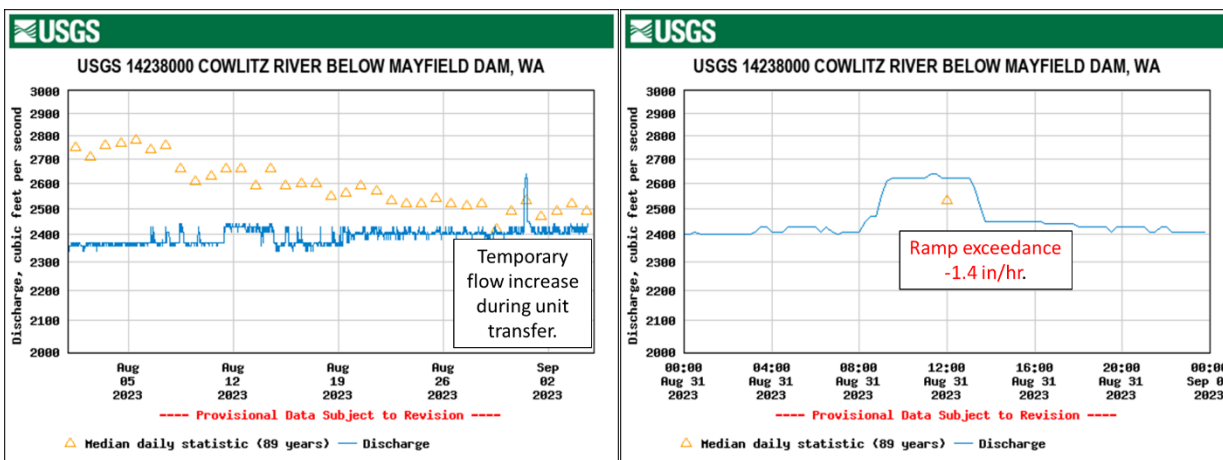
Announcements

- We were pleased to welcome Cam Penner-Ash to the group. Cam is the Cleanup Project Manager for the Ecology's Southwest Regional Office. He is the new coordinator on the Kosmos Riffe Lake Cleanup and will be providing quarterly updates on this to the FTC.
- Tacoma was excited to share that Sam Gibbons has joined Tacoma as the new Natural Resource Owners Representative. He will be representing various Natural Resources sections or personnel on complex projects like the Trout Hatchery Remodel and Mayfield Juvenile Bypass System upgrades. While we wish him well in this new role, this organizational shift is not limerick worthy.
- Tacoma is currently advertising for these 3 positions: Senior Fisheries Scientist, Senior Fish Passage Specialist, and a Science and Research Biologist. Please visit TPU Jobs for details.

Updates

Hydro Operations – Melora (presentation emailed on September 4)

- Inflows: Daily average flows for August was 1,175 cfs and are currently at 1,178 cfs (September 3). September average inflows are about 1,700 cfs. With very little precipitation in July and August, we continue being well below the average for the water year.
- Storage: Riffe's current elevation is 717' (~12' lower than the last 5-year average). Both Mossyrock short lane and North Taidnapam ramps are closed.
- Outflows: On August 31, a planned unit transfer resulted in a ramp exceedance of -1.4 inch/hr. Tacoma is taking measures to prevent this from happening in the future. This incident will be included in the Annual 402 report to FERC.
- 10-day Forecast: Typical - warm and dry and remaining so for the next 3 months. Without precipitation, the Mossyrock long lane may close before the end of September (~708'). Melora will let WDFW know if this occurs. The freezing level is above 11K'. Outflows are expected to be 2,360 cfs unless there is a load demand. Inflows should be ~1.2K cfs.



Link to the USGS real-time Cowlitz River hydrograph:

https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060.00065

<https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Water Quality/Monitoring

Copper Canyon Creek Whitewater Takeout site: Potential fire concerns resulted in road closures that made the site inaccessible. No temperature issues have been reported there.

Temperature Data: Annual hatchery reports include temperature data that WDFW records at the hatchery. Eric would be the contact for Anne to receive temperature data. Matt noted the temperature loggers are utilized for the passage study and are not installed year-round. The loggers associated with the debris deflector will come out following the annual passage assessment.

- Action Item: Matt P to send out temp data charts illustrating additional isotherms for the boat barrier vertical array as well as the North and South Debris Deflector vertical arrays.

Kosmos Site: Tacoma has completed 8/15 sampling of deep wells and believes they can move forward with the Remedial Investigation (RI) report. Once data are validated the RI report is due to Ecology within 90 days. Following filing of the RI report and satisfaction of the existing Agreed Order (AO), Ecology will issue a new AO which will lead to the creation of a draft clean-up action plan.

North Shore fishing trail adjacent to the Mossyrock Dam: This trail was closed due to rock fall safety issues. After investigation, Tacoma decided to do some rock scaling to get the trail to a condition where it is safe for people to return. The work will all be done in the dry. They are securing the necessary permits.

Dredging at the Blue Creek Weir: Anne asked if there were photos of this. Matt is still waiting for the report from the PM on site. Jamie will share this when he is back in the office. Anne expressed concern that the Water Quality Protection Plan (WQPP) had not been approved. She and Matt discussed this over the lunch break. Tacoma will work with Ecology to address potential changes / BMPs that could be made to adaptively manage water quality related concerns. They will also work to revise the WQPP.

Gravel Augmentation

Matt reported ~800 cubic yards of gravel were delivered the week of August 28. There were issues with the gravel slinger which ended up dropping and piling gravel into riparian zone. That machine broke down and was replaced by a slinger with a new belt which resulted in much more accurate placement. Anne showed photos of the gravel fell into the riparian zone. Peggy asked what they planned to do about the gravel in the riparian zones. Matt will arrange a trip out to the site before the end of October with WDFW, DNR, the County, and other stakeholders to discuss mitigation options and how best to move forward. Flexibility has been written into the plan. Matt reminded all there will be no more augmentation this year. Next year, Tacoma will continue per the new plan that was approved at the last FTC meeting.

Fish Facilities

Eric reported the Cowlitz Facilities Team is still in the process of hiring three seasonal PSMFC Fisheries Technician positions to help out at the separator and Mayfield counting house.

Separator:

- Return numbers are currently low at the separator. The spring Chinook are starting to drop eggs on the table and the summer steelhead are starting to turn dark. They are getting more cutthroat and fall Chinook and the coho are slowly trickling in.
- Tacoma's last haul of fish to the LCPUD Copper Canyon Creek Whitewater Takeout site was on August 14 as Port Blakley shut the 300 Road down for fire danger on August 31. To date, a total of 685 fish have been released at the site.
- August 28 was the last week for steelhead recycling. A total of 1,759 summer steelhead were recycled to the I-5 boat ramp this year.

Brood Collection:

- Tacoma is currently collecting fall Chinook, summer steelhead, coho, and cutthroat broodstock.
- After the first spawn of spring Chinook, they are also collecting 30 additional females due to smaller females with lower-than-average fecundity. It is pretty easy telling the falls and springers apart for collection.
- At the end of August, Eric noted they were 241 adult fall Chinook behind for collection,

Mayfield Counting House:

- All Chinook and coho are getting snout tagged and all steelhead and cutthroat receive a dorsal sinus tag.
- Total numbers have dropped a little over the last couple of weeks (typical for this time of year). Those numbers are expected to climb again this month.
- We are currently seeing about twice as many Chinook as coho. There have only been a few steelhead each week for the last couple of weeks.

Satellite Rearing

Eric reported Tacoma is still looking for an approach to using the Energy Northwest (EN) site as a Satellite Rearing facility although there are complications associated with the two FERC projects intersecting. They are working through these challenges. This is why they are now focusing more closely on setting up the Mayfield Net Pen Pilot project in hope that, if successful, it could be a potential Satellite Rearing facility or other type of program.

He reminded all that the Mayfield Net Pen Pilot project is a product from the public's request during last year's APR (Annual Program Review) meeting where we gave the option of shifting some of the coho production from the hatchery into net pens in order to make more space in the hatchery to produce either more or larger spring Chinook. Success of this program will be measured by comparing coho survival in the hatchery vs. survival in the net pens. If similar, or better survival is achieved in the net pens, the program will be considered a success and they will look to move even more of the coho production into the net pens and raise more spring Chinook in the hatchery.

Stay tuned to hear more as Tacoma evaluates the viability of this program which carries with it the potential to break ground for either a Satellite Rearing facility, a CRR/HAP program, or other opportunity for outside engagement.

Cispus Release Site (Tom Music Bridge)

Laura emailed Lyn that she is waiting for some documents from the USFS to send to the USACE. She will be at the next meeting and hopes to have more news at that time.

Monitoring & Evaluation Subgroup

This group's meetings have been focused on M&E Plan development, including the transport plan for the two release sites on the Tilton. Bryce offered to review the plan and send it out to the group. Scott noted the plan may be impacted by the new marking plan which has resulted in seeing the return of some Chinook jacks. Bryce noted some issues such as spring Chinook transport have been discussed through email.

- Action Item: Bryce to review the M&E plan and send it out to the group in advance of the next meeting/email discussion.

HGMP Submitted

Bryce noted the Cowlitz Hatchery Genetic Management Plan was submitted to NOAA Fisheries at the end of August. In so doing, they worked hard to incorporate the Transition Plans. They are currently waiting for the services to respond.

Downstream Adaptive Management Technical Work Group (TWG)

No report this month due to the Annual Program Review.

- Action Item: John to send out marked up draft of Charter for this Subgroup.

Model Toxics Control Act and Riffe Lake

Presenter: Cam Penner-Ash

Cam Penner-Ash is the new formal site manager for Riffe Lake cleanup. He began by providing a summary of the Model Toxics Control Act (MTCA) followed by an overview of the associated stages of cleanup. He then reviewed the history of the Kosmos site at Riffe Lake. The first seep of black oily liquid was discovered at the site in April, 2019 and Ecology was notified. In November 2019 Tacoma declared an emergency to implement Independent Remedial Action (IRA). The Remedial Investigation Work Plan was issued at the end of 2021 in order to propose which investigation work would be required to complete the Remedial Investigation document. The upcoming Remedial Investigation document (anticipated end of 2023) will sum up where things are located and how they

got there. Cam welcomes any Riffe Lake cleanup related questions (cam.penner-ash@ecy.wa.gov). All of the upcoming documents will eventually undergo public comment. He will try to remind people of these during his quarterly updates. The comment periods are a good opportunity to have any concerns or questions addressed about the cleanup process. Cam anticipates that the next FTC meeting that he will attend will be in December 2023.

2023 APR (Annual Program Review) Process

Presenter: Eric Shoblom

The Cowlitz Annual Program Review and Science Conference took place on August 22. This provided an opportunity to meet with the public and present a population and hatchery program management strategy for the coming season. The deadline for APR public input was September 1. Feedback received is being shared with the FTC for consideration at today's meeting. Eric reviewed the process:

- FHMP – Transition plans
 - Bio programming
 - Annual Program review process - essentially the fish production plan for each species
 - Implementation

Eric reminded all that 2022 was the first year to follow the new FHMP Transition Plans. The second public APR meeting will be part of the October 3 FTC meeting. He reviewed the results of the proposed production plan for each species:

- Spring Chinook
 - Option 1 is proposed (poundage neutral, etc.) and small, net pen pilot program to ensure and make sure survivals are good in the net pens. If all goes well, then switch to Option 2 (increases pounds, etc.) for one year. After the initial year, additional funding or a new strategy will be needed to continue Option 2.
- Coho
 - Recommending size and release strategy remain the same. Coho are more resilient so would be good fit for net pen program. Shift 96K to net pens to experiment.
- Fall Chinook
 - Retain existing program, improved monitoring and hatchery rearing conditions. Marking at Mayfield.
- Winter Steelhead:
 - Collected 100% of early arrivals. Two transitions are well underway, creating an earlier lower Cowlitz winter run and reallocating production to the Tilton and UCR:
 - LC Winters: Reduce by 170K; Tilton Winters: Increase by 52K; UCR Winters: Increase by 118K.
- Summer Steelhead and Cutthroat
 - No Transition Plans – keep both programs the same as last year.

Eric hasn't received any public feedback via email. He noted that Larry Pryor wanted to see a sub-yearling Spring Chinook program and Tacoma is investigating a program very similar to that for the satellite rearing program. Randy LeDuc is supportive of the pilot program for Spring Chinook. Jack Tipping also supported Option 2. Bryce noted WDFW also supported the pilot program to make sure it is a viable option before moving forward with Option 2. They had hoped to do a more formal SAR analysis of the Mayfield fall Chinook net pen program with increased hatchery M&E availability at WDFW. Eric will introduce a draft DD to memorialize the APR decisions at the October FTC meeting.

COWLITZ ANNUAL PRODUCTION REVIEW DECISIONS

Species	Before 2011 FHMP Update	2019 APR Goal	2020 APR Goal	2021 APR Goal	2022 APR Goal	2023 APR Goal
Fall Chinook	4,800,000	3,500,000	3,500,000	3,500,000	3,500,000	3,500,000
Spring Chinook	959,800	1,738,529	1,738,529	1,738,529	1,678,000	1,678,000
Coho	2,835,000	2,178,000	2,178,000	2,178,000	2,178,000	2,178,000
Winter Steelhead	690,000	647,000	647,000	647,000	647,000	647,000
Summer Steelhead	550,000	625,000	650,000	650,000	650,000	650,000
Cutthroat	160,000	100,599	100,599	100,599	100,599	100,599

- **Action Item:** Eric to send out draft DD by September 26.

LCPUD Dam Operations

Presenter: Lyn for Russell Page

Lyn provided the following update from Russell as he was unable to attend the meeting:

- Hatch cover work is complete, and the hatch cover has been re-installed. They are closing out that project this week.
- Unit 1 is currently in outage and will be in outage through September and into October.
- They are working on a strategy to repair broken cross members on their trash rack and may be pulling them in early fall to complete the repairs.
- A riverine drawdown and monitoring procedure is being developed for the drawdown scheduled for Q1 of 2024, to ensure water quality and license obligations are followed during the entire process. This will be presented to the FTC this fall.

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

Presenters: Denise Smee and Melora Shelton

CRR Funding:

Having received no comment or questions since the last meeting, Denise walked through again the draft DD for CRR funding recommendations (2023-05). The document includes active links to LCFRB's Google Drive folders with project information. Melora updated the total funding for the two projects to \$218,696. With that edit, the DD was approved by consensus of voting members present.

Other Updates:

- The LCFRB will host a Lessons Learned TAC meeting for the 2024 CRR and SFRB grant rounds on September 13. Denise will send out the agenda. Voting members of the FTC are invited to participate in this meeting. Other members are welcome to attend as public.
- CRR Field Tour on September 26. Let Denise know if you can/can't attend by September 8.
- The Cispus Yellow Jacket Phase IV Project is not yet under contract. There is an agreement with the RCO as match for CRR grant. There has been no change to the SOW.
- Quarterly reports are starting to come in. Folks have been busy with project implementation.

Balance on CRR fund grants awarded to date:

- 8/28 CRR Balance: \$17,568,913.61 (or ~\$17.6 M)
- Awards: 2019-2022: \$3,588,307 (or ~\$3.6 M, supporting total project values of ~\$6.5 M)

HAP Subcommittee:

Hatchery Associated Projects DD 2023-03. Melora reminded all this was reviewed at the last FTC meeting and no further comments were received. The DD calls for moving forward with including HAP projects in the CRR Grant round in 2024 along with associated documents based on the 2023 grant round. WDFW requested a wording edit, after which the DD was approved with that edit by voting members present.

On August 21 the HAP Subcommittee met and began to list different types of projects that might be implemented. These discussions will continue at future meetings on September 20, with M&E members invited to attend at the next meeting (either Oct 3 or Oct 18, pending APR wrap up schedule). They will keep the FTC in the loop and reach out for feedback/suggestions.

Next steps: A draft DD with an updated implementation strategy will be presented at the November FTC meeting and the decision will be requested at the December meeting.

In closing, Melora showed Google map of Yellow Jacket Creek project to illustrate restoration efforts over the years, including 2023 construction. It was quite impressive! John noted in the chat that he thinks "LCPUD and the USFS installed and buried some engineered log jams upstream of the FR28 road bridge on Yellowjacket Creek in the early 2000s. The whole lower Yellowjacket Creek should have great habitat in the future!"

Action Items:

- All: By September 8 let Denise know ASAP if you plan to attend (or not) the Lessons Learned Meeting and/or the field tour.
- Travis: Send out the DDs approved by consensus at this meeting to other FTC members not at the meeting for electronic approval.

Public Comment Period #1 - Agenda related

Randy:

- Regarding summer steelhead recycling: Can this be extended a couple of weeks in Sept if we are selective? Can it also be possible to recycle fish more than once?

Bryce: If the duration is extended, the quality of fish starts to decline, so there is less incentive for anglers to keep them. Also, autumn rainfall tends to cause the fish to move into the tributaries. Bryce will bring this up with the M&E Group for consideration. Recycling more than once. Less concern about stray and more concern with return to creel and trucking costs. Creel sampling showed 30% of the fish people caught were recycled.

- Will the net pens we move the silvers into stay at the end of the lake or will they be moved up to the trout hatchery?

Eric: For this pilot project, the coho would be in the net pens over the winter months. There is still the potential to have a program with net pens further up the reservoir, but the current proposal is to keep them near the dam.

Jack:

- Thanked Bryce for agreeing to look into recycling fish more than once as well as extending the period. In the Chat, he noted summer steelhead recycling numbers were far below the 6,600 cap. He suggested the M&E team 1) Please determine if there are detrimental effects of recycling fish more than once. 2) Please determine if there are detrimental effects of recycling fish into mid-September.
- Regarding CRR fund allocations, he thinks future upstream habitat projects should be on hold until FCEs at Cowlitz Falls reach at least 80%, unless there is a metric of success as

measured in fish numbers. Spending money without a metric of success may not be prudent.

Maybe keep the money in escrow until FCE improves at the dam?

John: John asked why 80%? FCEs for steelhead, coho, may already be close to that. Even before the Northshore collector went in, steelhead and coho FCEs were 60-80%.

Peggy: If unspent funds were put into escrow, would they carry over beyond this license period?

Travis: It is Tacoma's obligation and in Tacoma's interest to spend that money before the current license expires. FERC wouldn't allow it to be carried over.

Steve M: Committed to follow up with Jack on how the efficacy of habitat work is being evaluated in terms of fish population responses. This is difficult to do on a project-by-project scale. We are learning as we go.

Topics for October 3, 2023 FTC Meeting

- Updates incl. Hydro Ops, Water Quality, Fish Facilities, Cispus Release Site
 - LCPUD Cowlitz Falls Dam Operations
 - Downstream Adaptive Management TWG
 - Follow-up on Spring Flow Reduction and Summer Ops
 - CRR Fund / HAP Subcommittee
 - 2023 APR Process Debrief – Introduction of Draft DD
 - Preview November FTC Meeting topics
-

Meeting Evaluation

- Well attended and appreciated Randy and Jack joining us
- Approved two DDs
- Reconciled the misunderstanding on the WQPP
- Appreciated information on fires downstream of the Packwood Project

Josua's Inspirational Quote

Josua introduced the quote by acknowledging many of us have been struggling with sufficient personnel given the workload and how we are in the midst of change, including change of season: "I think my favorite thing about seasons changing is the opportunity to look different." - Taylor Swift

Public Comment Period #2 – Any Topic

Randy:

- Asked Bryce on the condition of the chum project discussed earlier.

Bryce: The final decision on the Regional Chum assessment grant proposal will be made by the SRFB which meets September 13 and 14.

Steve: Sees this being funded. WDFW would go into contract with the RCO and move forward.

Jack:

- Thanks for the opportunity to comment.
-

Closing Remarks

Travis thanked everyone for working together so well. He also called out the great opportunities to get out there and catch some salmon. It's a pink salmon year!

Parking Lot

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

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final Meeting Summary
October 3, 2023 from 9:30 – 3:30

FTC Representative Attendees:

Travis Nelson	TPU
Anne Baxter	Ecology
Bryce Glaser	WDFW
Jonathan Stumpf	TU

Additional Attendees:

Peggy Miller	WDFW
Josua Holowatz	WDFW
John Serl	WDFW
Brian Gale	WDFW
Kristopher Warner	WDFW
Todd Hillson	WDFW
Eric Shoblom	TPU
Scott Gibson	TPU
Melora Shelton	TPU
Leah Marquez-Glynn	TPU
Steve Manlow	LCFRB
Denise Smee	LCFRB
Steve West	LCFRB
Michael Boyles	BPA
Laura Wolfe	LCPUD
Ann Weckback	Lewis County
Stephen Lewis	BIA
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Stephen Raught and Larry Prior

Remaining 2023 FTC Meeting Dates: November 7 and December 5 (in person at Veterans Memorial Museum in Chehalis)

Approval of September Meeting Summary

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

Announcements

- Tacoma is still advertising for these two positions: Senior Fisheries Scientist and Senior Fish Passage Specialist. Please visit TPU Jobs for details.

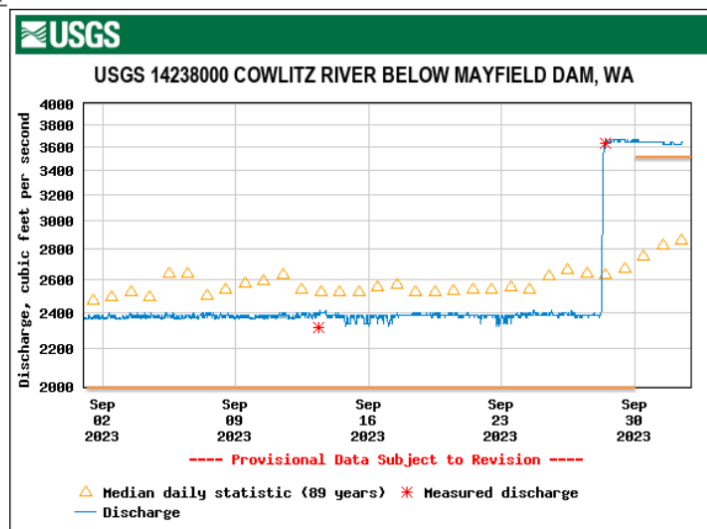
Updates

Hydro Operations – Melora (presentation emailed on October 2)

- Inflows: September daily average flows were 1,117 cfs (63% of the historical average). End of month rain pushed September precipitation to 137% of normal. Water Year 2023 ended well below average for every month except May.

- Storage: Riffe's current elevation is 708' (~12' lower than the 2017-2022 average) with continuous drafting since our last meeting. The Mossyrock long lane closed October 2.
- Outflows: ~3.6K cfs; minimum outflow of 3.5K cfs from October 1. Ramping limits are 1 inch/hr. both day and night.
- 10-day Forecast: Typical temperatures with 3-4 inches of rain and freezing levels above 11K'. Outflows around 3.6K cfs unless there is load demand. Inflows should increase from ~1.7K cfs. It's great to be starting the new water year with rain, but probabilities tilt toward an El Niño fall and winter.

Outflow



Link to the USGS real-time Cowlitz River hydrograph:

https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060.00065
<https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Water Quality/Monitoring

Action Item: Matt to send out water temperature data if it is available. At the September meeting we discussed possibly adding this to the end of the Hydro Ops report.

Anne B noted it would be helpful to have an FTC discussion on Tacoma's findings in their recently released five-year Disease Management Plan (measuring water, sediment, etc.).

Fish Facilities

Separator:

- More coho are returning to the separator now than in 2014 when we had a record return of coho. There are lots of coho jacks – almost matching the number of coho adults.
- The Port Blakley 300 Road has opened back up after being closed for fire danger. Tacoma has been able to release a few loads of mostly coho along with a few spring Chinook to the Copper Canyon site in the last couple of weeks.
- Eric was pleased to report Lake Scanewa is now under 18 °C. Staff began releasing fish to the Day Use site, discontinuing use of the Copper Canyon site. This allows fish to choose to go to the Upper Cowlitz or Cispus. Bryce noted that the Transition Plan indicates our preference to only put NORs in Scanewa and not to transfer them to Packwood and Cispus. The Plan calls for doing a 25/25 split of HOR coho adults to the Cispus and Upper Cowlitz and 50% to Scanewa. All NORs are to go to Scanewa. John noted 20 NOR coho were sent to Packwood since Scanewa opened back up. The idea is to prioritize Scanewa as much as possible. Eric

will follow up with staff to ensure this is happening. Part of the reason for the split distribution of HOR's is wanting increased angling opportunities.

- 12K coho will be released to the Gust Backstrom release site throughout this season. Transports will occur throughout the entire run vs. releasing them all at the start of the season.
- All NOR coho and fall Chinook are released at the Bremer Bridge release site in the Tilton. This area is closed to anglers even though it has been reported that individuals are still fishing there. Tacoma has been in contact with WDFW Enforcement who has been monitoring the site and has been handing out tickets.
- Note: When 500 fish return to the separator for five straight days, this triggers Tacoma staff to started working a 7-day work week.

Brood Collection:

- Tacoma is currently collecting fall Chinook, coho, and cutthroat trout broodstock. The Summer Steelhead collection ended at the end of September.
- Since the middle of last week, coho collection is on schedule while fall Chinook is a staggering 830 adults behind the collection schedule.
- Fall Chinook NOR broodstock is collected at 10% to brood and 90% to the Tilton with a 2 to 1 demographic displacement. This means for every NOR collected for brood, two HORs are sent upstream.
- All HOR cutthroat are collected for broodstock and all NORs are sent upstream.

Mayfield Counting House:

- Numbers are low and should start picking up. They are seeing coho jacks and coho and fall Chinook adults from the tagging efforts at Mayfield returning to the separator.
- Most of the fish coming into the trap are Chinook sub-yearlings with a few coho.
- The autoflush program was initiated on August 29.
- The Mayfield remodel is still in the planning stages as Tacoma works with Kleinschmidt on scoping and design. They are trying to balance meeting NMFS Criteria while providing maximum flexibility. They have not yet determined whether to build a Counting House on the other side of the river or just remodel it where it is.

Cowlitz Falls Fish Facility:

24/7 operations concluded at the end of September for the 2023 season. Fall operation started today. The facility will start up each Tuesday and operate for 72 straight hours for four consecutive weeks, through October 27.

- Collection numbers so far: >221,000 smolts comprised of approximately:
 - 171K Coho, 40K Chinook, 9.5K steelhead, 838 Cutthroat
- Preliminary FCE estimates:
 - Steelhead: 65%, Coho: 75%, Chinook: 59%
 - Chinook are still being recaptured (33 in September; about half of those came last week as water temps decreased associated with a small fall freshet)
 - Water temps dropped from 15 °C to low 12 °C last week
 - Generation cycled between 1,000 to up to 2,600 cfs last week
 - John noted there were some collection facilities (weir boxes, etc.) used in the past at the weir gates that were useful but not suitable as designed due to dam safety concerns. Utilizing redesigned additions to spillway flumes may be useful to reach collection goals. We are aiming for 95% FCE. This obligation is stated in the Bi-Op and is specific to smolts.

Cispus Release Site (Tom Music Bridge)

Laura reported LCPUD finally got all the necessary documentation together and submitted for the 404 permit and is waiting to hear back from the Corps (Seattle District). She has requested and has been assured their review will be expedited if possible.

Discussion: Are we expecting the review by the Corps to be concluded by the next FTC meeting? Is there anything we can do as an FTC to facilitate the process? The number of entities involved has created complexity. The LCFRB has been working with the Seattle District on some projects. The Corps has set up an internal "Stream Team" that complex projects can be referred to. Steve M offered to discuss this with the project lead for the Stream Team if Laura thinks that would be helpful.

Satellite Rearing

Eric noted there was nothing to report this month other than he has received a quote for the netting for Mayfield Net Pen Pilot Project net pen project. It was suggested we review the schedule per the FTC-approved DD at the November meeting.

Monitoring & Evaluation Subgroup

Bryce noted the M&E plan is an FHMP requirement. It describes the monitoring activities that will be implemented to generate baseline data for monitoring needs and directed studies. Scott noted Tacoma's consultant has produced a draft plan which is currently undergoing internal review. It will then go to the M&E Team for further review. The last meeting of this subgroup was canceled, and they are working on some issues through email and ad hoc meetings as needed. Bryce suggested the recent change made for fall Chinook NOR broodstock collection from 1 in 3 collection to 1 in 10 collection should be sent out to the whole M&E Subgroup, so they are aware. Scott agreed that would be good in the name of transparency. What UC/LC monitoring work is occurring this fall? Bryce requested that TPU provide a list of all M&E work that is occurring this fall. Bryce anticipates other issues coming up this fall that will need to be discussed. Charters are to be developed for each committee within the FTC to ensure clear expectations and communication with members of the FTC. Stephen asked to be added to this group. He is very interested in the Charter.

Post meeting note: On Oct. 16, Scott Gibson requested that this clarification be added to the notes in response to Bryce's question about fall UC/LC monitoring work: In a continued effort to help support the development of a life cycle model for spring Chinook, Tacoma Power has been collecting otoliths from NOR carcasses encountered in the Upper Cowlitz and Cispus rivers. The otolith data will provide insights into the life history and environmental conditions experienced by spring Chinook, which is essential for understanding the timing of life stage transitions in the life cycle. All samples have been cataloged and stored for future analysis. The M&E Subgroup will collaboratively work on a strategy to push the model forward.

- **Action Item:** Travis to coordinate with Bryce to send the email chain out to the larger distribution list. Add Stephen to the M&E Subgroup.

Downstream Adaptive Management Technical Work Group (TWG)

There is no report this month due to the Annual Program Review. The draft Charter from July of 2018 that John was able to find was distributed to all on September 5. John reported the TWG met re: Cowlitz Falls and Mayfield collectors. The Summer Results report will be combined with the Spring Report and will be out to the FTC soon for review. The TWG is looking at options for actions and studies for the 2024 spring-summer collection season. Options discussed include an active tag study for steelhead and coho, testing unbalanced spillway flume flows. Due to the Cowlitz Falls Dam debris deflector removal for maintenance during the Chinook collection period, it is unlikely that an active tag study for Chinook will be pursued in 2024. John also noted that Cowlitz Falls collection will

be unavailable after Labor Day 2024 due to the maintenance drawdown by LCPUD for Debris Barrier work. This will miss a significant portion of the Chinook emigration. He suggested that Tacoma implement collection in upper Riffe Lake during this period. The TWG Charter was not discussed at this meeting. As FTC protocols call for Charters to be established for each subcommittee, Travis will see if he can find a more current version of this group's Charter. He commended the CRR folks / HAP Subcommittee for doing a great job with their Charter.

- **Action Item:** Travis to look for a more current version of the charter. Add this to the November FTC agenda.

LCPUD Dam Operations

As Russell Page was unable to attend the meeting, he provided the following update via email:
Hatch Cover: This work is complete and fish sluiceways are in place. Work continues for outage scheduled through the end of October.

Trash Rack: An emergency repair of the trash rack has been scheduled for the first week of November and will consist of a dual unit outage and spilling through the sluice gates or spillway gate 4 depending on the flows. This work will take approximately one week to complete and LCPUD will have divers in the water every day from 0800-1600. Baffle panels will be removed just prior to this work.

Debris Barrier Rehabilitation Project: This project is still on schedule. They plan to submit the RFQ within the next two weeks and still anticipate a drawdown for rehabilitation site work the first quarter of 2024 based on the selected contractors schedule. The work will take approximately one month to complete and will be finished no later than March 1, 2024. The second drawdown for the rehabilitation is scheduled for 2024 immediately following fish season and will also take approximately one month to complete. The reservoir will be lowered to approximately 484' for this work.

Sluice Gate Project: The 90% design is complete with the design contractor working toward the 100% plans by December 31, 2023. This work will consist of a gantry crane extension, stability retrofits and sluice gate replacement. The Plan will be submitted to FERC for review the first quarter of 2024 with construction tentatively planned for 2025.

FERC Periodic Inspection (PI): This onsite inspection is scheduled for the first week of March 2024 and will require the PUD to open all the spillway gates and sluice gates several times for testing. This is strategically scheduled to occur before the start of fish collection. Baffle panels are scheduled to be installed immediately following the onsite inspection for the PI.

They are still working on a water quality monitoring plan for the riverine drawdown in 2025 for the sluice gate work. This should be ready from preliminary review in December.

Follow-up on Spring Flow Reduction and Summer Operations

Presenter: Leah Marquez-Glynn

Leah Marquez Glynn, Hydro Resource Operations Lead and Power Scheduling/Settlements Manager at Tacoma, gave a recap of the summer refill. She started by reminding all that on April 3, Tacoma executed the minimum flow reduction to 4K cfs with fish transport flows based on low forecast. They stayed at 4K cfs for almost a month and the refill outlook improved. In May they went back up to 5K cfs when a heat event was forecasted. Unfortunately, by June the May inflow forecast provided by the River Forecast Center Model and associated refill probabilities were failing. RFC forecasts are based on current conditions, the 10-day forecast, and weather from 1981 through the prior year to generate refill scenarios. This happened with regional forecasts as well. Actual elevations by end of summer

were 8 ft below the forecasted worst case. The expectation was to be at 749 ft (full pool) at start of June. Instead, June began at 732 ft. Leah has had discussions with the River Forecast Center about what their forecast considers. Tacoma evaluated an additional forecast tool this past year and it failed similarly even with different analyses that take climate change into account). She shared the following summary of the summer operations:

Impacts:

- Recreation was significantly curtailed: Swim beach was dewatered in July; most boat ramps were unavailable in August; and all boat ramps were unavailable in September
- The local community was very unhappy
- There was significant impact to utility revenue

Lessons Learned:

- Forecasts do not account for all variability and are too sensitive to current conditions
- Need to operate more conservatively, leaving more room for error
- In future years do not increase discharge until reservoir is full
- Seismic limit worsens impacts of refill failure

Discussion: Peggy brought up the impact on fish from reducing minimum flow then not increasing discharge until reservoir is full which she finds more important than impact on recreation. Stephen noted there are other long-term forecasts that can be used. Anne said it is important to operate more conservatively and leave ample room for error. Maybe next year, the FTC can start looking at the forecast earlier rather than waiting until March.

Tacoma will continue to consult with FTC on these topics.

Peggy and Anne expressed appreciation for how challenging Leah's job is. Anne asked if we could have started taking mitigating steps as early as December. Leah responded hydrologic conditions in January were normal, so we were in a comfortable position with what the forecast was predicting to start drafting to make room for the water (winter storms, etc.). Travis reminded all of the quote: "All models are wrong, and some are useful." That's why we do the iterative effort on sharing reliable info with the FTC in a timely manner. Ideally the data from the year we just had will be incorporated to strengthen the model.

Tacoma appreciates very much everyone's collaboration and support on this. Leah disclosed this is her last meeting with us as she is moving into a new role in Long-term Planning. We thanked her for all the work she has done including her presentation to the FTC and wished her well.

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

Presenters: Steve Manlow and Melora Shelton

Steve M thanked everyone who participated in the CRR field review and expressed special appreciation to the sponsors for their presentations.

He and Melora presented proposed changes to the CRR Implementation Strategy that incorporate some lessons learned, responses to FTC questions during the grant round, and other program updates. The draft updates will be distributed for a 30-day review and a decision document will follow.

The HAP Subcommittee last met on September 20 and will be meeting again later today. They plan to invite M&E and other science folks to meet with them on October 18 (1:30-2:30) to discuss project ideas that have been identified to date.

Tacoma is requesting a change of date from March 1 to June 1 for filing the CRR annual report with FERC. This will allow for more accurate reporting. Melora will let the FTC know if FERC asks for stakeholder support for this change.

Steve and Melora shared photos from the field tour/site visit which was attended by 25 people. There were sponsor presentations and site visits to Camp Creek and Yellowjacket Creek. Travis expressed much appreciation with the partnership with the FTC and LCFRB.

Action Item: Melora to send out draft DD by October 31 for review at the November FTC Meeting.

2023 APR Process: Public Comment Meeting #2

Presenter: Eric Shoblom

Eric started by reminding all that the Cowlitz Annual Program Review and Science Conference took place on August 22. This provided an opportunity to meet with the public and present a population and hatchery program management strategy for the coming season. This FTC meeting today serves as the second public comment meeting. Eric reviewed the DD that reflects the program as discussed at the last meeting. The proposed decision includes a table of programs aligned with the FHMP Transition Plans. The only change is a portion of the coho will be shifted offsite into Mayfield net pens. Tacoma will conduct a pre-pilot net pen program where coho survival will be tested in four net pens. If successful a full pilot study will occur for one year the following year.

The DD describes how Tacoma will produce the following programs in the Cowlitz Hatchery Complex for brood year 2023 of coho, fall Chinook salmon, summer steelhead, and cutthroat trout. Winter steelhead and spring Chinook salmon goals will take effect in the 2024 brood year as is typical of the APR process:

- Fall Chinook: 3.5 million
- Spring Chinook: 1,678K
- Coho: 2.178 million
- Winter steelhead: 647K
- Summer steelhead: 650K
- Cutthroat trout: 100.599K

Discussion:

Bryce suggested adding the public comments to the DD as has been done in prior years.

Larry:

- Success should be based on adult return goals - not just on releases/production based. The SAR number doesn't seem to resonate with anybody. For 2022 SARs assuming 3.5million releases of fall Chinook, he sees a failure rate of ~99.9% (don't return to the Cowlitz River). Spring Chinook number has a similar failure rate. This needs to be addressed Priest Rapids is having much more success despite the same ocean challenges. Coho program has been successful in terms of returns. Could look at reducing coho release numbers.
- The success of upriver programs depends on the success of the hatcheries. CF collection numbers are down – fall Chinook, spring Chinook, and steelhead.

Bryce: We have been clear that improvement is needed with the fall Chinook program. Just because they didn't return to the Cowlitz, doesn't mean they didn't contribute in other ways. The M&E Plan is now addressing SARs and a lifecycle model. The FTC is working to address these in terms of the Transition Plans.

Eric: Thanked Larry and acknowledged the challenges with spring and fall Chinook. The net pen pilot program is not about increasing the number of coho but about making room in the hatchery for

additional spring Chinook. The option of replacing the portion of the coho program that we move off to the net pens is being discussed.

Bryce indicated that the Transition Plan is intended to reduce the number of coho going to surplus and make more available up river for recovery and angling opportunity. Eric noted Tacoma has proposed many changes to improve rearing for fall Chinook. The Transition Plan uses bio-programming to raise the entire program within the hatchery without using the net pens. We have also transitioned to using the Tilton stock to improve our integration rates and the resiliency of the stock to the natural environment. Our NOR program is doing well. We need to improve the HOR program.

Larry:

- Larry appreciated Bryce's and Eric's responses. He thinks something else is wrong in the hatchery or other programs... Accountability should go along with the adult return goals.
- Release sizes? (Eric noted release sizes have not changed other than the spring Chinook.)
- Have SARs been studied in years of lower releases - less dense, raceways, etc.?

Eric: We have not yet studied them, but the fish looked great with lower density!

Table 1: Retitled to: Cowlitz Annual Production Review Decisions

Eric explained that the table represents the year that we make a decision on future production. This means the change will take effect the next coming opportunity to collect eggs or adult return year. For instance, a decision in 2023 will not necessarily take effect in 2023, some species it will be 2024.

There was consensus among the FTC Voting members to approve this DD.

- **Action Item:** Travis to send out DD approved at this meeting for 7-day electronic approval by voting members not present.

Public Comment Period #1 - Agenda related

Stephen R:

- Recently built his retirement home in the Cispus Valley. The problem is there aren't any fish. The last report showed a total of three fish. He has talked to Joe First and Laura LCPUD about this and feels he isn't getting good answers. He is concerned the water level will be too high to do work in the river, but not high enough to support fish. In the past he worked with the FS to install the chute. The next opportunity to work in the river will be next August. The last time the river was high enough for fish was last November. By sharing these concerns, he is representing the landowners in the area.

Eric: Yes, this has been frustrating not having the Cispus Release site in the upper river. Weekly report shows fish have been put into Copper Canyon which is the Cispus River.

Stephen R:

- Recognizes that Copper Canyon is in the Cispus. And that's not the area he is talking about. The Cowlitz Tribe has spent a lot of money on fish habitat. 400 yards down the river from his property, he sees an excavator working on the river. Can we get an amendment to whatever permit they have, so they can dredge some of the channel so we can get fish up there? He also said he can't fish at the Mossyrock site so there's another lost opportunity for fishing.

Eric: There is an engineer working to move the rock at Mossyrock fishing area and Eric welcomed Stephen to call him at 360-669-3588 to discuss these topics.

Topics for November 7, 2023 FTC Meeting

- Updates incl. Hydro Ops, Water Quality, Fish Facilities, Cispus Release Site
- LCPUD Cowlitz Falls Dam Operations
- Satellite Rearing (?)

- Downstream Adaptive Management TWG
 - Follow-up on Spring Flow Reduction and Summer Ops – 15 min.
 - CRR Fund / HAP Subcommittee – Review of Implementation Strategy DD
 - 2023 APR Process Debrief (?)
 - Preview December FTC Meeting topics (In-person at Veterans Memorial Museum)
-

Meeting Evaluation

- Good participation
 - Approved the APR DD
 - Completed the second APR public meeting
 - Nice to have Stephen Raught join us
 - Appreciate the flexibility in the agenda timing
-

Josua's Inspirational Quote

Josua noted as the fall season begins, and we review what has occurred in the year so far, it is nice to reflect and become more intentional about the future. This reflection will allow us to make better choices and consider more perspectives. "Wisdom comes with the ability to be still. Just look and just listen. No more is needed. Being still, looking, and listening activates the non-conceptual intelligence within you. Let stillness direct your words and actions." - Eckhart Tolle

Public Comment Period #2 – Any Topic

Larry:

- Reviewed 2013-2022 data for adult fall Chinook. 2016 seems to be when the crash started and 2022 was the lowest year. He sees this as failure rates instead of SARs. Priest Rapids' improvement started around the same time as our decline. Larry also asked for an update on where WDFW was in getting fishery permits updated.

Bryce: The decline was consistent Columbia River and coast wide. Cowlitz fall Chinook are not rebounding as fast as in other areas. He also shared that WDFW has received funding to work on updating permits for ESA coverage of fisheries for NOAA Fisheries review and is undergoing a prioritization process to determine where along the Columbia River to start. Bryce hopes they can start in the Lower Columbia River. Jonathan noted that ESA permitting and funding for Columbia River Basin was a priority of TU in the last legislative session. He sees this as a great opportunity to get the fisheries up and running. He offered to coordinate with Larry on getting funding in the next legislative session. Larry, also a member of TU, thanked him.

- Release numbers for steelhead is the gage for success. It should instead be based on return to the salmon hatchery. How about counting those coming into Blue Creek? It would be nice to see some reporting on steelhead.

Bryce: At the Watershed Science meeting just before initial APR meeting in Chehalis in August – Josua showed the lower river harvest and catch rate in the summer SH program. It seems to be relatively consistent even in low abundance years.

Action Item: Travis to see if Josua's presentation on this has been posted. (*Travis sent this out to all at the end of the meeting.*)

Closing Remarks

Travis ended the meeting by reminding us all how important it is that we are there for and take care of one another.

Parking Lot

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

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final Meeting Summary
November 7, 2023 from 9:30 – 2:30

FTC Representative Attendees:

Travis Nelson	TPU
Anne Baxter	Ecology
Bryce Glaser	WDFW

Additional Attendees:

Peggy Miller	WDFW
Josua Holowatz	WDFW
John Serl	WDFW
Brian Gale	WDFW
Kristopher Warner	WDFW
Todd Hillson	WDFW
Eric Shoblom	TPU
Scott Gibson	TPU
Melora Shelton	TPU
Steve Manlow	LCFRB
Denise Smee	LCFRB
Michael Boyles	BPA
Laura Wolfe	LCPUD
Joe First	LCPUD
Ann Weckback	Lewis County
Katie Buchan	USFS
Stephen Lewis	BIA
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Michael Deckert

Remaining 2023 FTC Meeting Date: December 5: In person (with remote option) at Veterans Memorial Museum in Chehalis

Approval of October Meeting Summary

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

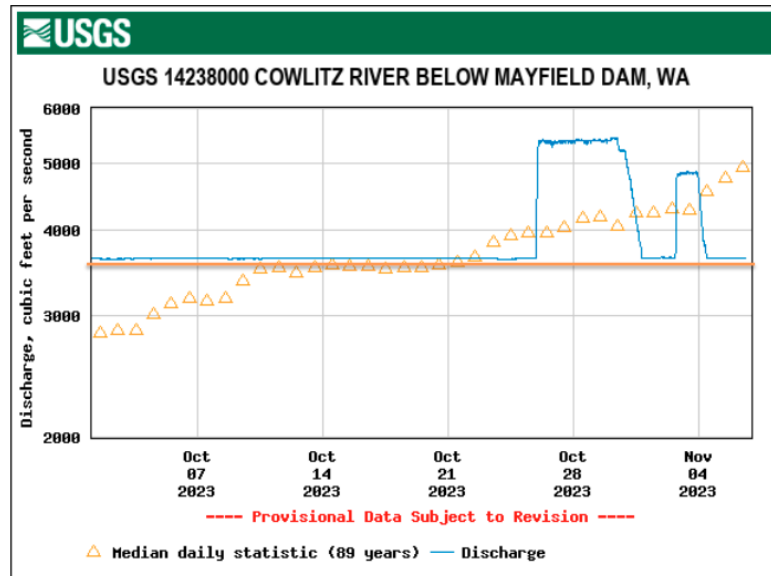
Updates

Hydro Operations – Melora (presentation emailed on November 6)

- Inflows: October daily average flows were 1,769 cfs (64% of the historical average), despite 5” of rain (also less than normal). November is at 5,456 cfs (75% of average): absolute and relative inflows have increased with fall weather.
- Storage: Riffe’s current elevation is 696’ (~23’ lower than the 2017-2022 average), up from a low of 692’. The Mossyrock long lane remains closed.

- Outflows: Maintained discharge at ~3.6K cfs since September, except during cold and to manage side flows. Minimum outflow of 3.5K cfs from October 1. Ramping limits are now 2 inches/hr both day and night
- 10-day Forecast: Typical temperatures with 3-4 inches of rain, freezing levels 3,500-5,000 ft. Outflows around 3.6K cfs unless there are high side flows. Inflows should be 9K cfs and then drop down to 4-5K cfs.

Outflow



Link to the USGS real-time Cowlitz River hydrograph:

https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060,00065
<https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Question re. Riffe flood control curve: Currently about 758 ft, decreasing down to 745.5 ft by the end of November.

Water Quality/Temp Data

Prior to the meeting Matt sent out water temperature data associated with the following locations:
 Lake Scanewa Water Temperature Data associated with the following locations:

- Boat Barrier Array
- Debris Deflector North
- Debris Deflector South
- Scanewa Boat Launch
- Copper Canyon

Matt reviewed the temp monitoring in Scanewa. Per Peggy’s question about these data being based on 15-minute readings vs. “daily means” Matt thanked her and said he will doublecheck and have this corrected.

Anne B noted the FTC has been requesting the inclusion of other water temperature data that Tacoma is collecting along the system, including further downstream. Matt responded that this information is provided in weekly updates. Anne indicated it would be helpful if this information could be provided in the monthly reviews at FTC meetings. Matt noted additional temp data is collected at the hatchery. Water temperatures are recorded during releases on hand written logs and are reported

at the end of the year in an annual report. Tacoma doesn't have another avenue set up to share this more frequently. There is an administrative lift associated with providing these data in multiple ways.

Josua supported Anne's request noting temperature matters for eggs in the gravel, spring Chinook in the lower river, while incubating. This ties in with other species and impacts emergence and predation. Peggy acknowledged it will take Tacoma time to put these data together. However, it will take time for the FTC to seek out the information in multiple sources. Both WDFW and Ecology would really appreciate a one stop shop for these data.

Action Items:

- Matt: Clarify that "daily mean" is illustrated in the release location figure and that the data are based on 15-min readings, with min and max values listed below the figure being based on 15-min min and max data for transparency. Redistribute the temp report.
- Matt: Put together a list of where Tacoma currently collects temp data and relative associated depths (surface or actual depth) for each.
- Travis: Set up a Teams call with interested FTC members to review and assess whether there are data communication gaps from a regulator standpoint, and how best to disseminate this information.

Fish Facilities

Separator:

- Coho numbers have dropped off over the last couple of weeks at the separator. The biggest week this year for coho was the week ending on October 15 with a little over 8,400 coho returns. Last week we had 3,267 coho adults and jacks.
- Coho Jack numbers continue to be high. There have been 26,737 (62%) coho adult returns and 16,550 (38%) jack returns. The highest return of jacks is with the upper Cowlitz Hatchery Program (Ad + CWT) with 45% of the return are adults and 55% are jacks.
- The release goal for HOR coho to the Tilton River is 12,000 adults for the season. A schedule was developed so the coho are released throughout the season rather than all of them at the beginning. By the end of this last week there have been 7,646 HOR adults sent to the Tilton River. The goal by the end of last week was 8,100. With the drop in returns last week, the Tilton release goal for that week was slightly behind.
- Tacoma staff continues to work a 7-day work week. This could change in the next couple of weeks if separator returns do not increase.

Broodstock Collection:

Tacoma is currently collecting fall Chinook, coho, and cutthroat trout for broodstock. By the end of last week:

- Coho collection is on schedule.
- Fall Chinook are way behind.
- All HOR cutthroat are collected for broodstock and all NORs are sent upstream.

Mayfield Counting House:

- All Chinook and coho are getting snout tagged and all steelhead and cutthroat are getting a dorsal sinus tag.
- We are seeing coho jacks and adults and fall Chinook adults from the tagging efforts at Mayfield returning to the Separator.

- Numbers at the Mayfield Counting House are slightly lower than the average for this time of year. There were not a lot of fall Chinook adults released to the Tilton last year so the current outmigrant numbers are not too surprising
- The auto flush is occurring twice a week.

Cowlitz Falls Fish Facility

The final fall block was completed October 27. The facility is now offline for the remainder of the year.

- Fall blocks accounted for about 1.5% of total smolt collection but comprised about 7.4% of total Chinook smolt collection.

Season smolt totals (all age classes):

- Coho: 171,901
- Steelhead: 9,539
- Chinook: 43,090
- Cutthroat: 847
- Total: 225,377

Staff are finalizing data sets this week for delivery to the consultant so they can generate an annual report and findings.

Satellite Rearing

This project is on hold until further conversations occur with regulators.

Disease Management Plan

The 5-year Article 8 Cowlitz Disease Management Plan was sent out to the FTC for a 30-day review. No comments were received, and the Plan has been submitted to FERC. Eric hopes it can be posted to Tacoma's website. Anne is hoping for an opportunity to have some dialogue on this. Perhaps a presentation to the FTC? Or the next Science meeting? Peggy noted in Cushman, there are brief presentations of what to expect in annual reports before they come out. She finds this to be very helpful. Travis noted it would be difficult with Tacoma's current staffing levels. What Tacoma has done and continues to do is extend the timeline for reviewers as needed.

Action Item: Travis to follow up with Eric and Matt on the Disease Management Plan discussion.

Cowlitz Trout Hatchery Remodel

Eric started by reminding everyone of the Master Plan from 2018. After COVID, etc., the plan needed to be redone. Tacoma will interview consultants for Phase 1 starting tomorrow. There is a project manager and a new owners rep. Phase 1 will include: refreshing the Master Plan, bio reprogramming, initial permitting, Section 106, ground water studies, full facility site survey and hydraulic model, and robust alternatives analysis allowing Tacoma to determine the best places to invest money for a strong return on investment (ROI). At the end of Phase 1, which should be complete in two years, they should be at 10% design indicating the final scope of what, how and when the hatchery will be improved.

It was noted it seems like a long time to yield a mere 10% design. Eric reiterated the extent of this initial phase and added that HDR's original estimate for the cost of the entire program tripled after the pandemic, supply chain shortages, staff changes, etc. Bryce asked to see a schedule and where the FTC will plug into the process. WDFW contributed a lot to the 2018 Master Plan. Eric agreed, saying next steps will include Consultants describing how they see the process unfolding. They would also develop a Project Management Plan and Communications Plan to present to the FTC.

Cispus Release Site (Tom Music Bridge)

Laura reported that USACE requested additional information and LCPUD is working through the list of things and will respond to the Corps in the next 20 days or so. Current discussions with the Corps revolve around the temporary fix and don't include the other side of the river. Part of the open dialogue that is ongoing is clarifying with the Corps how they want the USFS to be more involved. Bryce thanked Laura, recognizing all the work to try to get this done. Transport plans and implementation plans are compromised if we don't have this release site. He hopes the PUD will let the FTC know if there is anything the FTC or any of its members can do to help support this effort.

Monitoring & Evaluation Subgroup

Bryce noted this group hasn't met for a while. When an M&E issue arises (e.g., Chinook broodstock collection), the group works to address it offline/ through emails. If email resolution is not possible, then an ad hoc subgroup meeting can be convened. Another recent issue had to do with coho jack transport, which was resolved via email communication. Fall Chinook survival is a big challenge that should be addressed soon. The M&E Plan is an FHMP requirement. Four Peaks Environmental has distributed a preliminary draft to the subgroup for review.

Questions / Requests:

- What is the timeline for the subgroup to begin meeting again and also for these issues to be distributed to the FTC?
- Can Tacoma provide a description of the full scope of monitoring that is occurring, so it is possible to evaluate how well current monitoring aligns with the Monitoring Plan?
- There is a need for a Subgroup Charter. It's time to update the most recent draft.

Travis noted Tacoma is in the process of recruiting for and interviewing candidates to work in this area. Consultants are also being considered as Tacoma is committed to keeping things moving forward per the requirements in the FHMP for this. He will follow up with Matt B and Bryce on this.

Action Item: Travis to coordinate with Bryce to respond to the above requests. Send the email chains for Chinook broodstock and coho jack transport out to the larger distribution list. Add Stephen Lewis (per his request) to the M&E Subgroup.

Downstream Adaptive Management Technical Work Group (TWG)

John noted the last two meetings have been canceled, delaying completion of a study plan for the 2024 season. Work to be done:

- Develop a study plan for the 2024 season.
- Update the Charter for this TWG.
- Locate and distribute the latest version of the draft Downstream Adaptive Management Plan.

Action Item: Travis to look for a more current version (John's draft is from 2018) of the charter. Add this to the December FTC agenda.

LCPUD Dam Operations

Presenter: Joe First

Removal of baffle panels: These were removed from spillways 2 and 3 in preparation for flood season. They will be reinstalled in March.

Unit 2 Maintenance: This is complete, and the unit is ready to operate.

Debris Barrier Rehabilitation Project: The PUD has extended the bid opening to November 28 to accommodate contractors' requests for more time.

Reservoir Drawdown: They are still planning to do a 3-4-week reservoir drawdown (16-20 ft) in February of 2024 to allow the contractor to clean out sediment around the debris barrier moorage site blocks. The drawdown could happen sooner in the event of a naturally occurring flood.

Trash Rack Repair: Unit 2 has a couple of bent bars on slot 4. Divers repaired those bars. A lot of debris (mostly wood with some sediment) was removed. The damage to the bars occurred in 1996 when the clam shell from a large crane struck the trash rack several times. The PUD can now use the trash rake all the way down on slot 4. Slots 1-3 had 10 ft of debris build-up. Slot 4 had 20 ft of debris build-up.

Cowlitz Restoration and Recovery Fund / Habitat and Production (HAP) Subgroup
Presenters: Denise Smee, Melora Shelton, and Brian Gale

LCFRB/SFRB Update: Denise reported the 2023 contracts with the Cascade Forest Conservancy area almost done (no requests to extensions or budget changes). Lewis County PUD completed their Kiona Creek project this summer. Well done!

Decision Document 2023-06: Melora walked through the DD for the 2024 update to the CRR Implementation Strategy. The Strategy is out for a 30-day review (due November 20). Recognizing how busy everyone is, she offered that any edits to the Decision Document submitted before November 27 can be incorporated into the version that is presented at the December FTC meeting for review and final approval.

As presented at the October FTC meeting, the 2024 update includes items identified after the 2023 grant round (moving away from projects that require acquisition, etc.) Edits were made to the eligibility information to better align with the LCFRB Salmon Recovery Grant round.

HAP Subcommittee: Brian Gale reported this group has been meeting regularly and working on defining what makes a good HAP project and how that can be translated into good guidance for projects. The subcommittee is looking for ways to increase potential applicant engagement. They have been considering project categories that could perhaps be put forward as suggestions / bait for others to want to work on. E.g., artificial redds, recruiting of early outmigrants, using facilities other than TPU or WDFW, adult release sites, and kelt reconditioning. They solicited informal feedback on these potential projects from technical staff who participate on the M&E Subgroup in a discussion at the last HAP subcommittee meeting. Project feedback leaned toward net pen sites or incorporating 2 or 3 more adult release sites (more mobile, strategic). Eric reiterated his appreciation for the M&E folks who offered their perspectives. The HAP Subcommittee feels like they now have some categories from which to develop out some solid projects and provide guidance to applicants that can improve the likelihood that that project would succeed. He also clarified that nothing precludes doing other projects not on the list. Melora thanked WDFW and Tacoma folks who participated in these conversations.

Action Item: All to review DD 2023-06 and submit comments by November 27 and/or be ready to suggest them during the final review at the December FTC Meeting.

Public Comment Period #1 - Agenda related

Michael Deckert:

- Cispus Adult Release Site: It's exciting to see the Copper Canyon Facility being used as multi-use facility and Tacoma taking advantage of the facility while the Tom Music Bridge Adult Release site is inoperable. How long do the trucks occupy the ramp? On what days are fish typically hauled, weekdays, weekends?

- Cowlitz Falls Operations: Encourage the planning for the extended Scanewa Reservoir drawdowns in 2024, consider and address not only the environmental concerns, but also the impacts to fishing and other recreation opportunities in the reservoir and Cispus River

Laura (LCPUD): In accordance with the license and the Biological Opinion, LCPUD has to do reservoir maintenance drawdowns at a time with least impact to fish. There are concerns about sediment movement.

Scott (TPU): They typically haul once or twice a week (mid-week vs. weekends). It only takes 10 minutes to release fish, so the recreational impacts are minimal. This is the first year of doing this. Scott anticipates similar timeframes in the future.

Topics for December 5, 2023 FTC Meeting at Veterans Memorial Museum in Chehalis

- Updates incl. Hydro Ops, Water Quality, Fish Facilities, Cispus Release Site
- LCPUD Cowlitz Falls Dam Operations
- Status of Transition Plans (?)
- Review of 2023 FTC Work Plan
 - Travis to send out final 2023 FTC Work Plan (last circulated on June 7) in anticipation of the 2024 Work Plan.
- Satellite Rearing (?)
- Downstream Adaptive Management TWG
- Monitoring and Evaluation Subgroup
- Presentation of 5-year Disease Management Report (?)
- Presentation by Ecology: Model Toxics Control Act and Riffe Lake (?)
- CRR Fund / HAP Subcommittee – Review / Approve DD 2023-06
- Preview January FTC Meeting

Meeting Evaluation

- Got out early
- Good participation
- Happy to have Michael of Our Family Kayaks join us today
- Excellent cat participation

Josua's Inspirational Quote

Josua had intended to share a different quote, but all the talk about grandma's home cooking at the start of the meeting caused him to select this quote instead: "Winter is the time for comfort, for good food and warmth, for the touch of a friendly hand and for a talk beside the fire: it is the time for home." – Edith Sitwell

Closing Remarks

Travis ended the meeting by thanking everyone for the great collaboration. He acknowledged Tacoma's staffing challenges are frustrating for all. Tacoma is doing its best to get the subgroups up and running again.

Parking Lot

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

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final Meeting Summary
December 5, 2023 from 9:30 – 2:30

FTC Representative Attendees:

Travis Nelson	TPU
Chad Brown	Ecology
Bryce Glaser	WDFW

Additional Attendees:

Peggy Miller	WDFW
John Serl	WDFW
Brian Gale	WDFW
Kris Warner	WDFW
Todd Hillson	WDFW
John Best	WDFW
Thomas Starkey	Ecology
Eric Shoblom	TPU
Scott Gibson	TPU
Melora Shelton	TPU
Matt Peter	TPU
Steve Manlow	LCFRB
Denise Smee	LCFRB
Michael Boyles	BPA
Russell Page	LCPUD
Ann Weckback	Lewis County
Stephen Lewis	BIA
Katie Buchan	USFS
Lyn Wiltse	PDSA Consulting / Facilitator

Public Attendees: Larry Pryor, Buddy Rose, Randy LeDuc, Jack Tipping

2024 FTC Meeting Dates: In-person meetings will include a remote option.

Jan.10 (NEW DATE!)., Feb. 6, Mar. 5 (in person), Apr. 2, May 7, June 4 (in person), Aug. 6, Sept. 3 (in person), Oct. 1, Nov. 5, Dec. 3 (in person)

Approval of November Meeting Summary

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

Announcements

- We were happy to welcome WDFW's Kris Warner to the FTC. He is their new Hatchery Monitoring and Evaluation Biologist. His prior experience includes working at the Cowlitz Salmon Hatchery.
- We were also pleased to welcome Chad Brown, Ecology's Supervisor for Water Quality Management as the voting member for this meeting as Anne Baxter has accepted a position with the Water Resources Program - Operational and Technical Support Unit at Ecology and is

transitioning to that role. For now, we will include Chad Brown on all FERC 401-related meetings/email communications. Anne will still be working with Chad's Hydro group on flow-related issues, so we will still see her from time to time.

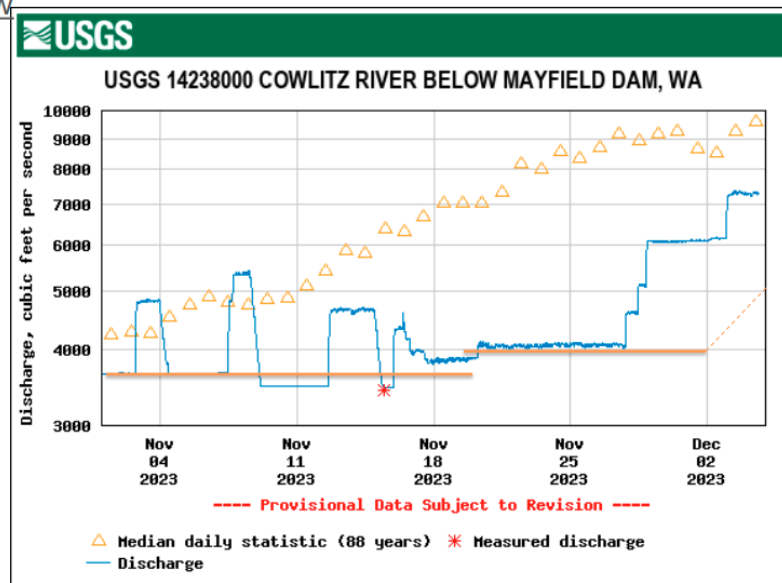
- We also welcomed Thomas Starkey, Ecology's Hydropower Compliance & Research Scientist.

Updates

Hydro Operations – Melora (presentation emailed on December 4)

- Inflows: There has been some increase in absolute and relative inflows with fall rains. November mean daily inflows were 5,294 (73% of average) with nearly 10 inches of rain. December's long-term average is 9,350 cfs with wet conditions in the forecast.
- Storage: Riffe's current elevation is just below 701 ft.- well below long-term average and average since 2017. With the atmospheric river we are currently experiencing, that is expected to increase substantially. The long lane at Mossyrock remains closed as of this meeting.
- Outflow: Outflows have been at or above the minimum, which was reset on 11/21 and again with recent discharge. USGS did a field stage-discharge measurement on 11/15 (red star on hydrograph) and changed the rating that evening, retroactive to 11/8. Melora described how this resulted in a minimum flow alarm, apparent flow excursions in the revised record, and Tacoma's response including notification to WDFW and Ecology on 11/16 and plan to include in the annual Article 402 report to FERC. The group discussed why this is not considered to be a flow excursion (Tacoma was managing in compliance with the data available) and that the stage (water elevation) was the same operations near 3,500 cfs before and after 11/8. Tacoma is now managing to the current stage-discharge rating from the USGS.
- 10-day Forecast: We are at the beginning of a forecast atmospheric river. Substantial fill is anticipated at Riffe Lake. Tacoma is coordinating with WDFW about opening the boat ramps. Melora will keep the FTC Informed. Typical temperatures are forecast along with around 8" of rain. Outflow is expected to be around 5K cfs by the weekend.

Outflow



Min stepped up from 3,500 cfs to ~3,930 cfs on 11/21; 5,000 cfs on 12/5.
Ramping limits 2 inch/hr day and night from 11/1, no excursions.

Link to the USGS real-time Cowlitz River hydrograph:

https://waterdata.usgs.gov/wa/nwis/uv/?site_no=14238000&PARAMeter_cd=00060.00065
<https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Note: During the lunch break, Melora entered the following update into the Chat:
Here is the most recent Mayfield discharge update. This will be posted to the website later today: The current discharge on Tuesday, December 5th is 10,800 cfs. Discharge will increase to about 12,000 cfs tonight and be at that level through Wednesday. It's possible that discharge may increase to as high as 14,000 cfs. Discharge will begin to decrease on Thursday, getting down to about 9,000 cfs on Friday.

Water Quality/Temp Data

Matt P reported on the following water-quality related projects:

- Mossyrock Fishing Trail rock face scaling project – expected to continue for a couple more weeks.
- Taidnapam North boat launch improvements – Currently in Phase 1. Plans for a Taidnapam North additional parking area and trail are being developed and construction may begin as early as 2024.
- Culvert replacement project – Anticipated to start the summer of 2024 and will involve replacing some unpassable fish culverts on an unnamed creek to Mayfield Lake with an Aluminum box culvert structure.
- Temperature data – Tacoma has gathered the information requested at the November FTC Meeting related to the location and depths of water temperature monitoring. Travis to set up a meeting with interested agency folks to discuss.

Action Items:

- Matt P: Send out the list identifying where temperature monitoring is currently occurring and how those data are communicated to the FTC. Subsequent discussions will address areas where temp data is not being collected that is desired. Also, the potential development of a temperature model.
- Travis: Set up a Teams call with interested FTC members to review and assess whether there are data gaps in water temperature data from regulatory and M&E perspectives, and if so, how best to address them.
- The Kosmos Remedial Investigation (RI) Plan is due to Ecology on December 25. After feedback is received, Tacoma can begin development of the draft feasibility study (FS) and clean up action plan. The Kosmos is one component that is integral to getting Riffe Lake back to its historical full pool elevation.
- The new permitting package for gravel augmentation below the Barrier Dam is going out in early 2024.
- It looks like Tacoma will be able to avoid a spill scenario in association with the atmospheric river event that occurred in December.
- Eric noted Tacoma has installed a new temperature sensor at the Salmon Hatchery. This will automatically record the data, making it easier to see trends, etc.

Fish Facilities

Separator:

- The coho HOR target goal to the Tilton is 12,000 adults. A schedule was developed to meter the fish over the season rather than sending all 12k at the beginning of the season. With over 8,800 Tilton coho returns to date, Tacoma will release coho to the Tilton until they catch up to the 9,800 goal for the end of this week.
- Collecting 500 adults for five consecutive days at the separator triggers a 7-day work week for Tacoma staff. This ceased the weekend before Thanksgiving.

Broodstock Collection:

- Tacoma is currently collecting coho, winter-run steelhead and cutthroat trout for broodstock.
- Coho collection is on schedule.
- They are retaining HOR cutthroat for broodstock; NORs are sent upstream.
- 1 winter run steelhead returned to the separator. Scott noted there were two more today – went to brood.

Mayfield Counting House:

- The Chinook juveniles look great. The few parasites observed are not causing significant health issues.
- Most of what is coming through are Chinook yearlings and coho parr.
- Smolt numbers are slightly lower than average for this time of year.
- Tacoma staff is starting to see coho adults and fall Chinook jacks from past Mayfield tagging efforts returning to the separator.
- The auto flush system in the Mayfield secondary separator is operating twice a week – normal for this time of year.

Cowlitz Falls Fish Facility

The facility is now offline for the season until March 15 (after the LCPUD drawdown). The 2023 data have been delivered to the consultant to generate the Annual Report and findings. The Annual Report will be out to the FTC for a 30-day review on March 27. A draft DD with recommendations will be out to the FTC in January for an initial review. It will include proposals to utilize hydraulic models to assess forebay temperature, retrospective analyses, and an evaluation of management practices and an alternative study design for fish capture efficiency performance monitoring.

Satellite Rearing

As reported at the last meeting, this project is on hold until further conversations with regulators. To date, these discussions have primarily been with Ecology from whom Tacoma has gotten good direction. NMFS has also provided some comments as has WDFW. It was suggested it would be helpful if concerned parties would meet together to discuss similar concerns, etc. It is also important that these discussions include Energy Northwest's (EN) Resource Advisory Committee (RAC). FERC's approval is also required. An Operating Agreement (with Tacoma and EN's roles and responsibilities) is still being drafted. The BIA is involved from a technical expertise perspective and would like to be included in discussions on the agreement. Bryce suggested having the discussion as part of or immediately following the January or February FTC meeting, in time for the RAC's formal meeting in March.

Action Items:

- Travis: Follow up with David Price (NMFS) about his and Amy Kocourek's role/ participation on the FTC.
- Travis: Arrange for discussion with key regulators/stakeholders to occur before, during, or after the Jan. 10 or Feb. 6 FTC meeting.

Cowlitz Trout Hatchery Remodel

Eric announced Tacoma has selected McMillen as the contractor for this work and will be meeting with them the week of December 11 to begin discussing scope, schedule, and budget for the project, along with a Project Management Plan and Communications Plan. Tacoma will bring regular updates to the FTC. These efforts will result in a 10% design that includes bio programming, analysis of the area, wells, etc.

Disease Management Plan

The 5-year Article 8 Cowlitz Disease Management Plan has been submitted to FERC. Eric will create an outline of the plan and share it at the next FTC meeting to see if there is interest in having the author do a presentation on it at an upcoming meeting.

Cispus Release Site (Tom Music Bridge)

Due to high flows LCPUD was conducting a drawdown on the day of this meeting so Laura was unable to attend as she was on fish rescue duty. After the meeting she emailed an update that the USACE is working through the Section 106 Cultural Resources Review and expects things to move along fairly quickly.

Monitoring & Evaluation Subgroup

Four Peaks Environmental has distributed a preliminary draft to the subgroup for review. WDFW has requested an extension of the review period of the draft until December 20 and will have their comments ready for discussion at the subgroup meeting that day. Bryce suggested the subgroup begin to meet regularly and revise the draft charter as appropriate. He will discuss this with Matt B.

Action Item: Matt B to coordinate with Bryce to respond to timeline, scope, and Charter requests. Send the email chains for Chinook broodstock and coho Jack transport out to the larger distribution list. Add Stephen Lewis (per his request) to the M&E Subgroup.

Downstream Adaptive Management Technical Work Group (TWG)

This group met on Nov. 28 and developed four recommendations which will be brought to the FTC in a DD for approval. Bryce proposed the TWG work on updating the charter and Downstream Adaptive Management Plan (which is to be updated every 18 months for improvements to downstream efficiency if targets are not being met).

Action Item: Matt B to discuss with Bryce how to move forward with updating the charter, Downstream Adaptive Management Plan, and study plan for the 2024 season.

LCPUD Dam Operations

Presenter: Russell Page

Russell reported they are currently in a flood situation at Cowlitz Falls and just started drawdown of Lake Scanewa to 852'. Laura is helping with fish rescue.

LCPUD has two construction projects at the end of Falls Road. Both are in conjunction with each other for the new office building. If anyone plans to visit Cowlitz Falls or the Fish facility, be advised there is lots of logging and tractor movement at the end of Falls Road. It is best to schedule any visits in advance with Russell. There is still reasonable access on the lower road to the fish facility.

Debris Barrier Rehabilitation Project: The PUD hired a contractor for this project the week of November 27. Russell anticipates it taking 3-5 days to dry out the area and then 2-3 weeks to repair the moorage site. The project should be complete by the end of February.

Trash Rack Repair: These repairs have been completed. The PUD is talking with Tacoma about joining efforts for a deeper, more thorough cleanout in front of the unit on an annual basis.

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

Presenters: Denise Smee, Melora Shelton, and Steve Manlow

LCFRB/SFRB Update: Denise reported the 2023 contracts with the Cascade Forest Conservancy area almost complete. There have been no requests for extensions or budget changes. Lewis County PUD completed their Kiona Creek project this summer. Well done!

Decision Document 2023-06: Melora reviewed the background and consultation to update the CRR Implementation Strategy for 2024. WDFW responded following the 30-day review that they had no edits to the updated Strategy document, with the understanding that is a living document. No other comments were received. The DD was approved by consensus by the FTC members in attendance. The Implementation Strategy will be attached to the final DD.

The HAP Subcommittee continues to meet, including immediately following today's FTC meeting. They will continue to flesh out topic areas that were discussed by the folks from the M&E group a couple of meetings ago. Melora will also work on some administrative scheduling.

The LCFRB is getting ready for 2024. They will sponsor a workshop on Dec. 15 re the grant programs they will be managing next year. Information on how to attend is on their website.

Melora assumes FERC will approve Tacoma's pending request to move the Article 3 CRR Program filing date from March 1 to June 1. The FTC review will be later than previous years and avoid having to do "homework" during the holidays.

Action Item: Melora to send approved DD 2023-06 to Travis for electronic distribution / approval.

Public Comment Period #1 - Agenda related

Larry Pryor:

- How do flows affect fishing, returns, and fish spawning?

Scott: Tacoma undergoes a monitoring and evaluation effort in the mainstem Cowlitz from August to mid-January each year. During this period, they monitor Chinook abundance via aerial redd surveys and carcass mark recapture surveys. Minimum flows were established to provide adequate flow for fall Chinook spawners in the lower Cowlitz. There are currently no directed studies looking at the effects of flows in terms of spawning in the mainstem. They perform creel surveys to monitor the fishery, but that is not related to flows. This hasn't been addressed in current M&E protocols

Jack Tipping:

- Do you have specific Fall Chinook Broodstock numbers?

Eric: No. Collected around 1K adults for brood.

- What is the trend in wild spawning surveys this year? Can we phase fall Chinook production into spring Chinook?

John: The numbers are fairly strong - close to 7,200 fish for the peak fall Chinook expansion. The Mark-Recapture estimates will be ~12,000.

- How many CWT fish returned to Mayfield?

Scott: This is the first year we are seeing fall Chinook jacks returning and coho adults. Tacoma marked 30K coho smolts at Mayfield in 2022 and collected 1,200 adults so far this year.

- Spring Chinook returns?
- Scott: Spring Chinook returning adults with a tag? It is rare occurrence to recover Unmarked (UM) spring Chinook adults with a coded wire snout tag. This year we recovered 14 fall Chinook jacks that were UM with a coded wire snout tag. Fall Chinook smolt numbers at Mayfield in 2022 were below the five-year average (N = 52,00). Total smolts collected and tagged in 2022 was 20,000.
- What about the possibility of a Satellite Rearing (SR) site on the opposite side of the river from the hatchery? Need to make more room at the hatchery for spring Chinook

Eric: The license requires SR Facilities to be over and above what is produced in the hatchery. The overall poundage cap does not include SR. There are currently meetings with hatchery staff on this.

Randy:

- What is the short- and long-term strategy for boating access on Riffe Lake? Most of the folks who fish on that lake are elderly. Hearing that it is a 10-year project is not satisfactory. The Settlement Agreement says Tacoma will provide access to the lake. Randy needs to know what to tell people when they ask him for updates.

Travis: They are working on being able to improve reservoir access. He asked Randy to follow up with Matt Bleich and let Travis know if he doesn't hear back. This is an important priority for the public. It is an obligation that Tacoma wants to meet.

Action Item: Travis to send Randy Tacoma Power's list of contacts for the Riffe Lake Elevation Restoration Initiative and the TPU Board.

- Randy sees people coming up with problems, and few coming up with solutions. He would like to see some centralized organization and roles and responsibilities.

Travis: Tacoma is making progress toward rebuilding their M&E team who was engaged in this task.

Eric: Sam Gibbons is Tacoma's new owner's rep. He will be able to focus on the SR project as well as the trout hatchery and Mayfield juvenile collection. The pilot net pen project has been approved by the FTC as part of the Annual Program Review process. The current location is at the end of the lake. If that is successful and it looks like it will be, anywhere else will also be successful.

Buddy Rose:

- He was approached by County Commissioner Scott Bremer and Mayor of Mossyrock, who both expressed concern about the extent to which recreational activities have been hampered dramatically by the lower lake levels. They fear that people will change their habits and not come back. Is the effectiveness of the seismic analysis for dam's embankment done in 2005 along with the safety remediation project at south end of the dam being revisited? In 2017 engineers said a fix at the spillway gates would have been effective, allowing for the lake to return to full pool.

Travis: Tacoma's Dam Safety folks along with consultants are working on recommendations which will be filed with FERC. All plans are aimed at bringing the reservoir back up to normal elevation. In addition to recreational impacts, Tacoma is losing revenue due to the lower elevation. Travis has been encouraging Tacoma to host a public meeting on this. Tacoma is a public utility and needs to hear from the community they serve so they can prioritize projects accordingly. A PM has been assigned to get Riffe Lake restored to its full operational elevation.

Randy:

- Is there a chum restoration project update? When might the actual project materialize? Chum salmon are an important part of the system.

Bryce: The project put forward by DFW to do the restoration in the lower river has been funded by the SRFB and will involve doing an assessment to identify potential locations, willing landowners, etc. They should be able to get to work on this in the next month or so.

Steve M: From the time you do the assessment, design, get permits, and construction, the project usually takes two years to complete. He checked on this during the meeting and noted the project is not under contract yet. The assessment process will end with an actual project design.

- Observed sea lions eating spring Chinook and summer run steelhead at the mouth of the Cowlitz, preventing them from returning to the river. Can we be proactive on this?

Bryce: Last year was the perfect storm with sea lions following the smelt return all the way up to the Barrier Dam. He thinks we may see that occur more often. WDFW is trying to figure out an emergency response on hazing that would be effective over the long term. In coordination with other NW states, they got increased funding for removal efforts below Bonneville Dam. These include Steller sea lions. There are complications as the permit only allows for euthanization.

Action Item: Bryce to share updates on the Marine Mammals Protection Act at the next meeting.

Topics for January 10, 2024 FTC Meeting

- Updates incl. Hydro Ops, Water Quality, Fish Facilities, Cispus Release Site
 - Satellite Rearing
 - 5-year Disease Management Report – Review outline
 - LCPUD Cowlitz Falls Dam Operations
 - Status of Transition Plans (?)
 - Preview of 2024 FTC Work Plan
 - Downstream Adaptive Management TWG
 - Monitoring and Evaluation Subgroup
 - Presentation by Ecology: Model Toxics Control Act and Riffe Lake (?)
 - CRR Fund / HAP Subcommittee
 - Preview February FTC Meeting Topics
-

Meeting Evaluation

- This location is good for quarterly in-person meetings
 - Pizza was great
 - The Owl was so sensitive to “looking” toward even the smallest noise, that it was distracting.
 - Scott to speak up.
 - Appreciate the chocolate
 - Next time we need to bring our own extension cords.
-

Fun/Inspirational Quotes

- “After every storm there’s a rainbow, no matter how long it takes to show up.” -Grace V (Dove)
 - “You’ve got this!” and “Today’s your day!” (Dove)
 - “You can never step in the same river twice, for it’s not the same river and you are not the same person.”
 - “No good fish goes anywhere without a porpoise.”
 - “We can never go back and capture the magic of the past.”
-

Closing Remarks

Travis ended the meeting by thanking everyone attending. He sees his role as a public servant. We all have the opportunity and gift to serve and if we perceived as not serving the public, Tacoma’s leadership wants/needs to know that. Tacoma wants to honor deals and commitments made. We couldn’t implement the license without you all. Please be safe given the excessive rain.

Parking Lot

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