

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final Meeting Summary
 January 11, 2019 from 1:00 – 4:00 PM

Attendees:

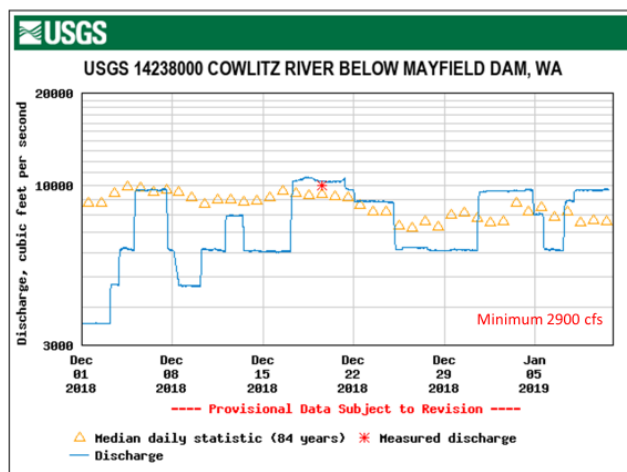
Travis Nelson	TPU
Paul Sparks	WA Council of TU / TU / American Rivers
Tom Wadsworth	WDFW
Jim Pacheco (by phone)	Tech Rep for WA Dept. of Ecology
Bryce Glaser	Tech Rep for WDFW
John Serl	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Matt Bleich	Tech Rep for TPU
Tim Hoffnagle	Tech Rep for TPU
Chris Foster	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Melora Shelton	Tech Rep for TPU
Steve West	LCFRB / Tech Rep for TPU
Laura Wolfe	LCPUD
Lyn Wiltse	PDSA Consulting / Facilitator

2019 FTC Meeting Dates: Feb. 5 (Coho Workshop starting at 9am / FTC starting at 1pm), Mar. 5 (Public FTC meeting), Late March (Steelhead Workshop), Apr. 2 (Cutthroat and Chum / FTC), Apr. 30 (Annual Process Chapter Workshop / FTC), June 4, July 2 (FHMP Placeholder), Aug. 6, Sept. 5 (Thurs.), Oct. 1, Nov. 5, Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery unless otherwise specified.

Announcements

- Hydro Operations: Florian projected a PPT presentation describing the Cowlitz Hydro Status. Inflows for Jan. 2019 to date are at 7,818 cfs, averaging 9,427 cfs. Storage at Riffe Lake on Jan. 10, 2019 was 708.27' with an average for the month of 733.31'. Snow at Paradise is 83% of normal. At White Pass snow is at 72% of normal. The average daily outflow since Dec. 1, 2018 is 7,535 cfs. The forecast continues to be warm and dry. Link to the USGS real-time Cowlitz River hydrograph:

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



- Cowlitz Falls Fish Facilities Report: Chris reported they are tying up loose ends as they plan to restart collection on Mar. 1, 2019. He has completed his report for fall operations and it will be distributed to all as soon as the internal review at TPU is

complete. This report is formatted similarly to the weekly reports he has been distributing and it includes a lessons-learned portion at the end.

- **Action Item:** Chris to send out the Fall CFFF Report ASAP.
- M& E Subgroup – Matt explained this group is working on how best to support FHMP efforts. When they meet again on Jan. 16, they will discuss the marking strategies and description of baseline vs. directed evaluations. In February, they will look at how to structure the M&E chapter - what to include and what to defer to an appendix (previously in Appendix J). Matt noted a smaller group is working on the details on an enumeration study of Steelhead smolts out of the Cowlitz Trout Hatchery. They are finalizing the study plan for this year – which models to use, etc.
- D/S Adaptive Management TWG: Matt reminded all that this group has been making recommendations to the FTC and they are in the midst of implementing the annual process, starting with getting the necessary contracts in place. The process will involve baselining for a second full year of operation for the downstream collector, including directed studies for Chinook and Steelhead. After they receive last year’s annual report from the consultants, they will review it and then send it to the FTC for review (likely 4-6 weeks from now).
- Tilton Release Site: Bryce asked that this topic be included among the regular updates as there is an urgent need to procure a second release site on the Tilton (there is agreement on the location for the site). Going through another season without an additional site will present a real management challenge. There is lots of angst over the change to a 300’ fishing area closure around the release site at Gust Backstrom Park during late summer/early fall. After TPU identifies a lead to help with the permitting, WDFW will assign a point person to help, as it is important to initiate the permitting process for the new site. Matt explained that TPU should be able to provide details on a timeline for this in the near future as they have requested an engineer to design the proposal. WDFW is working on developing a management strategy on how best to utilize the two different sites throughout the season.

Meeting Summary Approval

The Dec. 4, 2018 FTC meeting summary was approved with edits and will be posted to the FTC public website. Lyn expressed appreciation for everyone’s edits.

Decision Document 2019-01: 2016 FHMP Update Extension Request to FERC Presenters: Matt Bleich / Travis Nelson

Matt distributed a 9-month schedule for completing the FHMP. He will expand it to include an opportunity for the FTC to do a final review of the entire document after the public comment period. There was concern that perhaps this Extension of Time (EOT) was not long enough given the current challenges around federal partner engagement due to the government shutdown. Travis has been in touch with FERC about our asking for an EOT. He agreed to note in the accompanying letter to FERC that the EOT assumes federal partners impacted by the government shutdown will be fully engaged.

Jan. 11 Spring Chinook FHMP Workshop: There was consensus that the workshop approach is working well for the various species and is identifying key themes for the FHMP which focuses on the next six years starting in February 2020. Except for Steelhead, which will require a separate full day, these workshops will occur in the morning of FTC meeting dates. Upcoming workshops will focus on remaining species and then the Annual Project

Review (decision rules, etc.). At the end of each workshop, agreements will be memorialized. At the start of each subsequent workshop, those agreements will be reviewed, revised as necessary, and then finalized before moving on to the next species.

Action Items:

- Matt: Work with Lyn to send out Agenda for Feb. 5 (AM) FHMP Coho Workshop.
 - Those attending the Coho Workshop: Please arrive for a prompt 9:00 am start!
-

Decision Document 2019-2: Gravel Placement Temporary Strategy

Presenter: Florian Leischner

This document was revised based on input received at the December FTC meeting. It was reviewed, edited slightly and then approved by FTC members present. Travis will follow up, to the extent possible, with absent FTC members, according to the FTC protocol.

Decision Document 2019-3: CRR Habitat Guidance

Presenter: Florian Leischner

Florian began by emphasizing that this is a living document and can be changed over time. After much discussion and clarifying questions, it was pointed out that a separate decision document would be forthcoming regarding hatchery projects. This document was approved, with slight edits by FTC members present. Travis will follow up, to the extent possible, with absent FTC members, according to the FTC protocol.

Q&A from Nov. 6 Public Meeting

Presenter: Travis Nelson

Travis explained that there was no intention to reply to comments made by members of the public at the Nov. 6 FTC meeting. The commitment was to post an official FTC reply to all questions within 30 days of the meeting. He acknowledged with appreciation the work done on responses by WDFW. Draft responses are currently undergoing internal TPU review. They will then be sent out to the FTC for further comment / edits before being posted.

Action Items:

- Travis: Post on the public website that comments and Q&A from the public meeting will be posted after the January FTC meeting.
 - Travis: Email out draft responses to all to review ASAP.
-

Potential Topics for the Feb. 5, 2019 FTC Meeting

- Usual Announcements/Updates including Additional Release Site on the Tilton
- Approval of January Meeting Summary for posting to public
- FHMP Update, including Debrief of the Feb. 5 Workshop (the bulk of the meeting)
- Approval of FTC responses to Public Questions from Nov. 6 FTC Meeting (if not done electronically prior to the meeting)
- CRR Fund Update
- Gravel Augmentation Update
- M&E Subgroup Report
- Downstream Adaptive Management TWG Report
- Plan for March 5 Public FTC Meeting
 - Location, agenda, presentations, advertising, etc.

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final Conference Call / WebEx Meeting Summary
February 5, 2019 from 9:00 – Noon

Attendees:

Travis Nelson	TPU
Tom Wadsworth	WDFW
Carol Serdar	WA Dept. of Ecology
Michelle Day	NMFS
Rich Turner	Tech Rep for NMFS
Bryce Glaser	Tech Rep for WDFW
John Serl	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Matt Bleich	Tech Rep for TPU
Eric Shoblom	Tech Rep for TPU
Tim Hoffnagle	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Chris Foster	Tech Rep for TPU
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Lyn Wiltse	PDSA Consulting / Facilitator

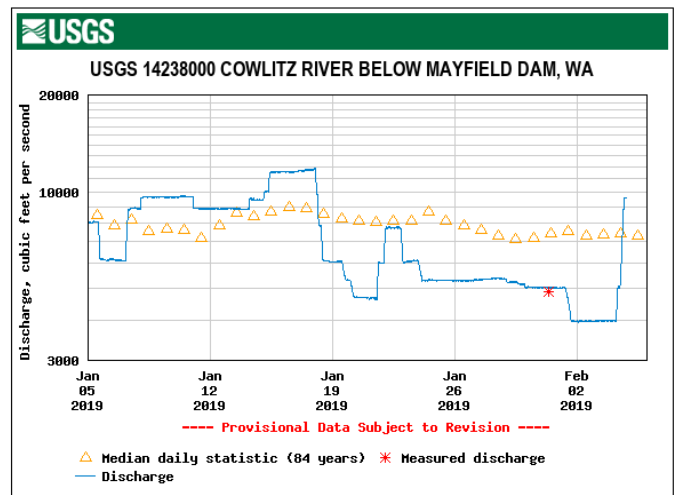
2019 FTC Meeting Dates: Mar. 5 (Public FTC meeting), Apr. 2, Apr. 30 (Cutthroat and Chum FHMP Workshop in AM and FTC in PM), June 4, July 2 (FHMP Placeholder), Aug. 6, Sept. 5 (Thurs.), Oct.1, Nov. 5, Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery unless otherwise specified.

FHMP Workshop Dates: Feb. 21:10:30-2:30 for Coho; Apr. 4: 9:30-3:30 for Steelhead; Apr. 30: 9:30-Noon for Cutthroat and Chum. All workshops to be at Cowlitz Salmon Hatchery unless otherwise specified.

- **Action Item:** Matt to review these dates with Paul to check for his availability.

Announcements

- Hydro Operations: Travis reviewed the current hydrograph. For January, the average daily inflow was 4,721 cfs (below the average of 9,427 cfs). Storage is currently is 704' and the snow pack is 60-80% of average. The calculated MIF is 2,900 cfs. TPU is likely to operate close to 10K cfs during this cold spell to meet load requirements. They will be replacing the exciter for Mayfield Unit #41 this summer. This will include a commissioning and testing period which may result in ramping and flow violations and a variance from traditional ramping rates as written in the license. TPU will propose a ramping schedule at the March FTC meeting. Carol



suggested they check the Nisqually minutes for lessons learned from the exciter replacement there, especially regarding the timing of what fish are present and knowing there will be low-flow summer conditions. TPU also plans to schedule an unrelated drawdown at Mayfield Lake this summer for annual maintenance. Link to the USGS real-time Cowlitz River hydrograph:

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

- CRR Program Update: Travis reported the habitat funding announcement was to have been made on Feb. 4 through the LCFRB. Given the inclement weather, this meeting may have been postponed. They have launched the CRR website at Mytpu.org/crr. This group continues to work on the habitat assessments and on developing the Upper Cowlitz Strategy. Peggy explained at their last meeting they had presentations of the 1D Hydraulic model to determine the best areas for a 2D flow model. There was also presentation on the geomorphic processes. She noted both presentations were excellent, and she looks forward to the report. Next steps include habitat-based spring Chinook production model and the impact of climate change on project selection. Travis notes he spoke recently with Erich Gaedeke at FERC regarding an order from the TPU letter saying the FTC supports the CRR Fund through the abandonment of upstream volitional passage. Erich indicated that he would send a letter to that effect likely this month. Also, this month Florian may have Hatchery Program Application documents to present.
 - **Action Item:** Florian: Please forward to all the presentations and handouts from last two CRR Fund Subgroup Meetings to Michelle and Rich.
- Gravel Augmentation: Travis explained TPU is in the early phases of permitting design and that a regulatory permit site visit is planned for Feb. 12 to discuss concerns, process, etc. The JARPA is to go out to agencies, including Ecology this week. It is assumed that the site visit would occur before the JARPA.
- D/S Adaptive Management TWG: Matt has scheduled another meeting in a couple of weeks. Main activities include review of the last annual reports and development of the 2019 evaluation period. TPU is still working with their consultants on their draft of last year's annual report. When ready, TPU will send it the FTC for review.
- M& E Subgroup: Phil explained this group has been working on technical pieces of FHMP content. They are currently in the midst of a big push to get task orders in place. They now have the Lower Cowlitz rotary screw trap report. More detail will be provided at future meetings.
- Additional Tilton Release Site: Eric explained that he recently spoke with DOT about starting a process to get a land use agreement. DOT wants to see a site plan, complete with drawings, and design before agreeing to proceed. TPU engineers have gone out to the site and taken measurements, estimated the amount of gravel that would need to be brought in, etc., in accordance with DOT requirements which are mainly related to public safety. Once complete, TPU will submit those plans to DOT and report to FTC on progress. While expressing appreciation to TPU for taking the lead on the engineering, permitting and site development, Bryce explained that WDFW wants to be included in those conversations especially regarding the timelines as they hope this can be in place by the next fall season. He offered that WDFW is willing to draft a management strategy about how the dual release sites would be used if that would be helpful. Matt responded that this will be discussed at the M&E Subgroup meeting and that there will be frequent updates to the M&E group and the FTC. Bryce responded that he sees M&E's role as developing methods to evaluate its

effectiveness and in the meantime, there is much pressure to have a secondary release site in place by next fall and work with DOT and others to accomplish this in short order. He requested a timeline be shared at the next FTC meeting. Matt agreed to take this request back to TPU and to discuss this with Bryce further offline.

Action Items:

- Matt: Continue to discuss this with Bryce.
 - Matt: Take Bryce's request for a timeline back to the appropriate department at TPU.
-

Meeting Summary Approval

The January 11, 2019 FTC meeting summary was approved with edits and will be posted to the FTC public website. Lyn expressed appreciation for everyone's edits.

Decision Document 2019-04: Excess Cowlitz Sea Run Cutthroat Disposition

Presenter: Eric Shoblom

Eric briefly walked through the document. Michelle reported that she had reviewed this document and confirmed that this is a "one-off" and not a scheduled occurrence for any time in the future. Eric explained that they had good survival in sea run cutthroat resulting in an overage. Putting these fish in Riffe Lake seemed good as it would support the fishery and not threaten fry production. Michelle reminded all that there are listed fish in Riffe Lake. After discussion, this Decision Document was approved with edits.

Action Item:

- Travis: After customary 7-day review by FTC members not attending this meeting, post on the public website.
 - Travis: Send to all handouts and presentations from the last two FTC meetings.
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Public Questions and FTC Answers from November 6, 2018 Public FTC Meeting

Presenter: Travis Nelson

Travis explained that receiving no replies to the Nov. 8 email where he attached the Excel spreadsheet of questions from the public at the Nov. 7 FTC Meeting, TPU and WDFW spent considerable time and effort on drafting responses for FTC review at this meeting. These draft responses were sent out on Jan. 29 along with other documents for this meeting. The intent was to facilitate the FTC review so this (now Word) document can be posted as soon as possible. The FTC reviewed these responses, offering clarifying edits and additions.

Action Items:

- Tom: Send Travis link to Columbia River Compact predictions so he can include it.
 - Phil: Add *C. shasta* to items to address in M&E Group.
 - Bryce: Send Travis official release sent to Buddy Rose on bird predation. (*Done.*)
 - Travis: After customary 7-day review by FTC members not attending this meeting, post these responses on the public website.
-

Potential Topics for the March 5, 2019 FTC Public Meeting

Presenter: Travis Nelson

Travis explained that the location for this meeting is not yet been chosen. It may be good to rotate the location so that no single group is made to travel especially far. Other potential

locations include Ridgefield and Olympia. Tom noted that while other members of the public would be attending, members of the CRAG prefer the Centralia / Chehalis area.

Logistics: If at the Veterans Memorial Museum again, look at a different microphone system. Consider starting at 10am and ending at 2:30 or 3pm. Include lunch again. Make time for one comment period, either at the beginning or end of the meeting. Note public comments and questions but don't promise written responses as was done for the November meeting.

Potential Agenda Topics:

- Usual Announcements/Updates including Additional Tilton Release Site
- Approval of February Meeting Summary for posting to public
- Gravel Augmentation Report / Presentation based on Feb. 12 site visit.
- FHMP Update
- CFFF Update
- CRR Fund Update
- M&E Subgroup Report / Presentation
- Downstream Adaptive Management TWG Report
- Topics for April 2 FTC Meeting

Action Items:

- Travis: Secure location and coordinate advertising for the meeting.
 - Travis: Send out draft agenda including timing of Public Comment Period to all for review / comment.
-

FHMP Process Update

Presenter Matt Bleich

Matt explained the need to select a new date for the FHMP Coho Workshop that had been intended to precede this meeting, as the workshops are most effective when done face-to-face. He will check with Paul's schedule re the dates listed on p. 1 of these notes.

Action Items:

- Matt: After checking with Paul, send out dates, locations, and agendas for Coho and Steelhead FHMP Workshops.
 - Lyn: Send notes from Fall Chinook Workshop out to Rich and Michelle. *(Done.)*
 - Matt: Send draft FHMP Workshop Spring and Fall Chinook tables to Rich and Michelle.
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Meeting Evaluation:

- Great attendance
- Happy to have our federal members back with us
- Very organized and productive
- Started and ended on time

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Veterans Memorial Museum, Chehalis, WA
Final FTC Public Meeting Summary
 March 5, 2019 from 10:00 – 2:00

Attendees:

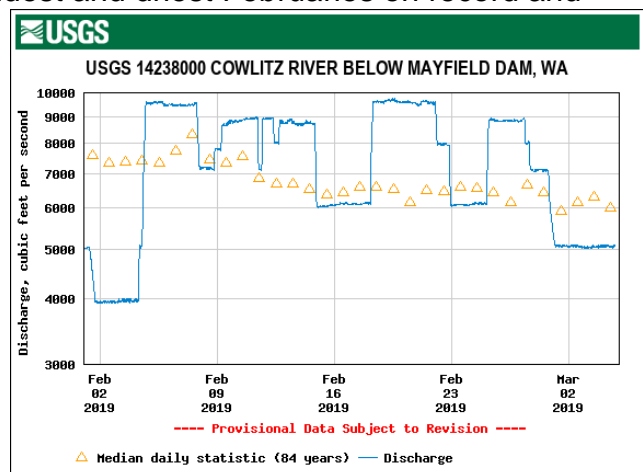
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2019 FTC Meeting Dates: Apr. 2, Apr. 30 (Cutthroat and Chum FHMP Workshop in AM and FTC in PM), June 4, July 2 (FHMP Placeholder), Aug. 6, Sept. 5 (Thurs.), Oct.1, Nov. 5, Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery unless otherwise specified.

FHMP Workshop Dates: Feb. 21:10:30-2:30 for Coho; Apr. 4: 9:30-3:30 for Steelhead; Apr. 30: 9:30-Noon for Cutthroat and Chum.

Announcements

- Hydro Operations: Florian reported inflows are 51% of normal. Outflows have been 7,500 cfs on average (90% of normal). The reservoir has been drafting rapidly and Riffe lake is currently at 679' which is its lowest in nearly 20 years. On March 3, TPU reduced outflows to 5K. This was one of coldest and driest Februaries on record and low temperatures have increased load demand. TPU is running projections on how best to address this. Snow pack is 90% of average. Inflows are below 2K cfs. During the meeting, TPU received word from Chris Foster that the inflows had dropped low enough to cause LCPUD to spill 1K cfs (or inflow) with 500 cfs of this required spill passing through the fish collector. While spilling is unfortunate, it was noted that being able to collect fish during a spill event is something to



celebrate, as that was not possible prior to building the fish collector.

There may be a need to request a temporary modification of the minimum downstream flow requirement from FERC. Expect an email update in a couple of weeks. Any request to reduce the required minimum flows would be discussed at the next FTC meeting.

Link to the USGS real-time Cowlitz River hydrograph:

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

- CF Fish Facilities Update: Eric reported this facility just started up March 1 for the 2019 season. For the last two years, they were building the Northshore collector and are just now finishing a remodel of the existing fish facilities. Very preliminary numbers for the first 4 days of operation are: 885 Chinook fry, 1 Chinook parr, 17 Chinook smolts, 1 steelhead smolt, 4 Coho parr, 3 Coho smolts, and 1 Cutthroat smolt.
- CRR Program Update: Erich Gaedeke at FERC has indicated that TPU will receive a response from them in the near future on the abandonment of upstream volitional passage. The next meeting of the CRR Fund Subgroup is March 7 at the Cowlitz Salmon Hatchery. Afterward, there will be the Upper Cowlitz/Cispus Habitat Strategy Work Group meeting (formed by the Lower Columbia Fish Recovery Board). The CRR Subgroup is providing this group technical information from the habitat assessments. The geomorphic analysis of the upper Cowlitz is nearly complete. Preliminary results of the hydraulic model of the upper Cowlitz will be presented at the next CRR meeting. Habitat project applications are being submitted to CRR and SRF Board for consideration. At the next FTC meeting a decision document regarding the hatchery-associated project applications will be submitted to the FTC for review and approval.
- Downstream Adaptive Management TWG: Matt reported the CFFF is now up and running with the idea of gaining info on the shoulders of the run timing for spring-time fish. The M&E group supported gathering this information, though recognizing this may not necessarily represent a strategy for the future. It is, rather an information gathering time to inform the operational strategy as we move forward. The lead operator of the facility is learning a lot about how to respond to the various operational challenges there. The TWG recommended expanding from just the baseline studies to directed studies to reach the ultimate goal of 95% FPS (or at least the minimal 75% with best available technology). They will also be performing steelhead directed studies sometime in April. Additional studies will include Chinook. Matt noted that this season they are projecting low spring Chinook return rates which would translate to fewer study fish for the 2020 season and these studies may have to be delayed for a year. He also noted that while spring Chinook are the lowest performing species at the juvenile collector, they are also the most improved. For now, the TWG continues working on adaptive management for Coho and steelhead. Tom reminded all there is an ESA requirement to meet the broodstock goals.
- Additional Tilton Release Site: Eric explained that the purpose of the site was to offset some of the pressure on the natural origin fish released at the Gus Backstrom site. Initial plans have been submitted to TPU engineering. As they are targeting the fall Chinook season for next year, they hope to complete the site this July. The schedule is still uncertain as there was a three-week delay due to snow. TPU engineers will be at the site March 7 to consider permitting requirements. Eric will provide an updated schedule by the end of this week.
- M& E Subgroup: Phil explained this group has been working on three primary tasks: getting task orders in place; making technical contributions to the FHMP; and

evaluating programs as best as possible including trout counting and evaluating size at release in order to optimize hatchery production.

- Gravel Augmentation: Florian explained the Settlement Agreement requires TPU to deploy 500 cubic yards of gravel annually into the river below the dam. They have been doing this for many years, placing the gravel immediately below Barrier Dam. The current pile isn't really moving as anticipated and is starting to encroach on the ADA fishing and boat launch areas. The interim strategy for 2019 through 2022 is to relocate gravel augmentation activities from the current location on the right bank below barrier dam to the right bank immediately downstream of the mouth of Mill Creek. Tacoma anticipates that gravel placed at the Mill Creek location will be more readily mobilized by the typical winter flow than where the gravel has been placed in the past. They are working on the designs to place 7K yards over the next four years. Eventually, they want to be able to place gravel at multiple elevations. Construction will take place over four weeks in August and will include constructing a long bridge to get at the downstream side of Mill Creek. The added gravel will enlarge the downstream alluvial fan. They anticipate the material will move quickly from there so they can add more at other sites. Tom noted WDFW supports this plan with the understanding of the need to work through the permitting process. WDFW has heard some concerns from the public as this is a fishing site and wants that to be taken into consideration through the gravel placement process. Travis noted that the augmentation of gravel at this site may actually create more fishing access as they will be enlarging an existing gravel bar and will spread it over a much larger area to provide habitat as well as being taken downstream. They have been deploying smaller sized gravel (¼" - 2") to supplement the coarse gravel that is already there. They will monitor the effectiveness of placing gravel in this new location and will be able to adaptively manage accordingly.

Meeting Summary Approval

The February 5, 2019 FTC conference call meeting summary was approved with one edit and will be posted to the FTC public website.

Mayfield Unit 41 – Exciter Replacement

Presenter: Florian Leischner

Florian explained that the main unit at the powerhouse needs to be replaced as it has reached its 21-year life span. TPU has other units that can make up for this exciter being out while it is being replaced. The new exciter will undergo two tests. First, they will run the unit at full capacity for a half day. The second test is a load rejection test where they run it at 25-40% of capacity, and then make the unit trip by turning it off. Since this is a planned trip, they can ensure they won't have a MIF violation, but there will be ramping violations when the trip occurs, as they anticipate a sudden 2' drop in flow. While TPU Engineering was hoping to replace the exciter sooner, they have delayed this project until the May-June timeframe so there will be less impact on young fry in the margins. They are still considering a spring night-time operation to minimize impact on recreation / fishing opportunities. They will bring a plan asking for a temporary increase in allowance on the ramping rate to cover the planned outage for a 10-24-hour period to the next FTC meeting for approval. They will inform the stakeholder committee when to expect the drop.

FHMP Process Update

Presenter Matt Bleich

Matt explained TPU is still waiting to hear back from FERC on their request for an EOT to mid of February of 2020. He distributed a work plan showing a series of workshops to flesh out key issues in each of the species chapters. Each chapter includes a review period for the FTC, including consolidated comments from the agencies. After TPU works with their consultant to address those comments, a revised draft will be available for public review. Matt assured all that TPU has worked to address concerns expressed by FTC members about redundancy, seeking to find the “sweet spot” that allows each chapter to stand on its own should readers choose to do so. He will provide continual updates of the chapters. For the steelhead workshop, they will be looking at all the different populations and the different concerns for return timing. While the FHMP will not address orcas directly, there will be flexibility to manage with existing tools while respecting ESA constraints, etc.

Public Comment Period

Travis extended appreciation to members of the public present, including Dale Lewis who was attending as a representative from Jaime Herrera Beutler’s Office.

Greg King: The Friends of the Cowlitz support increasing hatchery production to meet orca and other future needs.

Chris Vandenberg: What contribution do the salmon and steelhead coming out of the Cowlitz and Columbia River have on the southern resident orca prey base?

- **Action Item:** Rich Turner to provide analysis of populations that contribute to orcas. He noted that Columbia River spring Chinook contribute to the prey base. Travis will post the analysis on the TPU website.

Randy LeDuc: Can we improve summer run steelhead opportunities? In the past, we have had a 3K limit due to recycling of summer run steelhead. Can we increase this to 6K? It would be nice to have a brighter future outlook and the science supports a higher number.

- **Action Item:** Phil Sandstrom to discuss the recycling program with Randy; Michelle to discuss this from NMFS’ perspective; Lyn to add this topic to the Parking Lot at the end of this meeting summary so it can be addressed by the FTC.

Randy LeDuc: Is there a way we can address bird predation between river and the ocean? Can we start a process to deal with this as was done with the pinnipeds being removed from the Lower Columbia? Travis responded that hazing is a federally regulated activity.

Mammals are under the jurisdiction of NMFS, while birds are under USFWS jurisdiction.

- **Action Item:** Travis Nelson to provide Randy with the appropriate USFWS contact for this discussion.

Greg King: The summer-run Steelhead recycling stray rate was studied by the USGS and estimated at 2%. How can we get the lower Toledo Sand and Gravel net pen program back? Outside TPU’s efforts, what might the cap be and how would that relate to southern resident orcas? Of the three satellite ponds, can TPU negotiate one of the ponds for net pens? The Friends of the Cowlitz are interested in this. They would like to know which species are best suited to net pens? How much beyond the 650K lbs. can we go? What would best serve the southern resident orcas, keeping in mind this is for recovery of fish, recovery of the orcas, and also harvest. The net pens would be in Mayfield Lake. Michelle observed that Greg’s questions are highly dependent on net pen placement and operation.

Net pens would have to be upper river for recovery. It is important not to negatively impact ESA species.

Lee Roy Wisner: Sports and recreational fishermen and RV-ers all have a feeling that TPU is not being transparent and is retaliating against them. Travis agreed that TPU needs to do a better job of communicating and letting people know they are operating their facilities in the hopes of being a good neighbor. TPU is also eager to get Riffe back to full operation.

Greg King: The USACE was taking care of bird predation and now birds are congregating on the Astoria bridge now. Who is responsible? Travis responded: USACE and USFWS.

Travis closed the Public Comment Session by thanking everyone and reminding them that if they think of anything else, to feel free to contact Keith Underwood or Travis directly. Travis displayed the FTC public website with his contact information.

Topics for April 2 FTC Meeting

- Hydro Operations
- CF Fish Facilities Update
- Cowlitz Restoration & Recovery Fund
 - Hatchery Decision Document
- Downstream Adaptive Mgt. Tech Work Group
- Additional Tilton Release Site
- M&E Subgroup Report
- FHMP Process Update
 - Chinook Chapters out for review
 - Preview April 4 Steelhead Workshop
- Gravel Augmentation
- Dam Safety Update
- Debrief of Public Meeting
 - Plan for next Public Meeting
- Other?

Parking Lot

- Steelhead Recycling Program

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Cowlitz Salmon Hatchery
Final Meeting Summary
 April 2, 2019 from 10:00 – 2:00

Attendees:

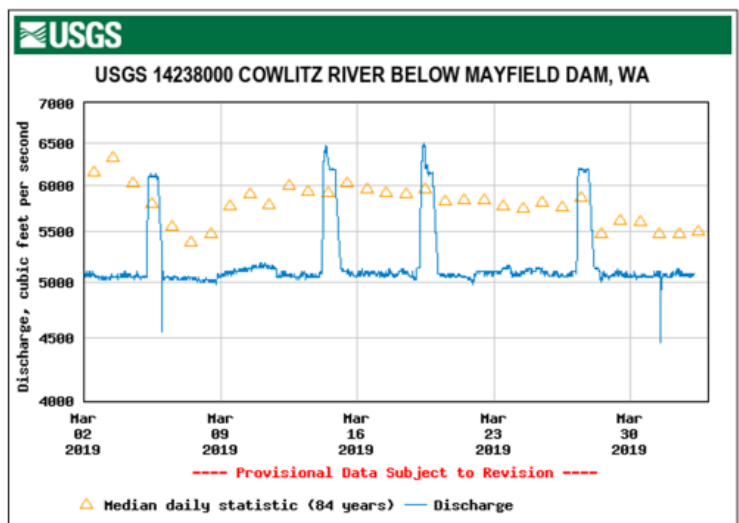
Travis Nelson	TPU
Tom Wadsworth	WDFW
Paul Sparks	WA Council of TU / TU / American Rivers
Carol Serdar	WA Dept. of Ecology
Sam Gibbons	Tech Rep for WDFW
John Serl	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Matt Bleich	Tech Rep for TPU
Eric Shoblom	Tech Rep for TPU
Tim Hoffnagle	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Leah Marquez-Glynn, by phone	Tech Rep for TPU
Steve West	LCFRB
Laura Wolfe	LCPUD
Lyn Wiltse	PDSA Consulting / Facilitator

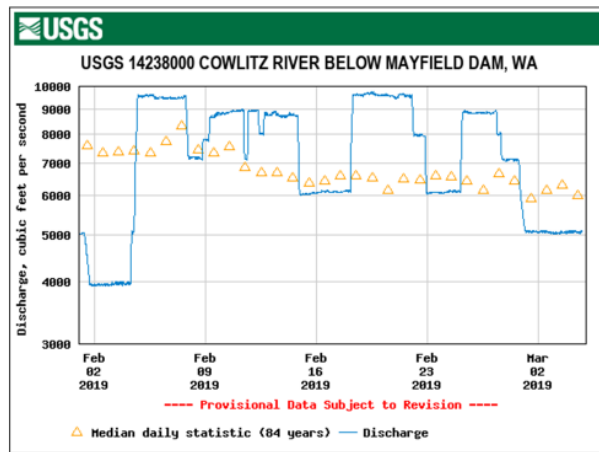
2019 FTC Meeting Dates: Apr. 30 (Cutthroat and Chum FHMP Workshop in AM and FTC in PM), June 4, July 2 (FHMP Placeholder), Aug. 6, Sept. 5 (Thurs.), Oct.1, Nov. 5, Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery unless otherwise specified.

FHMP Workshop Dates: Apr. 4: 9:30-3:30 for Steelhead; Apr. 30: 9:30-Noon for Cutthroat and Chum.

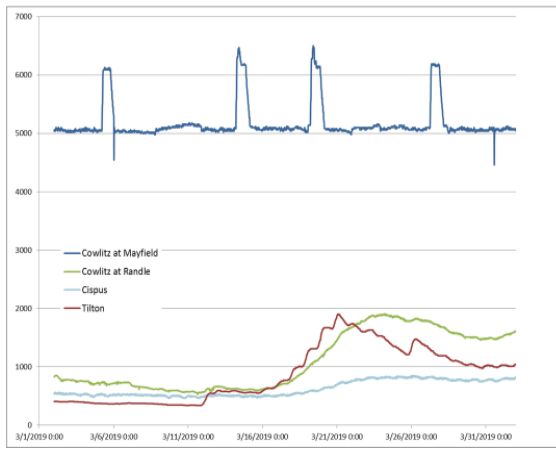
Announcements

- Hydro Operations: Florian reported inflows continue to be very low, similar to summer low flows. Some lowland snow recently melted, and the high-elevation snow should start melting with the rain anticipated later this week. Outflows have been 7,500 cfs on average (90% of normal). The reservoir has been drafting rapidly and Riffe Lake is currently at 668' (historic average is 736'). As shown in the graph to the right, there were two incidents (March 6 and 31) where Tacoma Power Dispatch, while switching from one unit to another, inadvertently caused two brief (15 min.) drops





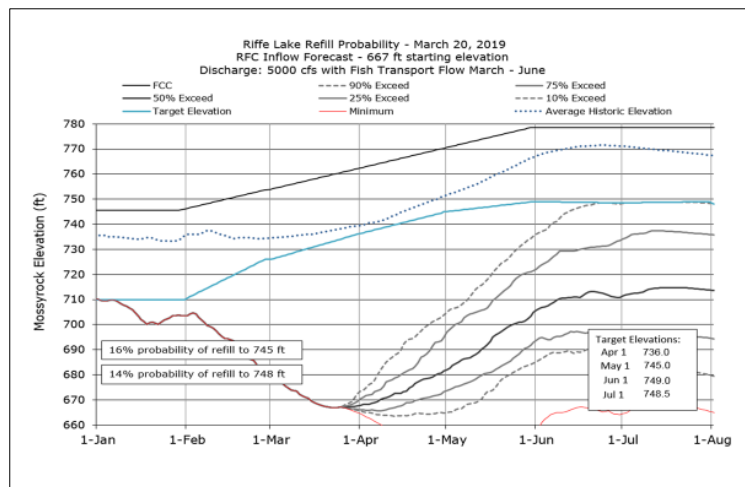
to below 5K cfs.



Carol requested Ecology be provided the presentations from these meetings, so Ecology has it available when they are reviewing the end-of-year reporting on instream flow.

Florian explained TPU will now put redundant flow monitoring at the unit, so these drops don't happen again. TPU uses NOAA's Northwest River Forecast Center inflow forecasts. Refill now is at 14% probability to refill to 748'. These predictions include rain and associated snow melt.

Link to the USGS real-time Cowlitz River hydrograph:



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

- Cowlitz Falls Minimum Flows: Peggy reported she will continue to reach out to FERC's Erich Gaedeke in hopes of addressing minimum flows by this fall.
- Gravel Augmentation: Florian reported the designs for this are being reviewed by contractors. TPU had a pre-application meeting with the regulators and they are nearly ready to begin to apply for the JARPA application. They plan to close off one of

the boat launches in the summer and create a temporary road and a temporary bridge to access downstream side of Mill Creek and place ~3K cubic yards of material to extend the downstream alluvial fan. The contractors suggest the design be altered to allow for annual placement of material using an excavator. They will be doing permitting with the USACE – due to the fill and need for ESA consultation. If they have to go through full consultation, the permitting timing will be pushed out beyond this summer. They hope the original license and Bi-Op will be sufficient. The permit will be for five years. If this is delayed, Peggy recommended TPU work on the permanent plan and Florian agreed.

- Downstream Adaptive Management TWG Update: Matt reported the 2018 annual report will be reviewed by the TWG and then will be out for FTC review in the May timeframe. The efforts from the TWG recommendations for 2019 are now underway. They have started operating the collector ahead of schedule with the intent to better understand the initial timing for all the life history stages for all of the fish in the basin. TPU is also initiating an acoustic telemetry study focused on steelhead (The Decision Document for this was approved a couple of months ago.). This is a new directed study focused on Chinook and steelhead to better understand limiting factors on the collector itself (discovery zone, entrance zone, retention, etc.). Discussions are underway about whether the juvenile collection facility for Mayfield should be addressed in the TWG or the M&E Group. When this recommendation is finalized, the FTC will be informed.
- M&E Subgroup: Phil explained this group has begun working on an outline for the M&E chapter for the FHMP. WDFW is drafting a plan for the group to consider regarding how an alternate Tilton release site might be used in terms of disposition (NOR/HOR). The next presentation to the FTC will be on either adult Coho or Spring Chinook.
- Additional Tilton Release Site: Eric explained that the TPU engineer assigned to this project has come up with a structural concept for the site. The road approach alignment design is nearly complete, after which Eric will run it by the DOT in hopes of gaining their approval so the project can move forward in a timely manner. Eric further explained that the current design calls for bolting the structure onto the original bridge footing and placing additional gravel on the existing road. The more extensive work would be done upland as there is a need for more fill for the road and there may be associated run-off challenges.
 - **Action Item:** Eric will share the schedule for the expected completion of the site design for DOT review.
- Plan to remove 600-800 tires from Mayfield this September: Travis has discussed this with the USACE and Ecology, which has a tire recycling program. The tires are located below the ordinary high elevation for the lake. They plan to remove these when the reservoir is already drawn down this September. Stay tuned.
- Dam spill gate repairs: Matt explained the analysis required for this project will be going on through 2019. TPU will be considering various design options. The FTC will be informed once a plan is in place.

Cowlitz Spring Flow Reduction Decision Document 2019-5

Presenter: Florian Leischner

Florian and Leah explained the proposed decision seeking to mitigate for the exceptionally low inflows into Riffe Lake. TPU is asking for a reduction to 2,900 cfs (down from the

originally requested 3,500 cfs). Leah suggested 2,900 with an average of 3,000 cfs for the weekly fish pulse flows. 2,900 cfs allows TPU to use only one unit which would provide for a smoother transition process. Florian reported that due to the extremely low inflows, TPU purchased \$6 million worth of power in February and early March. Without that power purchase, Riffe Lake would be 30-40' lower than its current elevation.

In the event TPU is unable to refill Riffe Lake, License Article 13 calls for them to consult with the FTC for a minimum flow reduction. Florian reminded all that the FTC approved a similar decision document in 2015. There was concern that on average, in one of every four years, TPU's failure to meet the MIF requirements impacts recovery. In 2017, the reservoir elevation was reduced due to seismic concerns (dam safety). Leah explained that in the very cold and dry month of February, TPU had to start balancing between meeting high power demand and keeping water in the reservoir. As the water supply forecast was low, Leah reported TPU would be in a similar position even without the seismic limits, as they would have started at a higher elevation and would be trying to reach a higher elevation for refill. Paul expressed concern for impact on ESA fish, including stranding. TPU will monitor for stranding after the flow reduction. Florian edited the Coordination Need section of the Decision Document to include Water Quality and the need for a larger planning effort if low water is the new norm. Phil agreed on the importance of using monitoring data to get a biological calendar of the major impacts to species.

After much discussion, this Decision Document was approved by consensus of members present. As per FTC protocols, Travis will follow up with absent FTC members to get their concurrence so that the action can take place the evening of April 2.

Action Items:

- Phil: Ensure the M&E group discussed how best to address this in the future.
- All: Send any specific limiting factors of concern to Phil so they can be consolidated and addressed appropriately.
- Florian: In addition to the edits made during the meeting, update second chart in the Decision Document to show 3K cfs.

Fry Disposition at CF Northshore Collector

Presenter: Matt Bleich

Matt explained that this report represented a combination of information from M&E and Downstream Adaptive Management TWG where there have been discussions about fry being collected at a much higher rate (20-40K/year vs. hundreds) since the construction of the Northshore Collector. A disposition document that was prepared before the collector was built indicated how to respond to an increased collection of fry. Previously, all fry were taken back upstream to convenient locations close to Lake Scanewa so they could grow out to a smolt life history stage resulting in higher SARs. The M&E Subgroup and the TWG recommend continuing with a two-phased approach:

1. Continue bringing fry back to convenient locations but place them further upstream where they can grow larger than the prior locations allowed.
2. Recognizing that this may not be the best long-term strategy for all species, look at life stage dependencies and utilization of the habitat and decide if they should take different actions for different species (M&E will address this).

FHMP Process Update

Presenter: Matt Bleich

Matt explained the next FHMP Workshop will focus on steelhead. He briefly recounted how each workshop starts with reviewing key themes from the prior workshop, making any final edits, and then memorializing the list for inclusion in the FHMP. Then participants are asked to look at the current workshop species from the perspectives of different audience groups. Finally, they review the current hatchery program for that species and discuss potential changes. Matt distributed a Winter Steelhead handout for review prior to the workshop on April 6.

Matt reminded everyone that the FHMP Chinook Chapter is out and comments are to be back by April 12. After TPU works with their consultant to address those comments, a revised draft will be available for public review. The Coho Chapter will be out for review on April 17. The Steelhead Chapter will come after that. The Cutthroat and Chum Workshop will take place the morning of the Apr. 30 FTC meeting and the FTC meeting will occur that afternoon.

March 5 FTC Public Meeting Debrief

Presenter: Travis Nelson

All agreed the last meeting went well and many heard appreciative feedback from participating members of the public. After some discussion, there was agreement to hold public questions and comments until the official public comment period near the end of the meeting. At the last meeting during the comment period, several questions came up that weren't related to the FTC meeting topics. For the next meeting (June 4), all agreed to set the expectation that we will respond (verbally) to comments that pertain to the current agenda and let people know that we may not be able to immediately respond to other topics. Tom noted that many of the same topics as were raised at the CRAG meetings.

Action Item:

- Travis: Secure location for the June 4 Public FTC Meeting.
-

CRR Fund Decision Document: Hatchery Materials

Presenter: Florian Leischner

CRR: Florian distributed a draft Hatchery-Associated Application Instruction and Forms packet to all. He asked for feedback and reminded all that he will be distributing a related Decision Document for this later this week for an electronic one-week review and approval.

Action Items:

- Florian: By April 8, send this out electronically for all to review and approve.
 - Florian: Check with TPU Legal Department about "Some of the organization's members must be active in Lewis County or Cowlitz County, Washington." Also ensure omission of limits on administrative / overhead costs occurred.
-

Meeting Summary Approval

The March 5 FTC Public Meeting summary was approved with edits and will be posted to the FTC public website.

Topics for April 30 FTC Meeting (12:30-3:30, following FHMP Workshop in AM)

- Hydro Operations, incl. changes to minimum flows
- Tire Removal at Mayfield
- Boat ramps and recreational levels
- Trout Hatchery Remodel Update

- Cowlitz Restoration & Recovery Fund
- Downstream Adaptive Management TWG
- Additional Tilton Release Site
- M&E Subgroup Report
- FHMP Process Update
- Gravel Augmentation
- Mayfield Unit 41 – Exciter Replacement
- Set Agenda for June 4 Public FTC Meeting

Parking Lot

- Steelhead Recycling Program

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Cowlitz Salmon Hatchery
Draft Meeting Summary
 April 30, 2019 from 1:00 – 4:00

Attendees:

Travis Nelson	TPU
Tom Wadsworth	WDFW
Paul Sparks	WA Council of TU / TU / American Rivers
Carol Serdar	WA Dept. of Ecology
Michelle Day	NMFS
Sam Gibbons	Tech Rep for WDFW
Brian Gale	Tech Rep for WDFW
Bryce Glaser	Tech Rep for WDFW
John Serl	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Matt Bleich	Tech Rep for TPU
Eric Shoblom	Tech Rep for TPU
Tim Hoffnagle	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Chris Foster, by phone	Tech Rep for TPU
Melora Shelton, by phone	Tech Rep for TPU
Ann Weckback, by phone	Lewis County / Tech Rep for TPU
Laura Wolfe	LCPUD / Tech Rep for TPU
Lyn Wiltse	PDSA Consulting / Facilitator

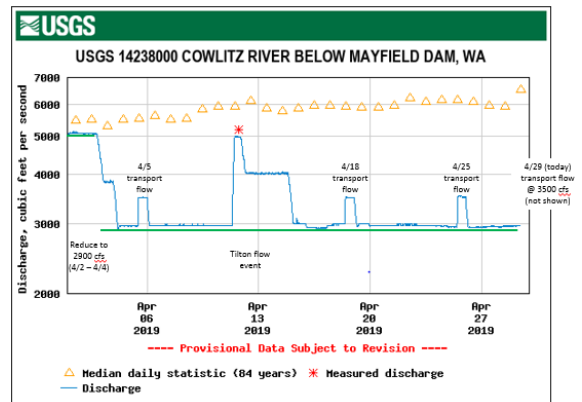
2019 FTC Meeting Dates: June 4 (Public Meeting), July 2 (FHMP Placeholder), Aug. 6, Sept. 5 (Thurs.), Oct.1, Nov. 5, Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery unless otherwise specified.

Announcements

- **Hydro Operations:** While March average daily inflows were approximately half the historical daily average, April average daily inflows of 9,435 cfs were well above the historical average of 7,706 cfs. The elevation at Riffe Lake is currently 711'. Snow pack is 86% of normal. At 2,900 cfs the probability of refill to 748' is 87%. At 3,500 cfs, that probability is 64%.
 Link to the USGS real-time Cowlitz River hydrograph:

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

- **Action Item:** Melora to ask Leah how snow pack is incorporated into historical data. Also, what is the difference in acre/ft. between elevations of 740' and 748'? Is 748' sufficient to meet MIF in the fall?(This can be discussed during the next coordination call.)



- CRR Fund: Melora reported that the LCFRB has received one grant application so far for a habitat project and a visit to the site (Yellowjacket Creek) will occur immediately following the next CRR meeting (May 2). The project is being proposed by the Cowlitz Tribe. Materials are posted on LCFRB and SRFB websites. They launched the grant program for hatchery associated projects on April 19. One letter (from Northwest Fisheries Enhancement) has been received so far. The revised set of due dates for proposals is available on the public CRR Fund website. The intent was to give equal time for HAM and HAP project proposals. The new dates are listed on Mytpu.org/crr.
 - **Action Item:** Melora to send out the dates to the FTC. FTC needs to be the deciding body. Melora also to check the broken link on site.
- FHMP: Matt noted receiving feedback that TPU may have missed some key themes in the Chinook Chapters. They are seeking a similar level of feedback on the Steelhead Chapter to ensure major themes are characterized effectively. Comments on the Chinook Chapter the week of May 6 would be appreciated. TPU plans to incorporate the content-driven comments into that chapter. Matt has also learned of concerns about the structure of the chapters. The intent is to use a structure that supports the best way to tell the story of each species. For now, TPU will continue to focus on content and then will invite others to participate in improving the structure. They plan to send the Coho Chapter out to the public within the context of the existing chapter. When the draft goes out for review, Bryce indicated a desire to see a notation on the draft that its contents have not been fully agreed to. The Coho Chapter will be out to FTC early next week. It will still contain the same structure as the Chinook Chapters, but that doesn't mean suggestions for changing the structure weren't heard. Matt will be sending out the Steelhead Chapter. Lyn will send notes from the steelhead workshop to all. Matt to do same with Coho. The first draft of key themes for Steelhead, Cutthroat and Chum will be out shortly and Matt looks forward to feedback on these at the June 4 meeting,
- Downstream Adaptive Management TWG: Matt reported the operations and implementation of the 2019 study is going mostly as planned (since issuance of the Decision Document). They are tagging the first groups of Steelhead and are seeing early returns of those fish coming back (with similar timing as last year so far). They also marked early group of Coho (two weeks earlier than historically). He also noted that TPU has recently received the 2018 report from their consultant. The TWG is reviewing the document. He plans to send the document (with embedded comments from the TWG) to the FTC for review this month.
- Summer-Run Steelhead Recycling: Tom said WDFW is considering starting the recycling earlier this year to give more opportunity. In the past, they have started this on June 15 as it was the peak of the fishery and coincided with the USGS study on straying. *WDFW Expressed an interest in beginning to recycle summer run steelhead (up to 3,300) ASAP. Need DD?*
- This year, WDFW plans to recycle up to 3,300 Summer-Run Steelhead for more harvest opportunity without any adverse environmental impact. The stray rate is very low. They floy-tagged these last year and will do the same this year. WDFW plans to discuss this with the CRAG. Ideally, they could start recycling soon. As this is a notification, there was general agreement that there was no need for a Decision Document on this. WDFW already discussed this with NOAA. They will capture the range and period for recycling in the HGMP and the FHMP.

- Gravel Augmentation: Travis reported this action will not occur this year, as TPU and Lewis County have different understandings regarding the need for a shoreline permit. TPU proposes having a zero-rise analysis done to see if the action and quantity would create any flood risk for adjacent and downstream property owners. Carol asked if TPU could hire a consultant to start the permanent gravel augmentation program now. She noted the interim plan is due in December and a long-term plan would be much preferred over a piecemeal approach.
 - **Action Item:** Travis will follow up with Florian and Keith on this issue, including drafting a Decision Document for discussion at the June meeting.
- M&E Subgroup: Bryce and Phil explained this group continues work through the FHMP M&E Chapter, prioritizing issues for the next 1-3 years. They are also discussing the Tilton release site operational plan. Their next meeting is set for May 29 and their next presentation to the FTC will be on adult Coho.
- Additional Tilton Release Site: Eric explained that the TPU engineering has completed a preliminary design and will be reviewing this with the DOT on May 1. They will then initiate a legal review for a land use agreement or permit. They will likely be one-to-two weeks behind the schedule that originally scheduled completion for the end of July. Carol requested that she be able to review the design well ahead of time.
 - **Action Item:** Eric will share the schedule for the expected completion of the site design for DOT review. Send this to Carol after buy-in from WA DOT and then will also share with the FTC.
- Scanewa Reservoir Turbidity Event of 4/17: Chris explained that he was onsite monitoring the debris removal project and he was certain this event was not in any way related to the debris removal project. TPU is not sure what the event was that caused the turbidity. TPU surveyors noticed the water was more turbid in Silver Creek than in the Cowlitz. There was some speculation that the turbidity may have been related to a landslide at Silver Creek upstream of Lake Scanewa.
- Tire Removal at Mayfield: Travis explained they plan to remove 600-800 tires from Mayfield this September during maintenance activities, including the boat ramp. Travis is working with the USACE, Ecology and WDFW to coordinate this effort. TPU will provide the equipment for the tire removal and Ecology has a grant fund to take care of disposal. WDFW will coordinate with TPU on the HPA and will store the tires temporarily. Carol observed TPU will need an In-Water Work Protection Plan for this work. She will coordinate with Matt on this. The tires were placed in the reservoir initially with the idea of providing tiger muskie habitat.
- Tom explained that he prepared a draft Decision Document re: releasing Spring Chinook. The program has been very successful over the last three years and has “spawned” Spring Chinook overages. This year, an overage of 76K fish need to be released in the next couple of weeks. Last year, there was also an overage and the FTC approved a Decision Document to release the fish in the lower river, clipping all of them and tagged some of them. Tom edited that Decision Document for this year, noting there are no state funds for the tagging. Sam explained there is a need to decide something on this by the end of June at the latest. From a fish health standpoint, it would be best to release them in early June. Discussions will continue offline. When and where for the release is an FTC question. TPU will get back to WDFW soon on whether they can provide the \$9K required for the tags.

Mayfield Unit 41 Exciter Replacement 2019-6

Presenter: Travis Nelson

Travis explained the purpose of this Decision Document with TPU requesting a 3-day variance period during the anticipated testing week of July 22 - July 26 when ramping of up to 4" per hour will be allowed. The FTC would receive at least a 24-hour notice prior to the start of the variance period. The proposed decision seeks temporary variance from the ramping rates requirement for the Cowlitz River to allow for testing of a new exciter for generating unit #41 at the Mayfield Powerhouse. This is required maintenance on an existing turbine. This work is scheduled to occur in July of this year.

After discussion, this Decision Document was edited slightly and approved by consensus of FTC members present.

Action Items:

- Travis: Revise the Decision Document as agreed to and Send out for approval.
 - Phil: Send stranding data from last event to FTC (when went from 5K to 4K and then down to 2,900 cfs).
-

Plan for June 4 FTC Public Meeting

Presenter: Travis Nelson

Travis announced that he reserved the Veterans Memorial Museum in Chehalis for our next meeting. The plan is to follow the same protocols for public comment as were used at the last meeting. Agenda topics are listed below.

Meeting Summary Approval

The April 2 FTC Public Meeting summary was approved with edits and will be posted to the FTC public website.

Possible Topics for June 4 FTC Public Meeting

- Hydro Operations, incl. changes to minimum flows
- Tire Removal at Mayfield
- Gravel Augmentation Decision Document
- Boat ramps and recreational levels
- Trout Hatchery Remodel Update
- Cowlitz Restoration & Recovery Fund
- Downstream Adaptive Management TWG
- Additional Tilton Release Site
- M&E Subgroup Report
 - Adult Coho Presentation?
- FHMP Process Update
 - Major themes for Cutthroat and Chum
- Agree whether to meet in July and Identify Agenda Topics for next FTC Meeting

Parking Lot

- Steelhead Recycling Program

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Cowlitz Salmon Hatchery
Final Public Meeting Summary
June 4, 2019 from 9:00 – 2:30

Attendees:

Travis Nelson	TPU
Tom Wadsworth	WDFW
Carol Serdar	WA Dept. of Ecology
Jim Pacheco	WA Dept of Ecology
Sam Gibbons	Tech Rep for WDFW
Brian Gale	Tech Rep for WDFW
Bryce Glaser	Tech Rep for WDFW
John Serl	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Matt Bleich	Tech Rep for TPU
Eric Shoblom	Tech Rep for TPU
Tim Hoffnagle	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Chris Foster	Tech Rep for TPU
Melora Shelton	Tech Rep for TPU
Rudy Salakory	Cowlitz Tribe / Tech Rep for TPU
Laura Wolfe	LCPUD
Debbie Carlson	BPA
Lyn Wiltse	PDSA Consulting / Facilitator

2019 FTC Meeting Dates: July 2 (FHMP Placeholder), July 16 (FTC Placeholder) Aug. 6, Sept. 5 (Thurs.), Oct.1, Nov. 5, Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery unless otherwise specified.

Action Items:

- Travis: Send out Doodle Poll for June CRR Fund Conference Call to discuss CRR Workshop purpose, topics, and date.
- Travis: Send out Doodle Poll and/or meeting invites for potential July 16 FTC Meeting.
- Matt: Send out Confirmation of FHMP Workshop and agenda for July 2.

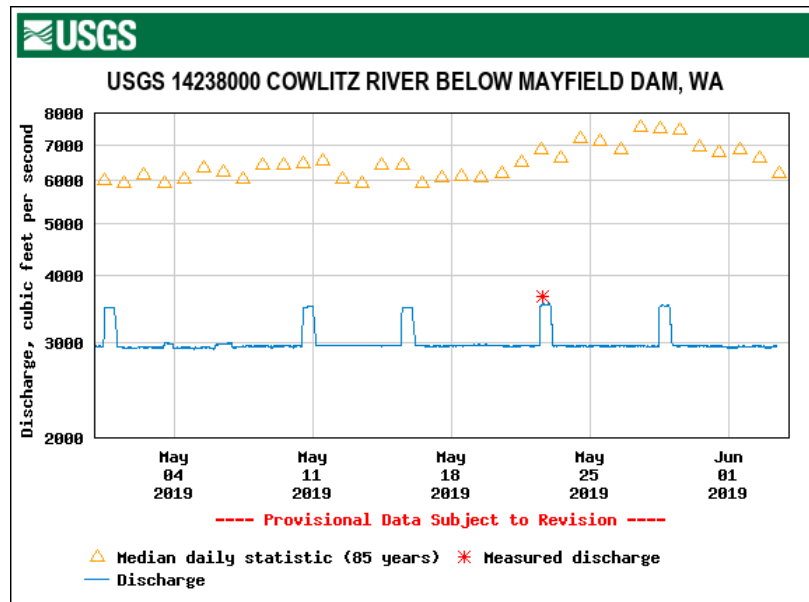
Announcements

- Hydro Operations: Melora reported that low inflows into Riffe Lake continued in May, with a daily average of 6,400 cfs (historical average is 9,100 cfs). So far in June, low inflows are persisting with flows this morning at 4,465 cfs. She noted inflows were higher in April due to early snowpack runoff. Riffe is at 736' elevation. The target for refill is 748'. Snowpack at Paradise is at 50% of normal, snowpack below 4500 has melted out (about a month early). Since the last FTC meeting, TPU has been maintaining a reduced MIF of 2,900 cfs plus weekly fish transport flows of 3,500 cfs. MIFs have been stable with no trips or other events. The forecast is for continued dry conditions with inflows at 3,500 – 5,500 cfs. Riffe continues to refill but the rate of refill is very slow. Comparison to 2015? In 2015 the reservoir was full and this year

we have had less precipitation accumulation (after the meeting Power Management confirmed that in 2015 the max elevation was 771.5 in early June, about 7 ft from full; and anticipates about 7 feet from full (748) in 2019, plus or minus a couple of feet; and that there has been less precipitation in winter/spring in 2019 than in 2015).

Link to the USGS real-time Cowlitz River hydrograph:

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



Melora also reported that the boat launches are open at Mossyrock and Taidnapam North, as is the Mossyrock Park swim area. Due to low lake elevations, the Kosmos and Taidnapam boat launch and parking lot is closed. She shared the following link and phone number for updates to this information.

(888) 502-8690; <https://www.mytpu.org/community-environment/parks-recreation/river-flows-lake-levels/>

Though Leah was unable to join this meeting, Travis talked with her this morning before this meeting and she said the probability of refill to 748' remains quite low. By July 1, the flows will change for power production in accordance with the summer flows prescribed by the license. Travis will continue to inform all of future hydro operation plans.

- Ecology on the MIF Flow Reduction Protocols: Carol expressed appreciation for the variety of interests TPU has to juggle as it determines how best it distribute water from the dam, including water for fish. A huge benefit to fish is having cool water from the reservoir in the summer. She noted that the SA 12.7 states: *Where an Agency has prescriptive and mandatory conditioning authority over fisheries or instream flow issues, the FTC will coordinate and convey information to the appropriate decision-making Agency. Where no Agency has prescriptive or mandatory conditioning authority, the FTC will make recommendations to Tacoma, who will convey a subsequent plan to FERC, and provide a copy of such plan to the FTC. For recommendations made directly to Tacoma, Tacoma shall follow the recommendations of the FTC unless it can establish good cause for rejecting or modifying such recommendations. Should Tacoma reject or modify such recommendations, it must notify the FTC in writing within 30 days of receiving the*

recommendations and state the reasons for rejecting or modifying such recommendations. She then read from Article 412 in the amended FERC license: *As required by condition 2 of the incidental take statement, the licensee shall modify project operations to provide agency-specified stream flows downstream from Mayfield Dam within the time frame specified by Washington Department of Ecology (WDOE) or the Commission, not to be less than 48 hours from the time of the request, and that such flow modification will remain in effect until superseded by subsequent WDOE or Commission action. The licensee must notify NOAA Fisheries following initiation of a flow-change action. Such notification shall not cause delay to implementation of any flow change identified by WDOE or the Commission.* Carol then noted that Ecology requested on May 7, 2019, during the weekly flow operations meeting, that we go up to 3,500 cfs for fish. There are other factors to be considered that require holding or discharging water, but fish are first. Ecology understands this year it is too late to make modifications. There is also a need to be cognizant that we are providing the flows for fish. Ecology and FERC have the final decision in these matters. There is a need to honor the instream flow rules set up in the Settlement Agreement and licensing process. There is also a need to improve communications around decisions that impact flows. Ecology asks that TPU prepare a Decision Document on minimum flow reductions that provides for fish recovery (stranding plan). Planning for a drought needs to be done before a drought – not during a drought. Carol suggested planning occur well in advance for next year, perhaps the late fall timeframe.

- Tire Removal at Mayfield: Travis recounted that in the 1980s tires were placed in the reservoir as a joint effort between the then WA Department of Game and TPU. This year, with the low reservoir levels, there is an opportunity to remove (600-800) the tires. TPU found a funding option with WADOE to have the tires taken to a recycling location at no charge. This will be a collaborative clean-up effort. TPU is funding and performing the removal; WDFW is providing temporary storage of the tires, and Ecology is funding the transport of the tires to a recycling location. The three entities will participate in a visit to the site to confirm logistics and the path forward. The actual removal is set to occur in September. TPU is securing the necessary permits including the HPA Corps permit and likely a 401. A Construction Stormwater General Permit is not needed. Carol observed that September is a lofty goal as she needs a 30-day review of the Water Protection Plan.
 - **Action Item:** Carol will confer with Isaac Standen (Ecology) on this effort.
- Trout Hatchery Remodel: Eric reminded all that the last remodel at the Trout Hatchery occurred in 1968. For the current remodel, TPU went through a master planning process – which involved a holistic approach to the remodel. They are now evaluating all the alternatives within the Master Plan and looking at ways to maximize flexibility while managing costs. The aim is to create a facility that will serve now and into the future. TPU has circumvented the planning process a bit by replacing the generators of the ozone plant as their parts had become obsolete. The new generators should be installed in time for the 2020 season. The continuing planning process is identifying optimal phasing and prioritization - the most logical way to proceed with the upgrades. How will WDFW expertise be incorporated into the remodel process? There is a need to find a place for the fish during construction. TPU will engage WDFW once they have identified a possible option such as developing the ponds further and using them instead of the raceways during the

remodel. Note: Carol noted Blue Creek (behind the raceways) is not on the Water Protection Plan. Matt Peter (TPU) mentioned an initial dredging project to lower the bed height of Blue Creek, so it doesn't flow down through the raceways. This might require a construction stormwater general permit.

- Downstream Adaptive Management TWG: Matt reported this group last met in late May. The annual draft report summarizing Article 1 – Downstream Fish Passage associated with Cowlitz Falls is out for FTC review with comments due by July 1. One comment received was to incorporate the report into a general operating report for what the Cowlitz Falls Facility (CFFF) looks like and how it works. Matt has discussed doing this next time with Chris Foster who coordinates the CFFF. There was a good discussion around the FCE metric – which is key in determining if license goals for fish passage and survival are being met. A number of ideas (e.g., annual average) about how best to calculate FCE are being discussed in the spirit of adaptive management. As populations and seasons vary over time, there may be opportunities to perhaps stratify the FCE through a different lens. The TWG will come back to the FTC with a recommendation on this prior to the next annual report. Matt sees the fact that we are having these discussions as good news as it indicates we are starting to get close to where we want to be with the collector. The reason the TWG gets to struggle through this is the vague language in the license. One of the recommendations to the FTC may include an amendment to the license. Current performance in 2019 for Steelhead and Coho is close to 80%. This is above the averages from prior like-water years. The FTC and the M&E group asked the TWG to take on the downstream passage topic for Mayfield as well. The TWG has begun to discuss the current situation, associated challenges, and juvenile bypass improvements that are taking place. They will give the FTC a broad update on what that project will look like.
- Additional Tilton Release Site: Eric explained that plans with WSDOT for this site have been finalized. WSDOT has approved the concept and TPU has been able to accommodate their additional requests. Eric will forward to the FTC the final set of drawings that will be going in for permit. WSDOT is reviewing these final drawings now. TPU is also working on a land use agreement and an internal SEPA. The schedule will likely extend a few months beyond the original target date of July 1 as there is uncertainty regarding the time needed for the contracts, construction and fabrication process. The M&E group is developing a plan for fish disposition at this new release site.
 - **Action Item:** Eric will send plans out to the FTC, including Ed Meyer (NMFS).
- Gravel Augmentation: Travis explained the intent of the gravel augmentation Decision Document that was approved by the FTC, noting that it was for high flows to pick up and transfer gravel placed adjacent to the channel downstream. The existing gravel pile is not being dispersed according to plan. The alternate location identified to deploy gravel downstream at Mill Creek has been met with permitting challenges. Another complication is this alternate location happens to also be a popular place to fish for Steelhead and fall Chinook. TPU wants to coordinate with the angling community on this. The gravel augmentation effort is now delayed at least for this year, requiring amending / replacing the Decision Document on this. Peggy encouraged TPU to hire a consultant to write the final gravel augmentation plan as they don't know how long the interim plan (due in December) might be extended.

- **Action Item:** Travis will send out last Gravel Augmentation Decision Document approved by the FTC along with a list of options to consider.
-

Meeting Summary Approval

The April 30, 2019 FTC Public Meeting summary was approved with edits from WDFW and Ecology and will be posted to the FTC public website. The edits are much appreciated.

Cowlitz Restoration & Recovery (CRR) Fund

Presenter: Melora Shelton

Melora reported that the LCFRB has received one grant application so far for a habitat project. Peggy, Paul, and Melora joined the LCFRB TAC for a visit to the site (Yellowjacket Creek) in May. Tacoma has received four letters of intent for covering 6 potential proposals on the hatchery side. These spurred initial conversations between Tacoma and the applicants about which projects might move forward, recognizing that the potential proponents lacked the resources to prepare solid applications on admittedly very short timelines. To that end, and to make the process as collaborative and accessible as possible, TPU hosted a roundtable discussion for the applicants about the program and next steps for processing the draft applications. Attendees included NW Fisheries Enhancement, Friends of the Cowlitz, Coastal Conservation Association, and WDFW. The due date for applications is July 14. Melora expressed appreciation for all who are participating in the process, and that the process will help everyone better understand and develop projects that will further recovery goals. She also noted this is a learning year for all involved.

Peggy asked if TPU plans to hold separate meetings regarding the CRR program in the future, that they notify the CRR Subcommittee. Further discussion included the following:

- Need equitable consideration between hatchery and habitat-type projects.
- There will be learning and growing pains along the way.
- The Salmon Recovery Fund Board process will be mirrored as much as possible in the CRR program.
- The CRR Fund protocol is already described in the LCFRB manual (approved by TPU and the LCFRB Board). Steve noted the need to operate in a way that complies with what is in the manual. Any changes would need to be broadly communicated ASAP.
- TPU wants to make the process transparent and understandable because they will be awarding public money. Citizens and organizations who want to submit a production project will likely need to garner support from agencies that already are familiar with habitat projects for salmon recovery. TPU wants to be sure everyone is on board and no ideas are left stranded.
- The FTC is working under the rules of the current FHMP as the revision is being developed.
- According to plans approved by the FTC, CRR Subcommittee was going to review the applications and bring recommendations back to the FTC. Travis explained that in this low application year, TPU wants to move this process into the FTC to ensure year one is a fully vetted and transparent process. This could also be more efficient to keep the whole FTC (with broad expertise) involved rather than the Subcommittee bringing in expertise as they need it.
- TPU only received an order from FERC in January of 2019 of its Plan to Abandon Volitional Upstream Passage. While waiting for that approval, the CRR Fund

Subcommittee began its work with TPU committing to fund the 2019 grant round in the event the plan was not approved by FERC in time.

- The FTC has been relying on the work of the CRR Fund Subcommittee, including approving principles and the specifics of how to evaluate the habitat projects. If we change that now, we would need full FTC support, including revisions to already approved decision documents or perhaps new ones.
- Travis suggested convening a CRR Workshop to discuss how best to move forward in this initial year of the program.

Action Item: Travis will send out a Doodle Poll by June 7 to select a date for the CRR Fund Workshop (topics to include ranking and schedule).

Monitoring and Evaluation Subgroup Presentation on Coho

Presenter: Phil Sandstrom

Phil reminded everyone that the last presentation from the M&E Subgroup was on Fall Chinook. The Coho presentation will follow the same format as was used for the prior presentation on Fall Chinook. He acknowledged that this is a collaborative effort by members of the M&E Group.

Phil described the current state of Coho for adults returning to the Cowlitz River (24% are harvested; 21% are transported upstream; 13% spawn in the Lower Cowlitz River; 4% come back to the separator and are incorporated into hatchery broodstock; and 38% are surplus.) These data were based on 5-year rolling averages, combined hatchery and natural-origin.

There is a consistent number of NOR adults coming back and there have been some big years for HOR returning to the Cowlitz River basins. He gave an overview of the total harvest for the ocean, Columbia, and Cowlitz Rivers, noting most of the NORs are harvested in the ocean: NORs: 53% harvested in the ocean and 47% in the Columbia. HORs: 48% harvested in the ocean; 28% in the Columbia; and 24% back in the Cowlitz River.

Some HORs are transported upstream to support reintroduction, a somewhat lower proportion are used for hatchery broodstock, and a larger portion are surplus.

Over time, trends for Coho are boom and bust. A lot of Coho jacks return to the separator (at a rate of nearly 50% for the 2018-2019 season). There was a disproportionately high number of HORs returning to the Cowlitz River. The TWG is looking at SAR values to evaluate how the integrated program (970K) performs compared to the segregated program (1.2 million). A favorable Coho adult return to the Cowlitz is predicted for this year. There is a need to determine how to respond when starting to see high numbers of jacks returning to the separator. Put on spawning grounds? Use them for surplus (segregated program)?

Coho adults are collected for hatchery broodstock. For the integrated program, when they backfill with HOR fish, (2013-2015) they are first generation HOR. In most years we surpass the smolt production goal for the integrated program and are mostly on target for the segregated program.

Lower Cowlitz River Spawning and Harvest: Low numbers of HORs have been documented on the spawning grounds. We are close to achieving goals for pHOS in the lower Cowlitz basins even with two large hatchery programs.

Summary:

- Production levels not changed but returning adult abundances increased.

- Harvest in ocean, Columbia River, and Cowlitz River fisheries ranged between 9,000 and 37,000 fish since 2010.
- Natural spawners ranged between 2,000 and 12,000 adults in the Lower Cowlitz River and 1,300 and 9,000 adults in the Tilton, and 300 and 7,000 adults in the Upper Cowlitz.
- Average number of fish sent to surplus since 2013 is 16,794 and ranged from no fish to 63,182.
- Average number of jacks since 2010: 8,071 hatchery jacks 319 natural jacks
- Integrated broodstock program developing since 2009.
- Integrated program operating at 100% pNOB in almost all years.

Gaps in Understanding:

- Natural populations – Positive identification for upper Cowlitz Coho. Can't positively ID the origin of Tilton / Lower Cowlitz Coho on spawning grounds or at separator.
- Focus has been on Lower Cowlitz tributary spawner abundance estimates.
- Lack understanding of conversion of transported adults to spawners
- Poor understanding of mainstem spawner escapement and distribution
- Unknown impacts of integrated vs. segregated hatchery programs on natural populations

Next Steps to Inform Management:

- Natural populations - improve ability to identify population origin on spawning grounds and at separator.
- Develop strategy for transition to a fully integrated hatchery program.
- Boom or bust nature: in the absence of better forecasting it is hard to prepare for good and bad return years.
- How to maximize production for recovery purpose in the upper Cowlitz basin while maintaining/increasing angler harvest opportunity (where we all want to be).

AM Public Comment Session *(FTC responses appear in italics.)*

Chris Vandenberg: If proponent is on the ranking committee, do you get to rank your own project? *No. That would likely present a conflict of interest.*

Randy LeDuc: Randy attended the TPU meeting re the CRR Fund program. He wanted the FTC to know that the meeting was mainly informational so folks can come with a quality project. He appreciated TPU having the meeting and hopes to see progress in harvest opportunities.

Leroy Wisner:

Trout hatchery- net pen netting? Lack of bird netting on large ponds at the Trout Hatchery - *With the remodel looming, TPU took drastic measures to increase the hazing. Hired USDA FS initially – but only had them eight hours/day (daylight to sunset). Had some evaluation efforts to see how many fish they were losing. They found they were very successful. Loss was down to 3% in some years. At the remodel, TPU plans to fully net the ponds. They have installed heron block netting which is proving to be quite successful and have hired a private contractor now who is very attentive and TPU and WDFW are working well together to address this issue and improve fish estimates of outmigration numbers.*

Riffe Lake: Will the old highway be open to use as a boat launch when water is low? *No plans for this (yet), though open for discussion.*

Timeline on Mossyrock Dam repair *Still working with a consultant to come up with alternatives to reduce/eliminate risk and come up with the best alternative. Matt noted there was a public meeting on this a few weeks ago. These materials were available online.*

Greg King:

Hasn't heard the FTC discuss recovery for the Orca Whale. The CRR Fund process had too tight a window. His project got shut down. Need to focus on recovery of Spring and Fall Chinook as this will help with the recovery of orcas.

When Coho is the most native species to the Cowlitz River season, the focus should be solely on an integrated program. Sees it as a waste that on a good year 63K Coho were sent to food banks as surplus, however, this could make a nice fishery up at Scanewa. *This is being addressed in the FHMP being drafted.*

And what about satellite ponds (rearing facilities)? *Making recent efforts to put a contract in place with the HGMP consultant to ensure we have all opportunities available to us – incorporating satellite rearing facilities makes a lot of sense to Matt. He will bring these discussions to the FTC. WDFW and FTC are more than willing to tackle this issue once there are options on the table to discuss.*

FHMP Update

Presenter: Matt Bleich

Matt explained that they recently heard back from FERC regarding the 1-year request of time made in January. FERC has approved a nine-month extension – until October 18 of this year. FERC would need additional justification in the form of letters of support from the FTC, WDFW, and NMSF for any additional extension beyond that date. Matt suggested that FERC wants to see concrete signs of progress being made toward a completed work product. If this occurs, they will likely respond with a final drop-dead date for the FHMP submittal.

He expressed great appreciation for the considerable time and effort people are devoting to the FHMP process. FTC members reviewing the chapters have noted the documents are very large and this presents a challenge in reviewing them in a timely manner. To date Matt has been fairly accommodating with extending the schedules he puts forth to honor the time needed for the review effort. He explained that with the October deadline he will necessarily be less accommodating with such requests going forward and apologized in advance for this. He acknowledged the FTC has done a lot of good work and has made great progress and as the initial chapters take shape and are approved, subsequent chapters should fall into place more easily.

Currently Status: The workshops are yielding good work products in terms of the themes to be included in the various species chapters. TPU recently received the last of the feedback on the Chinook Chapters and he was pleased to report that there were no surprises in any of the comments. TPU hopes to wrap up comments on the Coho Chapter by June 7.

TPU will not be addressing structural comments as this time – They have engaged a consultant to address this. Matt will see if the consultant can possibly attend the FHMP placeholder meeting on July 2 to engage directly with the FTC on these issues. Schedule highlights:

- Spring Chinook Themes – The chapter comment period has passed. Matt asked that any additional comments on the major themes derived from the workshop be provided by June 7, 2019.

- Coho Chapter Review and Themes – The comment period for coho has passed. Comments on the major themes is due June 7, 2019.
- Steelhead Chapter – This chapter is currently in development. Comments on major themes from the workshop and provide comments are due by June 14, 2019.
- Cutthroat and Chum Chapters – Development of these chapters will begin in the next couple of weeks. Please provide comments to the themes (highlighted in the attached) by July 2, 2019. Note: the Steelhead, cutthroat and Chum themes are all in the same attachment.
- Please do not focus comments on the structure or format of the document. These comments will be addressed by the technical editor TPU has contracted for this role. They will engage interested members of the FTC as soon as possible.
- The Chinook Chapter should be out to the public in a couple of weeks.
- TPU will incorporate Chinook edits into revised set of Chinook Chapters and send out for public review the middle of June. Note: These won't contain structural edits as the structural review will continue with editor.
- By July 1 the Steelhead Chapter should be out for review.
- The M&E Chapter is under internal review at TPU and will go back to the M&E Subgroup for additional work.
- The Annual Project Review (APR) Chapters are now in development.

Action Items:

- Matt: Send out themes for Spring Chinook, Coho and Steelhead ASAP.
- Matt: Follow up with dates of requested actions given the accelerated FERC submittal schedule.
- Matt: Send out agenda for July 2 FHMP Meeting
 - Review Structural Component with Consultant (?)
 - APR Prep
 - CRR Update (report from June workshop)

Annual Project Review

Presenter: Matt Bleich

Matt explained that it has been a few years since TPU engaged in the APR process which was deemed a low priority as we weren't making any program changes. Matt now believes it is important to do the presentations for the public using the models to describe why we are doing what we are doing, and how it fits with the models even if it is status quo. For this year Matt proposes the APR be a three-day process, incorporating lessons learned from prior years, requirements from the FHMP and the license, and the potentials for improvements:

1. Day 1: Combination of APR /Science Conference on July 10:
 - a. Cover the purpose of the APR as described in the FHMP, summarize trends from last five years, describe the decision rules, and circumstances that would call for changing those rules.
 - b. Set the stage for Day 2 with various science presentations, data from models, HSRG rule set, Hatchery operations, targets, and whether the program met goals and why/why not.
 - c. Members of the FTC would be encouraged to attend the presentations and talk with the public, ask / answer questions, etc.
2. Day 2: During FTC Meeting on August 6:

- a. TPU would present a suite of programmatic options to address the decisions and there would be a conversation with the FTC and then develop together what the suite of options would entail.
3. Day 3: Public meeting the week of August 12:
 - a. Present options to the public and solicit feedback.
 - b. Present the themes for the future GHMP and receive early feedback.
4. Final product: TPU would prepare a summary of the APR process and the conclusions and plan for operations for 2020 season.

Action Item: Matt will send an outline of the 2019 APR plan and draft agendas for the July 10 and week of August 12 meetings.

PM Public Comment Period

Greg King:

Concerned about not having grant writing skills. He would like to see an extension - perhaps 10 days to submit a proposal for Chinook recovery and orcas. He is also working on a chum program. *Travis agreed that this is a reasonable request and it is a challenge for citizens who don't have the same resources available to them as agencies do.*

Jack Tipping:

The Cowlitz River is closed to spring Chinook Fishing as is the whole lower Columbia to protect Cowlitz spring Chinook. Anger about this may explain why the Columbia River Endorsement fee was terminated. Based on (Jack's) run prediction model those fisheries will remain closed for at least the next two years. The closures cost millions of recreational dollars and the low numbers inhibit upper basin recovery. Suggests that the FTC (with no sports fishery representation) is partially responsible for this by varying hatchery release guidelines established in 1991. FTC didn't even try experimental releases beforehand. Put forth a proposal last week for CRR funds. The proposal was poundage neutral and called for rearing some coho in the existing Mayfield net pens to make room at the hatchery so some spring Chinook could be reared to the 1991 standard. The result would increase adult returns by about 600 more adult fish, many of which could be placed in the upper basin. However, the proposal was rejected due to something about the APR committee having to approve these types of proposals (production changes) first. Jack urged the FTC to take swift action and approve these types of proposals so we can once again have sport fisheries and also improve upper basin recoveries. Rome is burning.

Randy LeDuc:

If things go well with the FHMP, when would it be implemented? *FERC has been less than responsive for turnaround approvals. The FTC hasn't yet had this conversation as the focus has been on the development of the FHMP. Implementation discussions will follow. In the meantime, CRR Proposals can be related to the 2011 (current FHMP).*

Is part of the consideration going to be some flexibility – if we know there will be a problem in the ocean, can the managers have some flexibility to increase egg take, adjust for predation, and so on? How do we improve rate of returned fish – create a program with more wins in it than “I'm sorrys.” *Yes, we are writing the new FHMP with flexibility in it. The HGMPs will help with permits / permissions to drive these programs forward. That same flexibility / perspective will be included in both documents.*

We are in crisis. How do we streamline the management process – first things first. If we improve habitat but have no fish, then that's a non-starter. Today's decisions impact fishing opportunities 4-7 years from now.

Greg King: Timeline of FHMP? Get each chapter to review? *TPU is ready to start releasing some drafts for review since the successful workshops.*

Plan for July 16 and/or August 6 FTC Meeting

Presenter: Travis Nelson

Travis will be in touch with all regarding the next meeting dates.

Possible Topics for next FTC Meeting

- Hydro Operations, incl. changes to minimum flows
 - Tire Removal at Mayfield
 - Gravel Augmentation Decision Document
 - Trout Hatchery Remodel Update
 - Cowlitz Restoration & Recovery Fund (new or amended Decision Document)
 - Downstream Adaptive Management TWG
 - Additional Tilton Release Site
 - M&E Subgroup Report
 - FHMP Process Update
 - Water Quality Summary Report
-

Meeting Evaluation

- Went well
 - Lots of information was shared
 - Good, frank discussion
 - Confusion about start time and location
 - Multiple agendas sent in last week caused confusion
 - Acoustics - need a microphone
 - Appreciated lunch being supplied – perhaps sandwiches for lunch next time instead of pizza?
-

Parking Lot

- Review FTC Protocols
- Steelhead Recycling Program

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Cowlitz Salmon Hatchery
Final Meeting Summary
July 19, 2019 from 1:00 – 4:00

Attendees:

Travis Nelson	TPU
Carol Serdar	WA Dept. of Ecology
Nick Chambers	WA Council of TU / TU / American Rivers
Michelle Day, by phone	NMFS
Jim Pacheco, by phone	WA Dept of Ecology
Sam Gibbons	Tech Rep for WDFW
Brian Gale	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Eric Shoblom	Tech Rep for TPU
Chris Foster	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Melora Shelton	Tech Rep for TPU
Steve West, by phone	LCFRB / Tech Rep for TPU
Laura Wolfe	LCPUD
Lyn Wiltse	PDSA Consulting / Facilitator

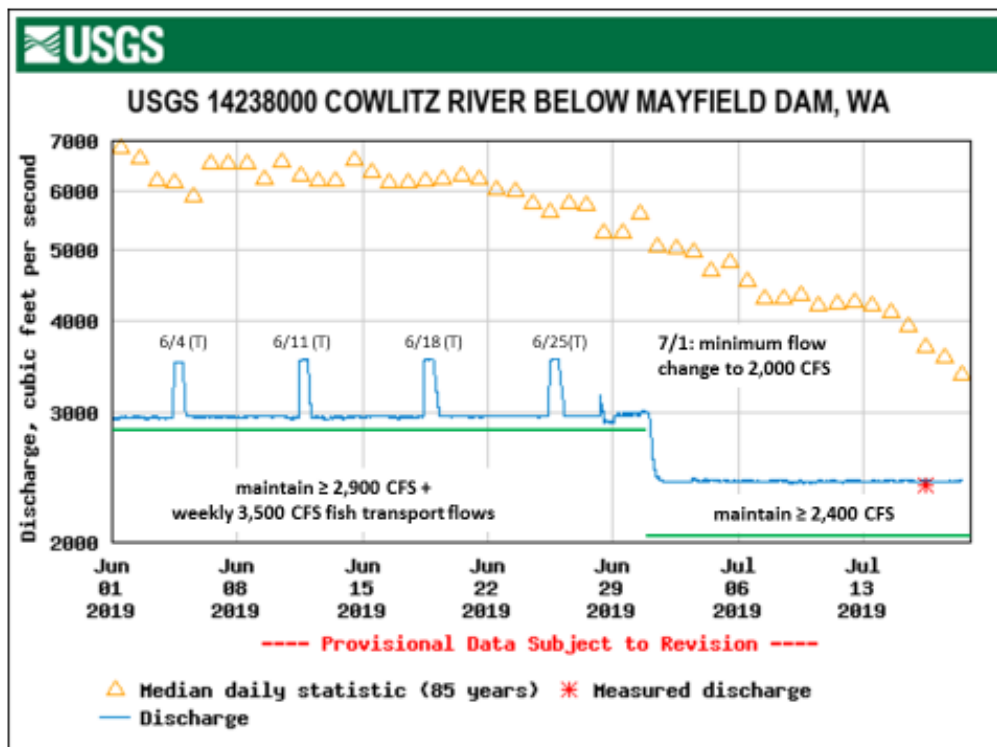
2019 FTC Meeting Dates: Aug. 6, Sept. 5 (Thurs.), Oct.1, Nov. 5, Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery unless otherwise specified.

Announcements

- Welcome Nick! We were pleased to welcome Nick Chambers who is assuming the position formerly held by Paul Sparks as the official FTC member representing Trout Unlimited. Paul has now assumed the role of TU's Technical Rep. Nick hails from Index and has ten plus years of experience with NW fisheries. He is looking forward to learning more about related hydro operations.
- Hydro Operations: Florian reported that low inflows (less than half the monthly average flows) into Riffe Lake continued in June, with a daily average of 6,400 cfs (historical average is 9,100 cfs). So far in July, this trend is continuing. With such low inflows, TPU was not able to refill the reservoir, though they got as close as 740'. Outflows: The MIFs changed on July 1 from the adjusted MIF down to the regular MIF of 2K cfs. While TPU seeks to stay above 2,400 cfs to support recreation, there is talk about dropping closer to the actual MIK of 2K cfs. This would require public outreach. The construction on the Barrier Dam next summer will require flows of 2K cfs. In the meantime, they are likely to drop flows to 2,200 cfs to help with water and power management as they respond to market demand. TPU also makes every effort to reduce the amount of variation in the reservoir elevation. The 2K cfs MIF in the license remains in effect until Sept. 30 when it increases to 3,500 cfs. Ecology is concerned with impacts on all water life in drawdown situations, not just fish. Freezing levels are currently around 10K'. Inflows are at 1,600-2,400 cfs. TPU will need to start drafting Riffe Lake when outflows exceed inflows.

Link to the USGS real-time Cowlitz River hydrograph:

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



- Trout Hatchery Remodel: Eric reported that plans for the remodel are both extensive and expensive. He and his team are continuing to build a case for the remodel to present to TPU upper management for approval. They did an internal storyboarding exercise where they identified the different viewpoints of TPU stakeholders. The idea is to create a comprehensive, inclusive, and compelling message around the need for the remodel which will likely be completed in phases over a period of 5-6 years. Carol advised TPU to apply for one construction permit for the project. Eric explained that the FTC will be extensively involved once TPU gets to the design phase.
- Additional Tilton Release Site: Eric explained WSDOT has approved the conceptual design which is now at the TPU Craft Shop where the design is being taken to a new level of detail. The site development will go out for bid this week or next. Carol noted there is a lot of riprap at the old bridge where the structure will be built and that TPU needs to be sure to protect the riprap before the infrastructure is put in place.
- Annual Project Review: The Science Conference on July 10 served as the kickoff for the APR process. Travis explained that the information coming from the In-season Implementation Tool (ISIT) helps with future planning to determine how the programs fit with recovery goals by way of supplementation efforts. It currently appears that there won't be any significant changes in these efforts through this APR process. Follow-up conversations will be scheduled for the near future. TPU is seeking to improve the way they have been doing this APR, which is part of their licensing requirement.
- FHMP: Travis reminded all that TPU is still operating under the 2011 FHMP until the updated version is submitted and approved by FERC. The Chinook Chapter was sent out last week for FTC and public review with comments due by Aug. 2. The Coho Chapter was sent out during this meeting with comments due by August 9. There will be more opportunities to have conversations about FHMP products in the future, including our August meeting. Nick indicated TU will be sending in some comments.

- Cowlitz Falls MIF: When Peggy talked with Erich Gaedeke of FERC about reducing flows at CF to protect against the likelihood of spill through Cowlitz Falls Dam, he said he had no problem with taking such action for up to four weeks. Laura sent to WDFW a request asking to reduce minimum flows to 500 cfs. WDFW approved the request and it is Peggy's understanding that LCPUD is already implementing this. The strategy is to avoid spill through Cowlitz Falls Dam that might impact fish collection. If it appears the flow reduction needs to be extended beyond 4 weeks, Peggy will have to get approval again from Erich. Chris expressed appreciation for everyone's collaborative and timely efforts on this. He also noted that the spill event through Cowlitz Falls Dam on July 2 was planned by LCPUD to support maintenance activities. All the subsequent events where spill was needed TPU was able to bypass using the Northshore Collector. Chris also reported that there is now daily coordination with LCPD operators for spill / pump-back using the Northshore Collector, together optimizing fish collection. Establishing such protocols now will greatly facilitate taking such actions in the future.
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Meeting Summary Approval

The June 4, 2019 FTC Public Meeting summary was approved with edits from WDFW and LCPUD and will be posted to the FTC public website. The edits are much appreciated.

Gravel Augmentation

Presenter: Florian Leischner

Florian walked through a presentation that explained the history of this SA Article and how there has been no gravel augmentation since 2016. He referenced Decision Document 2019-2 which was approved by the FTC in December of 2018. He explained that at that time there wasn't a full understanding of public concerns with the interim placement location at Mill Creek. Furthermore, there was a permitting delay and a question about the USACE vs. FERC as leads in ESA consultation. TPU is now pausing and considering alternate locations.

Carol asked that this be included in all monthly FTC updates. Michelle suggested that an email be sent out right away (vs. waiting until the next FTC meeting) when there are issues that cause delays as she may have been able to be of assistance. Travis agreed that they will provide such information in a more-timely manner in the future.

Florian showed a photo of a DNR road that has been reestablished down to Barrier Dam, though not necessarily to the location where the gravel would be placed. TPU has easements that don't exactly align with where the road is now. This issue needs to be resolved with landowners. TPU has contacted Forterra who owns property downstream that may serve as an additional site. TPU plans to do some angler outreach and coming up with a new implementation plan that will focus on placing gravel where it is most likely to be mobilized. The sites within the 11-mile study reach have not changed significantly since 2004. The plan should include several sites and not assume the gravel will be mobilized further downstream. It was suggested that, given the above-described complexities, TPU consider hiring a consultant to shepherd this project through to completion.

Action Items:

- Travis: Ask Matt Peter for the USACE contact on this issue and inform Carol and Jim.
- Florian: Touch base with Michelle and Matt Peter re ESA consultation.

- All: Please inform Florian of suggestions of alternative sites.

Cowlitz Restoration & Recovery (CRR) Fund

Presenters: Melora Shelton and Florian Leischner

Florian explained this group last met on July 12 via phone and WebEx and presented criteria and ranking on how to technically evaluate what is submitted for funding. TPU has shared the final applications received (one each for habitat and hatchery-related projects). The Habitat projects have been reviewed by the LCFRB folks and are posted on their website. They will also be posted on the FTC website. Note: Travis is working on making the FTC website more useable for everyone.

Melora reminded all that the proposed criteria are nothing new as they were derived and refined from the following FTC documents:

- License and FERC orders
- Implementation Plan (2014)
- Implementation strategy (2017)
- HAP Guiding Principles (2018)
- LCFRB 2019 Manual

She walked through a PPT of the currently proposed criteria, scoring, and evaluation framework. As this process leans on LCFRB for technical review, there are some elements under certainty of success and cost that hadn't been defined for hatchery-associated process. TPU worked to ensure that proposed hatchery-related criteria were aligned as closely as possible with those of habitat. They include:

- CRR Program Priorities
- Benefits to fish
- Certainty of Success
- Cost

Program priorities have questions from the Guiding Principles. Priority would be given to projects proposed for above the Barrier Dam and benefiting Spring Chinook. They will also prioritize projects that support current recovery efforts. TPU proposes a simplified scoring system for this initial round of applications. There was discussion around the need for zeros as well as "fatal flaw" zeros, that would be distinct from "low." Ideally the initial screening would catch the zeros and it would be brought to the FTC as potentially ineligible. Zeros will be incorporated into the next version of the scoring. Eric suggested adding how the proposed project might impact fishery programs. He will draft something on this for discussion at the CFF Fund conference call next week. It may be good to include some weighting to the scoring for hatchery related projects.

There remains some confusion about the role of the FTC and the CRR Fund Subgroup and whether a hybrid process, as discussed in the last conference call, will be used for this initial round of application. This will be discussed further at the upcoming conference call.

Next Steps: Melora will incorporate feedback from this meeting into the evaluation criterial and scoring framework. She and Florian will set up a conference call to discuss further the week of July 22. The idea would be to get agreement on the framework and the process before the Aug. 6 meeting where a Decision Document would be presented. It is important to have things clearly defined so as to easily defend any fund/no-fund decision.

The application for the habitat project has to do with expanding net pens at Toledo Sand and Gravel. The hatchery-related application is for the third phase of a project at Yellowjacket Creek which would reactivate the flood plain project using engineered log jam.

Action Items:

- Florian / Melora: Schedule a conference call for week of July 22 and send out a draft Decision Document on this by July 30 for discussion and approval at the August 6 FTC meeting.
 - Eric: Send proposed language to Melora ASAP include in conference call discussion.
 - All: Send other thoughts / suggestions on scoring matrix and criteria to Melora by June 24.
-

Possible Topics for Aug. 6 FTC Meeting

- Hydro Operations
 - MIF Reduction Process
 - Tire Removal at Mayfield
 - Gravel Augmentation
 - Trout Hatchery Remodel Update
 - Cowlitz Restoration & Recovery Fund (Decision Document)
 - Downstream Adaptive Management TWG
 - Additional Tilton Release Site
 - M&E Subgroup Report
 - FHMP Process Update
-

Meeting Evaluation

- Need to work on our communication during and between meetings.
 - Good attendance for a Friday afternoon meeting in the summer!
 - Was nice to combine the meeting with the Mayfield tire removal field trip.
 - Appreciated Jim's patience with addressing the gravel topic a half hour later than what showed on the agenda
-

Parking Lot

- Review FTC Protocols
- Steelhead Recycling Program

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Cowlitz Salmon Hatchery
Final Meeting Summary
August 6, 2019 from 9:30 – 3:30

Attendees:

Travis Nelson	TPU
Tom Wadsworth	WDFW
Carol Serdar	WA Dept. of Ecology
Nick Chambers	WA Council of TU / TU / American Rivers
Michelle Day	NMFS
Jim Pacheco, by phone	Tech Rep for WA Dept. of Ecology
Paul Sparks	Tech Rep for TU / TU / American Rivers
John Serl	Tech Rep for WDFW
Bryce Glaser	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Brian Gale	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Eric Shoblom	Tech Rep for TPU
Chris Foster	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Melora Shelton	Tech Rep for TPU
Laura Wolfe	LCPUD
Rudy Salakory	Cowlitz Tribe / Tech Rep for TPU
Ann Weckback	LC / Tech Rep for Tacoma Power
MaryLouise Keefe and Dan Turner	R2 Resource Consultants
Greg King	Friends of the Cowlitz
Eli Asher, by phone	Cowlitz Indian Tribe
Lyn Wiltse	PDSA Consulting / Facilitator

2019 FTC Meeting Dates: Sept. 5 (Thurs.) Public Meeting at Chehalis Veterans Museum from 9:00-3:00; Oct. 1, Nov. 5, Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery unless otherwise specified.

Dove Chocolate Inspirational quote:

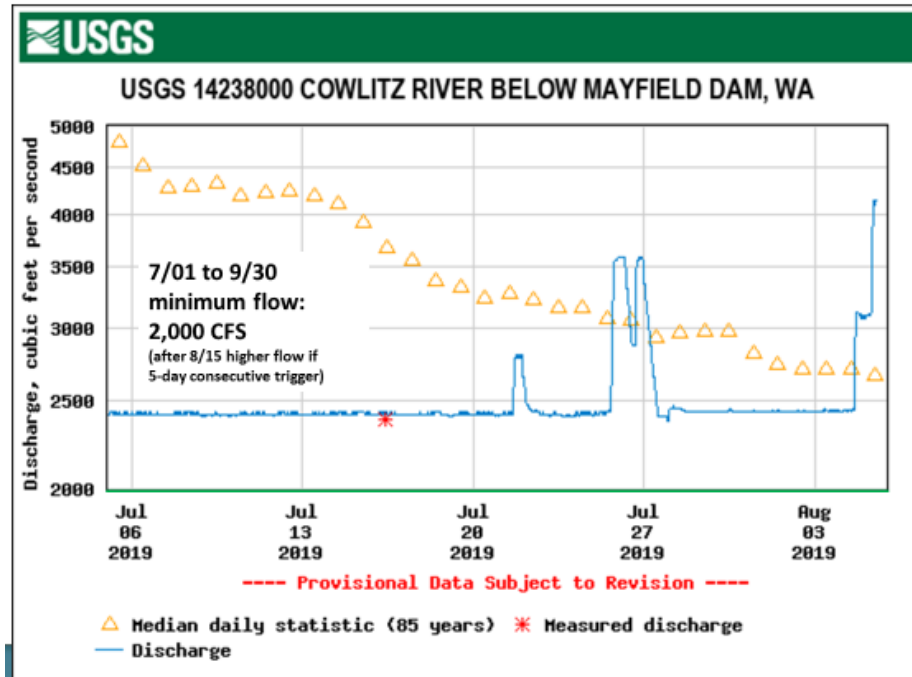
“We are all stories in the end. Just make sure it’s a good one.”

Announcements

- Hydro Operations: Florian reported that low inflows into Riffe Lake (currently at 735.45’) continue. Even with the reductions to the MIF, Riffe did not reach full refill. The boat ramps and swim beaches are likely to be open and useable through Labor Day. Outflows have been averaging 2,400 cfs and will likely stay above 2,000 cfs through the end of September. They were at 4,580 cfs at the time of this meeting but plan to ramp back down to 2,400 cfs by the end of the week. The forecast is dry with freezing levels at 11,000.

Link to the USGS real-time Cowlitz River hydrograph:

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



- Tire removal at Mayfield: Travis reported that TPU is continuing to look at permitting options and methods of extraction. They are working with WDFW on creative options with the aim of doing the removal in September to coincide with the timing of the Mayfield Lake drawdown. The SEPA notice is going out the week of August 5 and the HPA will follow. They had intended to remove the tires and store them at the salmon or trout hatchery. Since learning the tires have to be cleaned they are considering setting up a cleaning operation and alternate storage location such as the nearby switchyard.
- Downstream Adaptive Management TWG: Matt reported it looks like they will finish the season near or at FCE highs for Steelhead (81%) and 91% for Coho. The Chinook release groups are still out there. The first four release groups were at 75-85% FCE. The FCE for the last few groups has been around 50% as temperatures have increased. So far, the trend is similar for Chinook as for the initial two baseline years. Matt thanked Laura Wolfe, Peggy Miller, and Chris Foster for working so well together in anticipating the need for the MIF exemption, and putting the exemption in place in a timely manner. The TWG last met on July 16 and are now starting to work on the adaptive management suite of options for 2020. They plan to have a Decision Document on this item in time for the October FTC Meeting. They currently have four strategies in mind:
 1. Traditionally the collector has operated between April and August. The lowest performing fish have been Spring Chinook. They are now considering extending the operations to increase opportunities to capture Spring Chinook. They are discussing what the logistics of this would entail.
 2. To determine which life history strategies might be effective for Spring Chinook, the TWG will set up a study design to evaluate SAR for returning results (otoliths, scales, CWT, etc.).

3. They are considering setting up blocked study designs if had specific failure points for certain locations (e.g., entrance zone of the collector) or species. The study would test the impact of more flow and higher velocity (500 cfs vs 750 cfs through the tailrace discharge collector).
 4. They are evaluating what occurred the last two years to see what happened during spill events at 500 cfs and 750 cfs. Need to develop what the study design for this would look like. TPU has a contractor working on this now, in the 3rd year of 3-year contract. Ecology wants to be notified in writing as soon as possible in writing when flow changes are planned (impacts to TDG downstream of the dam).
- M&E Subgroup: Phil reported the Draft Annual FHMP Status Update should be out for FTC review in the October timeframe. The M&E crew for Lewis County is getting information together and will deliver a draft to TPU for review by August 15. Consequently, the 30-day review for the FTC will start a little late. They currently anticipate December 30 will be the deadline to accommodate the necessary coordination with WDFW, the FTC and TPU. This group has been discussing a marking program for the Cowlitz Basin. They started with Cutthroat and Steelhead and would like to complete a marking strategy for NOR Coho before the collection season starts in March/April.
 - Additional Tilton Release Site: Eric explained the release structure is being constructed by the TPU Crafts Shop. He has received conflicting information on when the site development bid will be/was released. The timeframe for construction will likely be late October-early November. WDFW will conduct a review of the work Cascade Aquaculture has done on the site so far to see that it meets their mitigation agreement (which may need to be updated). They also need to keep pushing on the disposition plan. There will likely be some angry anglers if it is a large Coho year and this new release site is not functioning.
 - Gravel Augmentation: Florian explained they are restarting the designs – doing some field trips to check out the two additional sites (Forterra and DNR). They will need a Decision Document if they don't put gravel anywhere this year.

Action Items:

- Travis: Ask Matt Peter for the USACE contact on this issue and inform Carol and Jim.
- Florian: Touch base with Michelle and Matt Peter re ESA consultation.
- All: Please inform Florian of suggestions of alternative sites.

Meeting Summary Approval

The July 19, 2019 FTC Public Meeting summary was approved with edits from WDFW and will be posted to the FTC public website.

CRR Fund

Presenters: Florian Leischner and Melora Shelton

Florian briefly recounted the changes in the screening and scoring tool based on FTC feedback. These included Incorporating red flags, zero scores, binary evaluations (yes/no), and adding new HAP-specific “consider the following” language under Scope and Approach While there has been a lot of discussion, the screening and scoring language is founded on whether the core CRR documents (implementation plan, strategy, and guiding principles) or has been adapted from the LCRFB certainty of success and cost questions, except for the

HAP Scope and Approach language noted. All agreed that it doesn't make sense to fund projects that don't pass the "silly grin test."

Florian explained that we will hear the presentations by project proponents at this meeting and have an opportunity to ask clarifying questions. Then, each participating entity (one vote per entity) will do the scoring prior to the September FTC meeting to set the stage for an FTC-wide discussion at that meeting. The voting members of the FTC will make the consensus funding decisions at the October FTC meeting.

Melora reminded all that the FTC will review the effectiveness of this process in this initial year and there will certainly be chances to improve the tool and the process in future years. Some FTC members reported not feeling comfortable enough with the scoring tool to approve the decision document at this meeting.

Action Item:

- Florian: On August 9 follow up with NMFS, TU, and WDFW to review the tool. Following that conference call, coordinate with Travis to send out an email request either to approve the decision document electronically, or to do so at the September meeting.

Satellite Rearing Projects

Presenter: MaryLouise Keefe, R2 Resource Consultants

Matt introduced MaryLouise Keefe and Dan Turner of R2 Resource Consultants. He reminded all of the need to develop the HGMPs concurrently and consistently with the FHMP. TPU has extended R2's existing HGMP task order to address the license requirement for TPU to construct and operate satellite rearing facilities on the Upper Cowlitz River basin. She reminded all that multiple funding sources are available that may benefit multiple programs. The SA doesn't specify how the satellite facilities shall be used.

She also explained that the goal for this meeting is to brainstorm around the following:

1. Criteria that the facilities should meet (specific and regulatory, ecological, species interactions, logistics and operations, safety)
2. Objectives that these facilities will help us meet (specific and measurable – such as comparable with recovery, harvest)
3. Identify appropriate fish propagation technologies that support the criteria and objectives that come forward. Some of these make use of new technologies.

Feedback from discussions at this meeting will help to inform the concepts of satellite rearing that will eventually become a suite of options for design purposes in the future. She explained that R2 will create a draft proposal for the FTC to review. They will then integrate FTC feedback into a second draft which the FTC will also review.

FHMP Update

Presenter: Matt Bleich

Matt reminded all that when TPU asked for an EOT (Extension of Time) from FERC, they didn't get the full extension requested. A week ago, Matt talked with Erich Gaedeke who suggested an additional extension at the mid-October submittal deadline may be possible if TPU demonstrated a reasonable amount of product so that FERC could be assured a final extension would be sufficient in order to allow time for the FTC and the public to conduct a

full review of the whole FHMP as a single document. Ideally, an additional EOT request would be supported by letters of support from members of the FTC.

- The Chinook Chapter comments were due on August 2. Matt reported receiving feedback that is being addressed.
- The Coho Chapter comments are due August 9.
- The Steelhead Chapter FTC review period will be August 16-September 6 with public comment September 20-October 4.
- The Cutthroat and Chum Chapter review period will be August 19-30 for the FTC and September 6-20 for public review.
- The M&E Chapter will be to FTC in early Sept. Matt would like to see a quick turnaround on this (7-10 days).
- The APR Chapter is undergoing internal TPU review. The FTC review period is planned for August 26-September 6. The public review would be September 15-October 4.
- Introductory Chapters 1 and 2 are being reviewed by the consultant for consistency. These will be out as part of the whole-document review which will be around the second week of October, assuming FERC grants an additional EOT.

The consultant is working on the structure of the document which should be out for FTC to review in the next week or so. When asked about providing an updated annotated outline and crosswalk showing how nothing from the current FHMP was lost in this updated version, Matt assured everyone that the consultant had made sure this was the case. He regretted to say he would not be able to supply a crosswalk to aid in the final document review.

APR Process

Presenter: Matt Bleich

The next meeting (Day 2) will be held the evening of August 14 at the Veterans Memorial Museum in Chehalis. It will include a recap of Day 1, decision rule implementation, review of decision rules, proposed programs, themes for future fisheries and Hatchery Management Plan, and next steps. Public discussion and feedback will be invited for the proposed programs and the themes for the future FHMP.

It currently appears that there won't be any significant changes in these efforts through this APR process. We haven't made major changes for the last several years as we have been developing the FHMP Update.

In summary: Coho is trending in the right direction in the Upper Cowlitz. Fall Chinook is a down year. Spring Chinook – we are building abundance. No major changes proposed for Steelhead.

Matt walked through a slide showing the Decision Rules in the red-light, yellow-light, green light format and asked for feedback on the appropriateness of using this on August 14.

Cowlitz Restoration & Recovery (CRR) Fund Presentation and Review of CRR Fund Project Proposals

Presenters: Eli Asher (Cowlitz Tribe) and Greg King (Friends of the Cowlitz)

Proposal from Cowlitz Tribe:

Eli explained the scope and intent of the Cowlitz Tribe's proposed project: Cowlitz Indian Tribe Yellowjacket Creek Phase III. In addition to the LCRFB project record shared previously, final SRFB application information is available at the State's RCO PRISM website: <https://secure.rco.wa.gov/prism/search/ProjectSnapshot.aspx?ProjectNumber=19-1221>.

In this phased approach, they are partnering with the Forest Service and are looking to leverage funding into priority areas. Phase 3 (2021-2022), will include installing more engineered log jams to encourage braided island river planform and also includes replanting disturbed areas and log jam plantings. Eli has observed a lot of Coho fry in the area, but this is anecdotal information only.

Proposal from Friends of the Cowlitz:

Greg King reviewed their proposal to increase rearing capacity at the Toledo Sand and Gravel ponds to accommodate an addition 100K Spring Chinook. They want to increase the existing project to support reintroduction in the Upper Cowlitz. This matters from a recovery and Orca perspective. Michelle noted "We can produce more spring Chinook in the basin, not so sure about the hatchery." The \$125K cost that doesn't include the cost of marking and this would depend on how WDFW evaluates the harvest piece. Friends of the Cowlitz are in early discussions with the property owner about possibly selling the property to WDFW. The additional net pens might be available for Coho or possibly Steelhead rearing.

Greg King offered information on an artificial propagation enhancement project done by the Nez Perce Tribe at Johnson Creek in 1998 as an example of artificial propagation contributing to local recovery through enhancement. [Johnson Creek Summer Chinook - CRITFC](#) Some FTC members offered a caution on relying too heavily on the Johnson Creek Study.

Possible Topics for September 5 Public FTC Meeting

- Hydro Operations
- Activities during Mayfield Drawdown
 - Tire Removal / Boat Ramp Repair
- Gravel Augmentation Update
- Trout Hatchery Remodel Update
- Additional Tilton Release Site Update
- Cowlitz Restoration & Recovery Fund
 - Screening and Scoring Review and Discussion
- M&E Subgroup Report Update
- Downstream Adaptive Management TWG
- FHMP Process Update

Meeting Evaluation

- Agenda was overly full
- Record-breaking attendance
- Made good use of Web-Ex for those participating remotely
- Appreciated the two presentations seeking CRR Funding

Parking Lot

- Review FTC Protocols / Steelhead Recycling Program

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Veterans Memorial Museum, Chehalis
Final Public Meeting Summary
September 5, 2019 from 9:00 – 3:30

Attendees:

Travis Nelson	TPU
Tom Wadsworth	WDFW
Carol Serdar	WA Dept. of Ecology
Paul Sparks	WA Council of TU / TU / American Rivers
John Serl	Tech Rep for WDFW
Bryce Glaser	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Brian Gale	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Eric Shoblom	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Melora Shelton	Tech Rep for TPU
Ann Weckback	LC / Tech Rep for TPU
Laura Wolfe	LCPUD
Steve West	LCFRB
Debbie Carlson	BPA
Lyn Wiltse	PDSA Consulting / Facilitator

Remaining 2019 FTC Meeting Dates: Oct. 1, Nov. 5, Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery unless otherwise specified.

Cowlitz Restoration & Recovery (CRR) Fund: 2019 Grant Round Process

Presenters: Florian Leischner, Melora Shelton, Steve West

Florian walked us through the Decision Document 2019-8, outlining the CRR Program, screening and scoring materials. While TPU received email approval from some of the FTC members prior to this meeting, Florian and Melora thought it important to offer additional discussion, clarification prior to requesting approval at this meeting. After further discussion, and corresponding edits, Decision Document 2019-8 was approved.

Decision Document 2019-9 was reviewed at the August FTC meeting and approved at this meeting. It outlines how to use the scores to evaluate the process and make funding decisions. All participating entities will use these questions to score the proposed projects and, by September 20 send “draft scores” to Travis, copying Melora, so she can collate the scores into a single spreadsheet for review at the October FTC meeting. At that meeting, there will be a candid line-by-line discussion of the scores from each entity. The actual funding decisions will be made at the November 5 FTC meeting. Both decision documents will be circulated to the FTC for a 7-day period to allow comment by members not present at the meeting.

Melora walked through the process to access all the CRR-related documents which are stored in a single location for easy access on the FTC website. She offered to assist anyone

having difficulty with accessing the documents (contact info follows). Following this meeting, there will be a 2-week process for participating entities to review the proposals, complete scoring worksheets and return them to Melora by September 20.

Steve explained the current LCFRB rating and scoring process for projects. He displayed charts of the LCFRB process and results for habitat projects ranked during the SRFB/CRR round. He also explained other considerations including habitat units which tie to certainty of success, cost, etc. For certainty of success the LCFRB considers scope and approach, coordination sequence and constraints, and qualification. After walking through the complexities associated with the ratings, he announced that the LCFRB will be changing / streamlining the process for next year. An overview of the LCFRB rating and scoring information is included in the CRR-related review documents on the FTC website.

Action Items:

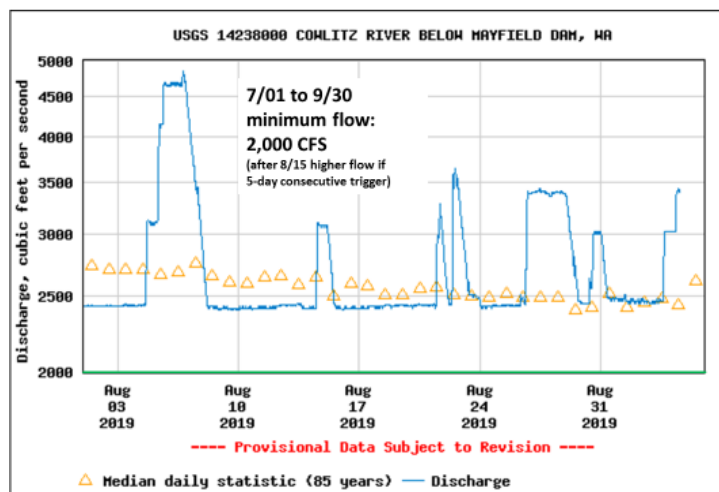
- Melora: Have Travis send out the scoring worksheets and instructions to all.
- All: If you need assistance accessing any of the CRR-related documents, contact Melora: 253-441-4994 (office); 253 820-7665 (cell); mshelton@cityoftacoma.org
- All: Email draft (preliminary) scores from your organization to Travis (copy Melora) by September 20 so she can collate the scores into single spreadsheet for all to review at the October FTC meeting. Ensure there is a designated point of contact for your organization for Melora to contact if there are any issues.

Meeting Summary Approval

The Meeting Summary from the August 6, 2019 FTC meeting was approved with edits and will be posted to the FTC public website.

Announcements

- Hydro Operations: Florian reported average daily inflows for the month of August are currently at 75% of normal, with an average inflow of 1756 cfs. The reservoir is slowly declining (at 728’ after a high of 745’). The new allowable refill is 749’. TPU was able to keep the swim beaches and boat launches open throughout the summer. Outflows are at 2,400 cfs except when TPU needs to increase flows to accommodate high power demand (2,000 cfs is the current minimum flow). TPU ramped at less than 2” per hour August 21-23 (as per Decision Document 2019-6) for commissioning and testing of Unit 41. Light precipitation is forecast with inflows into Riffe Lake of 800-1,400 cfs. The plan is to return to 2,400 cfs outflows September 6 and increase to 3,500 cfs minimum flow October 1.



Link to the USGS real-time Cowlitz River hydrograph:

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

- Activities during Mayfield Drawdown: Florian explained that initially the drawdown was to extend to 410', with a plan to spill the excess water. TDG risks caused TPU to shift the elevation to 415' by using generation units (415' is the floor at which the units can safely operate). TPU has employed a contractor to use an aqua barrier to allow work on the boat ramps to proceed. They are coordinating the boat ramp work with the marina and State park. Both these boat ramp projects can be performed at 415'. They anticipate starting the drawdown on September 15 and it should be complete by September 26 with the reservoir returned to its current level. Tire removal at Mayfield is also set to occur during the drawdown. The tires are adjacent to the Mossy Rock Trout Hatchery. The removal will be done with hydraulic excavators on September 16. The refill at Mayfield should not impact Riffe Lake.
 - **Action Item:** Florian to email hydro status charts to Carol and Lyn. (*Done.*)
- Gravel Augmentation: Florian explained they conducted a couple of site visits recently and are planning to do more. TPU engineers are currently evaluating how to get gravel to the alternate sites (Forterra and DNR). They will need a decision document if they do not place gravel anywhere this year.
- Trout Hatchery Remodel: Eric reported his team is still working on preparing an internal presentation to TPU senior leadership (including several new leaders). After getting approval, they will expand the presentation to include technical details to share more broadly. The Trout Hatchery Remodel Master Plan itself has not changed. Changes may include phasing and certain design elements. WDFW would be concerned if changes included any production decreases during construction. Such discussions would need to occur as early as possible.
- M&E Subgroup: Phil reported they are still working with WDFW to get the annual status update report out. Hope to get this by the end of September for review to allow for a 30-day FTC review. The M&E group has been discussing a coded-wire-tag (CWT) marking strategy for the Cowlitz Basin. They are drafting a decision document (to be distributed prior to the October 1 FTC Meeting) to propose marking NOR Coho collected at Mayfield Dam with a CWT (in lieu of marking fish at Cowlitz Falls). Mayfield is better suited for TPU to handle the number of juveniles that would be moving downstream.
 - **Action Item:** Phil to ensure a decision document on this is sent out a week prior to the October meeting.
- Downstream Adaptive Management TWG: Matt explained this group has been discussing a marking program for the Cowlitz Basin. They started with Cutthroat and Steelhead and would like to complete a marking strategy for NOR Coho before collection for this year which will end up being the best-ever at Cowlitz Falls. They have learned much from building out the CF Northshore Collector. There has been great coordination with WDFW, LCPUD, and Ecology which has contributed to such success. While they have made the most progress over the years with Chinook, there is still room for improvement. Steelhead are performing above 75% and Coho are approaching 90%. In November or December there will be a decision document with recommendations for moving forward. This will be preceded by the annual meeting where subgroup recommendations will be discussed with LCPUD. Modifications from that meeting will be consolidated into the decision document. These will include:

- How to better characterize Spring Chinook life history challenges - late in collection season we start to see Chinook struggle with the entrance efficiency.
- Improvements for the coming year e.g., steelhead.
- Apply adaptive management further into the Collector to maximize collection during spill events.

Additional Tilton Release Site

Presenters: Eric and Bryce

Eric showed photos and design drawings of the site, including the release structure and explained that TPU is currently reviewing contractor bids. The contractor has 60 days to complete construction. The work could start as soon as mid-October and conclude by mid-December. TPU is engineering the metal flume. The contractor will do site prep including retaining wall, ecology blocks, ensuring the grading is correct, pouring the cement concrete block with a hole for the post to secure the flume section and installing gates. Carol cautioned there is a need to watch / survey the riprap near the site as high flows are likely. Asked about commissioning, Eric responded there will be a few days to test the structure. There is a possibility to incentivize early completion for the contractor to move more quickly, weather pending.

2019 Tilton River Salmon and Steelhead Transport Management Plan: Bryce explained that the purpose of this plan is to identify the preferred option for transport of salmon and steelhead into the Tilton River for 2019, near river mile 10. This additional site will provide redundancy and minimize impact of anglers and/or handling stress in NOR fish. It will also allow for continued recreational harvest of HOR fish. Objectives of the plan include:

- Disperse NOR fish into as much available habitat as possible.
- Accommodate fish releases under a larger range of river flows.
- Protect NOR fish in low flow conditions while maintaining a fishery through spatially separating HOR/NOR fish, particularly separation of NOR fall Chinook from HOR Chinook and Coho salmon.
- Provide a secondary release site to avoid any release site failures – always have a release site available.

The annual adult handling protocols determine where fish are distributed. WDFW has taken the lead in developing options for-how fish would be released at this site, while TPU took the lead on engineering, permitting and construction. The aim is to disperse NORs into as much habitat as possible, accommodate fish releases under a large range of flows, and to protect NOR fish from angling impacts in low-flow conditions. WDFW worked with the M&E Subgroup to develop a list of options for how the site might be used this year. The subgroup will have to work on some contingency options for this year since completion of the secondary site construction is delayed. Bryce reviewed the following preferred options recommended by the M&E sub-group:

- Option 1b: Transport all NOR Chinook and Coho to the new site and all HOR fall Chinook and HOR Coho to the Gus Backstrom Park (GBP). Identify a closed fishing area around the new site. Implement this strategy from the start of the season until sustained adequate flows (~150 cfs) allow for natural distribution to occur (generally mid-October), at which time a combination of both NOR and HOR fish could be released at GBP for efficient transportation and additional distribution of NORs. Note: While this may be a moot point this year if the site is not complete in October, it may serve as a kick-off point for next year's operations.

- Option 8: Split NOR and HOR Steelhead between the two sites equally throughout the entire season.
-

FHMP Update

Presenter: Matt Bleich

Matt reminded all that when TPU asked for an EOT (Extension of Time) from FERC, they didn't get the full extension requested. The 9-month extension granted by FERC was to October 18. While the entire document will not be complete by then, Matt believes there will be a substantial enough work product to demonstrate to FERC that good progress is being made. This should result in FERC granting an additional EOT. FERC has already been alerted that we need extra time for an entire document review including a public review process, so they are expecting an additional EOT request. The order says we need written concurrence from NMFS and USFWS indicating full support for an additional extension.

They also need supporting documentation from the FTC. It is important to create a decision document to demonstrate that support and explain fully why the extra time is needed and how the additional time will be used. Bryce noted that it would be wise to allow for additional time to resolve any outstanding comments or areas of disagreement, and that it would also be important to have a contingency plan in case we aren't granted the extension. He sees two issues: Waiting for the final document review to get an idea of how close we are; and federal partner engagement. How do we get concurrence on some of the more contentious issues? Matt assured everyone that he has been working offline to ensure good alignment with federal agencies. The decision document would state that we are continuing to operate under the existing plan until we get approval of the EOT from FERC. Paul expressed concern that the priority on recovery that resides on the current FHMP is missing from the draft FHMP as it is being addressed. He would like to see a premise for recovery strategy for each population and how they arrived at the decision they are using. Matt agreed this is the intent of the entire document, that hatchery programs are part of the intent for recovery.

- The Chinook Chapter comments were due on August 2. This has been fully revised by the consultant and should be sent out for review on September 6. While all public comments will not be included, there will be discussion about how to address these in a response matrix.
- The Coho Chapter comments were due August 9.
- The Steelhead Chapter is running late. They plan to send it out September 6 (will include all population chapters). September 25 will be the new date for comments. Then TPU will take a week to process these after which will be the public review period.
- The Cutthroat and Chum Chapter have been through FTC review and will be out September 6 for public review (on schedule).
- The M&E Chapter has been through discussions with the M&E team. FTC can expect to receive the draft chapter on September 9 with comments due September 25.
- The APR Chapter is two weeks late. This summarizes triggers and hatchery plans for programs. This should be out September 13 with comments due October 4. Public review would follow.
- Introductory Chapters 1 and 2 are being reviewed by the consultant for consistency. These will be out as part of the whole-document review which will be around the second week of October, assuming FERC grants an additional EOT.

- Matt thanked all for comments on the document structure. The consultant is working on the structure which will be out for FTC to review the week of September 9 or 15.

Action Items:

- Matt: Send out table with updated FHMP review schedule to all ASAP.
- Matt: If possible, get M&E Chapter comments to Phil by September 6 so they can be incorporated in the version that is sent out for FTC review the week of September 9.
- Matt: Contact federal FTC representatives and begin drafting the decision document for FTC review before making additional EOT request of FERC.

Public Comment Session (*FTC responses appear in italics.*)

Steve Bagley: Only had eight days to fish the last two years due to high water at Gus Backstrom Park. The second release site should give more opportunity for Coho – this will be a big advantage to fisherman. Wants the NOR Chinook to be released at the mouth of the river if the alternate release site isn't available. When barriers are removed, there are always fisherman who are illegally snagging fish, dragging them sideways. But within a couple of days of fishing there, things settle down. Those people are very friendly.

Greg King: Trout Hatchery Remodel - If TPU keeps delaying this, it will just cost more in the end. It is a requirement of the Settlement Agreement. Re: Fall Chinook. The Kalama manages nice returns of Fall Chinook. Why not here? *Starting to investigate what is happening to our Fall CH. Perhaps the C. shasta here is a limiting factor? Sam noted the Kalama currently produces 7 million (twice as many as on the Cowlitz). Do genetic testing to show that these are truly NOR fish? Paul doesn't see this happening at the new Tilton Release site. TPU sees genetic testing as one of many tools in the toolbox. Don't put NORs there or if you do, be sure to include no fishing zone. The no fishing zone is included.*

Jack Tipping: M&E Subgroup - Concerned that wild juvenile Chinook at the Mayfield migrant trap will not be tagged. This is a basic fish management action that is needed to one day allow sport harvest on wild fish in the lower river, would help identify wild production sources in the lower river, and help to develop a locally adapted stock in the Tilton River. *The M&E Group will continue to discuss this, and it is in the Fall Chinook Chapter of the FHMP. It will be included in the marking strategy that the M&E Group drafts – earliest would be late 2020.*

Larry Pryor: Fall Chinook: Why Tules? *This is the historic stock that was present in the Cowlitz and it is part of the recovery plan to recover that stock.* Withdrew CRR Proposal – conservation hatchery to support the Upper Cowlitz watershed. Fisherman fish for adults – not smolts. There has been a lot of lost opportunity over the years. How does the FHMP define areas of success? According to the HSRG, the gage of success is adult returns. Do you have adult return goals? If so, what are they? Everyone wants to bring back wild fish to the Cowlitz. He hears TU is in support of building up to harvestable levels. What are those goals? It would be good for the FTC to share the adult return goals and what constitutes harvestable levels, so everyone is pulling in the same direction. *In the FHMP there are triggers that relate to program shifts. There is recognition that each program drives toward a recovery goal. Some of these have phases. The broad goal is recovery. The FHMP is a stepwise goal to achieve that recovery. There are many steps taken toward recovery and these are measured along the way.*

Sometimes there is a discrepancy between HSRG goals and LCFRB goals. *HSRG is a set of recommendations. The LCFRB has recovery goals that are defined by NOAA.*

Meeting Evaluation:

- Did well moving through the many and varied topics
 - Lots to process
 - Pizza was good as were the chocolates
 - Facilitation was helpful to stay on time
 - Acoustic issues remain - Could use an additional wireless microphone
 - Suggestion from Larry (public): Have two public comment sessions - your public is waning)
 - Dove chocolate wrapper quote: Every moment matters, including this one!
-

Possible Topics for October 1 FTC Meeting

- Usual updates incl. Gravel Augmentation and Alternate Tilton Release Site
 - Cowlitz Restoration & Recovery Fund
 - Scoring Review, FTC score review, 2020 process discussion
 - M&E Subgroup Decision Document
 - FHMP Process Update and Decision Document
-

Parking Lot

- Review FTC Protocols / Steelhead Recycling Program

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Cowlitz Salmon Hatchery
Final Meeting Summary
October 17, 2019 from 9:30 – 4:15

Attendees:

Travis Nelson	TPU
Bryce Glaser	WDFW
Carol Serdar	WA Dept. of Ecology
Paul Sparks	WA Council of TU / TU / American Rivers
John Serl	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Brian Gale	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Josua Holowatz	Tech Rep for WDFW
Eric Shoblom	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Melora Shelton	Tech Rep for TPU
Chris Foster (by phone)	Tech Rep for TPU
Laura Wolfe	LCPUD
Steve West	LCFRB
Rudy Salakory	Cowlitz Indian Tribe, Tech Rep for TPU
Lyn Wiltse	PDSA Consulting / Facilitator

Remaining 2019 FTC Meeting Dates: Nov. 5, Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery unless otherwise specified.

Proposed 2020 FTC Meeting Dates: Jan. 7, Feb. 4, Mar. 3, Apr. 7, May 5, June 2, July 7, Sept. 8 (Sept. 7 is Labor Day), Oct. 6 (Election Day), Nov. 3, Dec. 1

- Action Item: All look at 2020 meeting schedule and be ready to approve or change it at the November meeting. Also consider changing start time to 9:00 and periodically altering meeting locations.

Great Washington Shakeout 2019

The FTC reviewed the recommended actions for earthquake safety from the state-wide “Drop-Cover-Hold On” drill. More information is available at these links:

[Earthquake information by Region – Washington](#) [Secure your space: Do a “hazard hunt”](#)
[Plan to be safe: Create a disaster preparedness plan](#)

Announcements

- As of the end of September, Tom Wadsworth has taken a new position and left the employment of WDFW. We appreciated his service on the FTC and wish him well. Bryce Glaser has stepped in to filling the role of the official WDFW representative.
- We were pleased to welcome Josua Holowatz from WDFW to the FTC. He is the interim District Fish Biologist covering the Cowlitz and Lewis Rivers and brings expertise in biostatistics, ecology and genetics.

FHMP Update

Presenter: Matt Bleich

Matt and Travis thanked those who participated in the 1:30 conference call on October 16. The feedback received on the call was helpful to Tacoma in framing this discussion.

Discussion preceding the editing of Decision Document 2019-9 included:

- The EOT request of FERC needs to be longer than 8 months.
- The duration between FHMP Updates be extended beyond 6 years, noting SA Signatories would have to approve this. Peggy noted that “6 years” is in the Bi-Op.
- The FHMP is a broader, foundational document and should be completed first and then the HGMP. Alignment is critical.
- Concern about NOAA’s limited resources and Rich Turner retiring the end of 2020.
- The 2011 FHMP is based on the ISIT Model which is founded on AHA Model that uses HSRG rule sets.
- We want to demonstrate we are making progress in the advancement of species recovery.
- We are working toward a new version of the FHMP and we need more time. We want a new plan that is broadly supported with a focus on recovery first, and then fisheries (harvest), and has clearly defined measures for success
- We want to provide sufficient time for all, including the public, to review the individual chapters as well as the entire document.
 - Still waiting for a crosswalk between 2011 and current draft FHMP.
- What if FERC doesn’t grant the complete EOT request? WDFW suggests that we should have a contingency plan.
- “Off-ramps” for the unlikely event that we get to the new deadline and the document is not yet complete. How to proceed operationally – under 2011 FHMP or other agreed-upon approach?
- It is not clear to all FTC members how close the draft chapters are to being final because the most recent drafts have not yet been distributed.
- The FTC has been (informally) continuing to operate under the 2011 FHMP and has communicated that to FERC.
- We need to identify areas of concern / unresolved issues during the review process and then have a process to address them in a timely fashion.
- We will have additional workshops as needed, including for any unresolved issues.
 - It would be helpful to set the dates of workshops that will be held on non-FTC meeting dates as soon as possible.

The FTC reviewed, edited, and by consensus approved an updated version of Decision Document 2019-9: FHMP Extension Request to FERC. Edits include a revised schedule, off-ramp language, a change in the EOT from 8 to 12 months, and the suggestion that the interim period between updates be extended from 6 to 10 years. By Nov. 1, TPU will initiate the process of getting SA signatories to approve this change. Travis noted that TPU attorneys are revising the letter to FERC. He will assure it is consistent with the approved decision document.

Action Items:

- Travis: Report back to the FTC after November 6 conference call with FERC.
- Travis: Email out approved decision document and the “DRAFT” FHMP referenced in the document filed with FERC and available on the public website. (*Done.*)

Cowlitz Restoration & Recovery (CRR) Fund: 2019 Grant Round Process

Presenters: Florian Leischner and Melora Shelton

Melora projected a spreadsheet she created with the preliminary scores she received from five of the participating organizations from whom she received draft scores. They were TPU, WDFW, LCRFB, TU, LC. The Cowlitz Tribe recused themselves from rating their proposed project and did not provide scores for the Friends of the Cowlitz (FOC) project. Florian reminded all that the goal of the line-by-line review is not to come up with an FTC consensus score, but to discuss the scoring as a group and provide an opportunity for scoring revision if desired.

Florian briefly recapped the background of this fund and our partnership with the LCRFB TAC for habitat projects. The hatchery associated projects are being evaluated on a technical basis by the FTC based on the final applications. Scoring categories for both types of projects include CRR Program priorities, benefits to fish, certainty of success, and cost.

After reviewing the LCRFB technical review and discussing the CRR scores, FTC members agreed to have Tacoma draft a decision document to approve funding for the Cispus Yellowjacket Creek Phase III Restoration Project. There was general agreement that this project would likely be successful and provide benefits to fish, and that it meets CRR program priorities. Although the first two phases are not complete, the approach has been demonstrated at many other locations and the tribe has a long history of implementing successful restoration projects. It was also noted that, as this project has multiple funders, ~\$600K from the CRR Fund can contribute to a ~\$2 million project, leveraging our influence.

The scoring and discussion indicated that there were many unresolved questions about the specifics of the Toledo Sand and Gravel Net Pens proposal from the FOC. There was concern about certainty of success and how the funds would be spent. WDFW suggested they would want to see a phased approach to increasing fish numbers and net pen capacity. The proposal needs additional details. This also signals an opportunity to improve the proposal process to help applicants provide more complete proposal information. During Greg King's presentation to this group, he made it clear that the FOC were looking for guidance for turning this into a more complete proposal.

We really appreciated Greg coming to give the presentation while acknowledging that they looked forward to future help in making the project proposal more complete. While the project seems to have merit, it doesn't appear to be quite ready for "prime time." Opportunity: Offer to meet with the FOC to provide them with sufficient feedback so they can possibly re-submit a more complete proposal in the future. Also noted: The property is currently up for sale.

At the end of this discussion, the FTC came to agreement on a preliminary funding decision for the 2019 grant round so that TPU could prepare a draft supporting decision document for review and approval at the November 5 meeting.

Action Item:

- Melora: Draft a Decision Document to approve funding for the Cispus Yellowjacket Creek Phase III Restoration project sponsored by the Cowlitz Indian Tribe for approval at the November FTC Meeting.

Coded Wire Tagging at Mayfield

Presenter: Matt Bleich

In Phil Sandstrom's absence, Matt explained that the coded wire tagging of Coho has been at Cowlitz Falls for the last several years. This was deemed the most appropriate place in representing the various populations. As the downstream collector is becoming increasingly efficient, capacity is becoming an issue. In order to avoid any associated biological impacts, it appears time to shift the tagging location back to Mayfield. Phil drafted and distributed a decision document reflecting that recommendation. As not everyone had been able to review that document, it was agreed to shift this topic to the November FTC meeting. It was suggested that the document also identify risks to recovery.

Action Item:

- All: Let Matt know if you have additional suggested edits (in addition to identifying risks to recovery) and be ready to discuss at the next meeting.

Tilton River Coho Disposition
Presenter: Matt Bleich

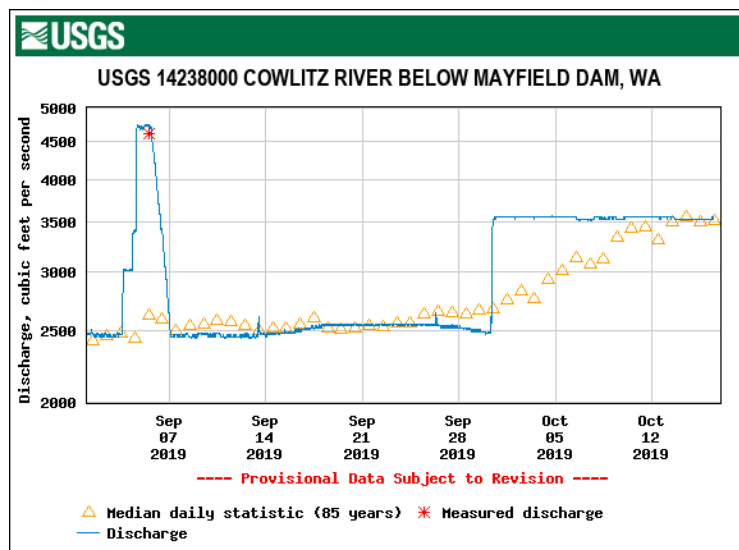
Matt explained that Phil requested this be added to the agenda because of the need to agree on a disposition protocol for when numbers of adult hatchery coho exceed 6K. This topic was deferred to the November meeting.

Meeting Summary Approval

Approval of the September 5 FTC meeting summary was deferred until November 5.

Updates

- Hydro Operations: Florian reported September average daily inflows were at 75% of normal, with average daily inflow of 1756 cfs. While the historical inflow average for October is 2,777 cfs, it was at 1,747 cfs on October 15. Riffe Lake drafted more slowly than usual due to the relatively cold and wet summer. The current reservoir level of 716' is anticipated to rise ~15' due to the forecast of a series of storms. October 1 through November 15, the minimum outflow is 3,500 cfs (though they may exceed 5K cfs following storms). TPU kept the reservoir above that level throughout the summer. A couple of spikes in the outflow coincided with the Mayfield drawdown; some of the units came online with different elevations. There were no ramping violations.



Link to the USGS real-time Cowlitz River hydrograph:

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

- **Action Item:** Melora to email charts to Carol and Lyn. (*Done.*)
 - **Mayfield Drawdown:** Carol noted that, as required in the Water Quality Cert and in the FERC License, two water quality protection plans approved by Ecology were in effect during the Mayfield Drawdown. These plans included the Mayfield Park boat extension where there was a unique situation with the bladders, and the Tire Removal activity. TPU shut down the tire removal operation soon after beginning as the tires were being drug across the sediment rather than being picked up and placed in a truck and hauled to an off-site location for washing before being trucked to a recycler. Some number of tires were removed and cleaned. Ecology's (Solid Waste Management Program) grant program provided funding for those tires once they were cleaned. As there were many tires left behind, there is a solid waste concern that requires coordination between TPU and Ecology. Carol reiterated that she needs to be notified before in-water activities occur. She also reported the 30' lower lake elevation has changed the pore water pressure such that oil from possible underground storage tanks or residual contamination in the underwater town of Kosmos is now oozing into Rainey Creek which flows into Riffe Lake. This may be important consideration when doing fish recovery.
 - **Water Quality Monitoring:** Ecology has been working with TPU for the last 5.5 years on summarizing water quality monitoring data into a single report. With these data, Carol reported it is likely that Ecology will approve the summary report. TPU will file a TDG monitoring plan with Ecology soon. Annual reporting is likely.
 - **Gravel Augmentation:** Florian reminded all TPU is working on an easement to get access to deliver gravel to the other side of the Cowlitz River. They are also evaluating another location on the south side closer to Barrier Dam. Will be seeking outside help with risk points at each location (e.g., problems with fishermen at Mill Creek, boat launch issues related to the existing pile, and what flows would mobilize the new material). They are also working on permitting for those sites (Forterra and DNR). A decision document will be required if gravel placement this year is deferred.
 - **Action Item:** Florian to prepare decision document for the Nov. 5 meeting.
 - **Additional Tilton Release Site:** Eric was pleased to report they have broken ground on the new release site and plan to complete construction by end of October or early November. The TPU Craft Shop has built the chute for the tube that will go down the center of it. The tube (16' tiger-flex hose) has been ordered and might not come in until December. The site should be usable by the end of the year. With the higher flows, they have been able to continue to release fish at Gus Backstrom. There will be discussion on commissioning the new site and when to implement proposed protocol for Steelhead.
 - **M&E Subgroup:** This update was deferred to the November meeting.
 - **Downstream Adaptive Management TWG:** Matt explained this group is working on a decision document with 2020-2021 recommendations for review at the December meeting.
-

Satellite Rearing

Presenter: Matt Bleich

Matt reported R2 has provided TPU with a preliminary draft of initial satellite rearing concepts based on feedback the FTC provided at the August meeting. Matt is working with R2 to flesh this out before providing it to the FTC for an initial review. Stay tuned.

Meeting Evaluation

- Some technical difficulties with the phone. We hope they didn't keep Ann from being able to dial it.
 - Highly productive - Powered through difficult discussions
 - People were hard on the issues, not on each other (Thanks Josua for that observation!)
 - Nice to have the full 30 minutes for lunch despite the full agenda.
 - It was a long meeting. Everyone did a great job maintaining focus throughout.
-

Potential Topics for November 5 FTC Meeting

- Usual updates incl. Water Quality, Alternate Tilton Release Site
 - FHMP Process Update
 - Review of FTC Protocols, including subgroups
 - **Action Item:** Lyn to distribute current protocols and prior work plan along with agenda for November meeting.
 - Cowlitz Restoration & Recovery Fund
 - Decision Document for Funding Decision
 - 2020 process discussion
 - CWT Tagging at Mayfield Decision Document
 - Gravel Augmentation Decision Document
 - Tilton River Coho Distribution
 - Next Steps
 - Set Topics for December 3 meeting including:
 - Mayfield Juvenile Collector
 - Update on Satellite Rearing
-

Parking Lot

- Review Steelhead Recycling Program

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Cowlitz Salmon Hatchery
Final Meeting Summary
November 5, 2019 from 9:30 – 3:30

Attendees:

Travis Nelson	TPU
Bryce Glaser	WDFW
Carol Serdar	WA Dept. of Ecology
Paul Sparks	WA Council of TU / TU / American Rivers
Rich Turner (by phone)	Tech Rep for NMFS
James Archibald (by phone)	Tech Rep for NMFS
John Serl	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Brian Gale	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Josua Holowatz	Tech Rep for WDFW
Matt Bleich	Tech Rep for TPU
Eric Shoblom	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Melora Shelton	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Chris Foster (by phone)	Tech Rep for TPU
Laura Wolfe	LCPUD
Steve West	LCFRB
Ann Weckback	Lewis County, Tech Rep for TPU
Rudy Salakory (by phone)	Cowlitz Indian Tribe, Tech Rep for TPU
Lyn Wiltse	PDSA Consulting / Facilitator

Remaining 2019 FTC Meeting Date: Dec. 3 from 9:30-3:00 at Cowlitz Salmon Hatchery.

Proposed 2020 FTC Meeting Dates: Jan. 7 (Public Meeting), Feb. 4, Mar. 3, Apr. 7, May 5, June 2, July 7, Sept. 8 (Sept. 7 is Labor Day), Oct. 6, Nov. 3 (Election Day), Dec. 1

- Action Item: All to review 2020 meeting schedule and be ready to approve or change it at the December meeting.
-

FHMP Update

Presenter: Matt Bleich

Matt reminded all that all draft chapters were sent out by Travis during the last FTC meeting. The remaining chapter will be out for review by November 8. He also discussed how two sets of workshops would provide a forum to identify and discuss unresolved topics after everyone has reviewed the draft FHMP. After some discussion, we agreed on the following:

Initial Workshop Dates:

- February 18, February 26, and March 3 (at front-end of FTC meeting, as needed)

These initial workshops are forums to identify and resolve “low hanging fruit” that needs to be addressed in the document.

Subsequent Workshop Dates (will occur prior to FTC meetings on these same dates):

- April 7, May 5, and June 2 (after this meeting, content will be sent to TPU’s technical editor (schedule, interim actions, arguments pro and con).

These dates are reserved for any topics that remain unresolved after the initial set of workshops. Such topics will be addressed with white papers that include a strategy and schedule for resolution. The white papers will be appended to the draft FHMP to illustrate these topics and how they would be resolved.

Paul expressed concern about the structure of workshops, preferring that such discussions occur with the entire FTC. Matt reminded all that the entire FTC is encouraged and expected to attend the workshops. He welcomed suggestions for the structure.

Paul announced that in December he will present a formal alternative strategy which he sees as a major shift for recovery specifically in the upper Cowlitz Basin. Bryce observed there seems to be a disconnect because his sense is that the structure and scope for this were agreed to (prior to the subcommittee meetings).

Action Items:

- Travis: Report back to the FTC after November 6 conference call with FERC.
- Travis: Coordinate with Paul on his presentation for the December meeting.

Cowlitz Restoration & Recovery (CRR) Fund: 2019 Grant Round Process
Presenters: Florian Leischner and Melora Shelton

At the October meeting, the FTC agreed on a preliminary funding decision for the 2019 grant round. After reviewing and discussing the supporting decision document, there was a consensus decision to approve funding for the Cispus Yellowjacket Creek Phase III Restoration Project. Melora walked through the funding decision document. After discussion and minor edits, it was approved by FTC representatives in attendance.

Observations by FTC of 2019 Process:

- Outcome would have been the same if the CRR Subgroup had continued to operate separately.
- CRR Subgroup members were the ones who scored the projects.
- This seemed like a more open process than when done through the subgroup
- Didn’t appreciate the surprise in the middle of the process (changing the structure from subgroup to the entire FTC, during FTC meeting).
- LCRFB TAC will not be formally scoring CRR-only projects in the future unless there is a nexus to a SRFB project. The CRR review is being removed LCRFB’s Grants Manual for 2020. They will still use “binning,” but the benefits-to-fish category will be defined by the TAC (vs. staff). They will only use the PRISM database.
- The LCRFB TAC information provided was hard to use; seemed like some details were missing.
- LCRFB TAC “Binning” made it seem like all projects were approved since the money was there.
- Outreach/engagement with applicants could be improved. There was no help for habitat project proponents in filling out the applications.

- Initial meeting TPU had with proponents of the hatchery projects was seen by some as less than positive, and actually discouraged several potential applicants from putting forth a proposal. (LCRFB has optional pre-proposal meetings.)
- For hatchery projects, with all the regulatory permitting, not sure workshops would be helpful since there is considerable lead time required – and a need to have in depth discussions with TPU and WDFW.
- While we want to assist with applications, we can't write them ourselves.

Suggestions by FTC for 2020 Process:

- Could we refer proponents to other similar applications they can use as examples?
- Review the implementation strategy.
- Create a formal process by which applicants and reviewers can be assured there is no conflict of interest or perception of conflict of interest.
- Habitat project process was well defined. By contrast, the hatchery project process was incomplete and rushed. Need to address this for the next grant round.
- RFPs should go out with ample time for folks to put together a thoughtful application.
- Need to better define the vetting process.

2020 Grant Round Program Updates:

Florian walked through a PowerPoint presentation of additional suggestions to improve the 2019 process. These included:

- Amend Implementation Strategy eligibility bullet list (e.g., define “public works project”, etc.).
- Allow for indirect overhead (guideline of 25% max?)
- Include the federal government as eligible entity
- Apply species/population priorities to all proposals (Make Spring Chinook more of a priority species for both types of projects)
- TPU/FTC responsible for solicitation, application, and review for all proposals
- Independent from LCRFB process/calendar and SRFB match requirement
- More stringent application requirements with required letters of intent.
- FTC can determine any draft application needing substantial changes or not fully developed ineligible for current grant round
- Have two ad hoc technical review committees review proposals and make recommendations to FTC (HAP and Habitat)

The purpose of the CRR Subgroup function was to take some of the workload off the FTC. This is like having specific ad hoc technical teams for habitat / hatchery projects. TPU thinks the CRR Subgroup should exist in an ad hoc capacity, rather than as a standing committee. This means being formed as needed, with the appropriate technical expertise, and at the request/direction of the FTC. The original model for disbursing funds was the HAG. Carol explained Ecology needs to stay involved with the discussions, but not the review and the scoring. Ecology supports the method reflected in the prior decision document. Travis reiterated that the proposal for 2020 is for the FTC to be able to request specific work products of CRR group on an ad hoc basis.

Action Items:

- Travis: Ensure consistent format in titles of decision documents.
- Steve: Send out new LCFRB manual. *(Done.)*

- Florian: Work with Peggy to frame up decision document of work products requested of CRR subgroup(s) for future grant round process.

Gravel Augmentation

Presenter: Florian Leischner

Florian explained that while TPU is continuing to pursue access to the other side of the Cowlitz River below the Barrier Dam, they are also continuing to look at other potential sites. The construction window is the month of August which was missed this year due to permitting questions related to the ESA consultation. Another complication has been public pushback on the Mill Creek location. Some landowner outreach is needed to determine if the gravel would fill in the popular fishing hole there.

Florian reviewed the draft decision document to delay gravel augmentation until 2020. While seeing the need for the delay, WDFW staff shared some of their concerns with the decision document, including that the next steps for implementing in 2020 and moving into the 5-year plan are not well defined. WDFW would like to see the justification for the need to delay. They also believe the next steps portion of the document could be strengthened to show an ability to achieve the 2020 target. When asked where the check-in points with the FTC would be, Travis responded that these would continue to occur at monthly FTC meetings. It was suggested that the decision document perhaps show another check-in point with the FTC about what the rest of the four years look like - either clearly line out how we are going to get there or describe the strategy and plans to make up the difference. This would provide some certainty of success.

Carol expressed concern that we are accumulating a lot of gravel and she doesn't want to see most or all of it deposited in a single location – which is what we have now. Florian agreed and explained the intent is to instead place gravel in five or six distinct locations within the reach. Paul said he hoped monitoring data as well as logistics in gravel placement were being considered.

It was noted that the DNR permitting process usually takes a long time. It would be helpful if the decision document included locations, timelines, priorities, etc. in support of the reason for the extension along with a reasonable idea that we could get there. Other suggestions included checking the math in the table and including the monitoring plan. Could some baseline redd mapping be done now to serve as a baseline later?

Action Items:

- Bryce: Send technical edits and other suggestions to Florian.
- Florian: Incorporate these edits into a revised draft decision document and send out in advance of the December FTC meeting.

Coded Wire Tagging at Mayfield

Presenter: Phil Sandstrom

Prior to the October meeting, Phil drafted and distributed a decision document reflecting the recommendation to move coded wire tagging of Coho from Cowlitz Falls (CF) back to the Mayfield Counting House. As not everyone had been able to review that document, it was agreed to shift this topic to this meeting. Phil explained the rationale behind the decision document. As the downstream collector is becoming increasingly efficient, capacity at CF is

becoming an issue. Bryce explained that WDFW sees this decision document as a little premature, as he thought this was something the M&E Subgroup would spend more time on – working through the pros and cons, while attempting to quantify some of the impacts. Phil responded that the M&E Subgroup has discussed this strategy, though they have not yet discussed the spreadsheet that John put together. He further explained that this decision document was written at a high level on the recommendation of the M&E Subgroup, and that more details would be covered in FTC discussions. There will be some fish that won't get marked at the Tilton. These Tilton-origin NOR Coho would be trucked back up the river, being placed into a different population, which is part of the FHMP strategy. WDFW thinks the decision document should be expanded to include the relative impact (using math) of shifting marking locations along with mitigation measures and how adaptive management would work.

There was also concern that this decision document has gotten out ahead of the FHMP. Phil responded that there is a need to make the change in location now as we continue to have better Spring Chinook collection and are running against constraints in terms of how much they can handle at the current Cowlitz Falls Facility. Laura expressed a concern that this might affect LCPUD's Bi-Op associated with their license. There is a concern that an increase in fallbacks will lead to corrective actions from FERC.

Action Items:

- Laura: Send LCPUD study to Phil, John, and Bryce. *(Done.)*
 - Phil: Convene M&E Subgroup to edit the decision document to address concerns shared at this meeting. Send decision document out prior to the December meeting.
-

Review of FTC Protocols

Presenter: Travis Nelson

Travis reviewed the current protocols, which are to be updated on an annual basis. He will take feedback from this discussion and incorporate it into a revised draft which he will send out in advance of the December meeting.

Discussions included:

- Concerns about subgroup/subcommittee function and how developed. Charter? How do they function? What about notetaking and reporting back to the FTC? List the subgroups of the FTC.
- Public meeting protocols should be added. How we craft the agenda for public meetings and the time in the public meetings for public comment.
- Add the purpose of the FTC (from the SA) to the protocols for context.
- FTC agendas: Some like having the decision documents up front. Others prefer to start with updates. Regroup updates by who is giving the presentation.
- Decision making: Consider a more formal decision-making process such as the Sussman model. Define what constitutes a major decision. What might require a proxy if an FTC member is unable to attend a meeting? Add that decision documents be sent out at least a week in advance if a decision is to be made on it at the subsequent FTC meeting. Note that these can be written by anyone, not just TPU. Attach links to supporting documentation (relevant reports/plans). If possible, have decision documents presented one month and then approved the following month. Need decisions at that level to be documented through notes / meeting summaries
- How are technical reps defined? Include in protocols?

- We don't want these protocols to be too restraining. We want these protocols to reflect a collaborative model.

Action Items:

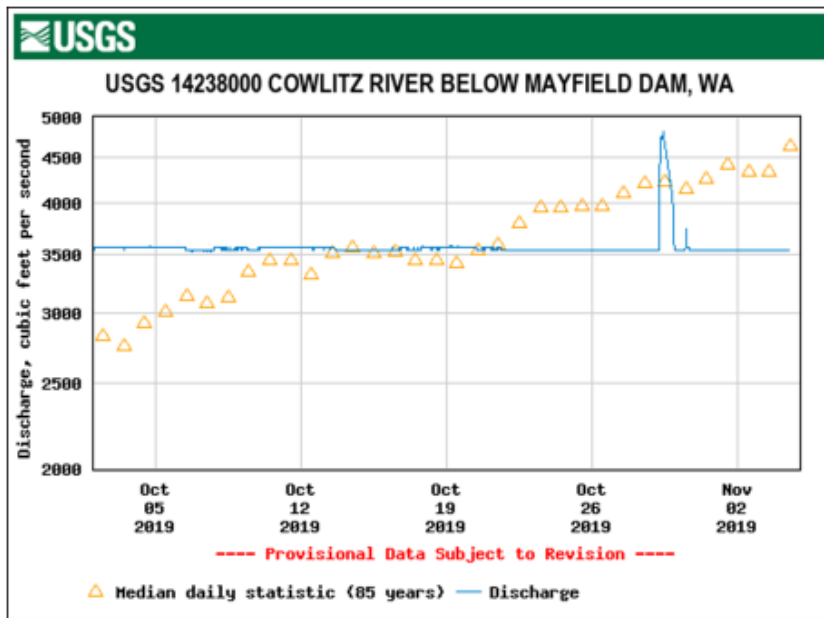
- All: Send Travis additional ideas including what constitutes a major decision.
- Travis: Send out revised protocols to all in advance of the December meeting.
- Lyn: Send out description of Sussman model.

Approval of Meeting Summaries

The September and October FTC meeting summaries were approved with edits and will be posted to the public website. Thanks to WDFW for their attention to detail – much appreciated!

Updates

- Hydro Operations: Florian reported October was very close to average for inflows. Riffe Lake was at 719' as of November 3. Minimum flows have been steady at 3,500 cfs with the exception of a couple of ramping exceedances. At Mossyrock, one unit was out for maintenance when the other shut down. The operators had to do a ramp manually (max drop of 3"/hour) and are in the process of bringing one unit back online. The 10-day forecast for rain has been reduced from 3-5" to ½".



No minimum flow exceedances: 10/1 to 11/15 min. flow: 3,500 cfs
 Ramping rate exceedances: Oct. 29 and Oct 30

Link to the USGS real-time Cowlitz River hydrograph:

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

- **Action Item:** Melora to email charts to Lyn to send out to all. (Done.)
- Water Quality: Carol reported that she just edited the two Water Quality Protection Plans and looks forward to seeing those reports. Kosmos oil is oozing out of a slope. TPU BMPs may not work with increased water level, so hoping it doesn't rain.
- M&E Subgroup: Phil announced the Annual FHMP Status Update will be to the FTC by November 15 for a 30-day review. TPU will incorporate comments received and

send the report to FERC by end of the year. Getting comments in early will be much appreciated as time is tight.

- Tilton Release Site: Around 75% of the site development is complete. The 16' tube will be delivered by November 8. The site prep should be complete by Thanksgiving. The gates should arrive the week of November 18. The commissioning / testing protocol will be discussed at M&E Subgroup, in coordination with TPU engineers.
 - Action Item: Eric - Send Travis PowerPoint presentation to post on the public website.
 - Downstream Adaptive Management TWG: Matt reported they are working on a decision document for the FTC with the final set of recommendations for 2020. The document will include supporting rationale. Part of the annual process is having a utility (LCPUD and TPU) meeting. They are still working through an aspect of entrance efficiency evaluation.
 - Action Item: Matt - Send out decision document prior to December meeting.
-

Meeting Evaluation

- The volume on the phone was finally adequate – much appreciated!
 - Good paraphrasing to ensure understanding of various viewpoints.
 - Discussions on clarifying processes were very constructive.
 - Nice to have the full 30 in for lunch despite the full agenda.
 - It was another long meeting, and everyone stayed engaged!
-

Potential Topics for December 3 FTC Meeting

- Usual updates incl. Water Quality, Mayfield Juvenile Collector study update
 - M&E Subgroup
 - CWT at Mayfield Decision Document
 - Alternate Tilton Release Site
 - Gravel Augmentation Decision Document
 - Downstream Adaptive Management TWG Decision Document
 - FHMP Update
 - Update from meeting with FERC
 - Paul's alternate recovery strategy for upper basin
 - FTC Protocols
 - Cowlitz Restoration & Recovery Fund
 - Scope of Work (Decision Document?) for CRR Subcommittee
 - Satellite Rearing (?)
 - Set Topics for January 7 Public FTC meeting including:
 - Mayfield Juvenile Collector
 - Update on Satellite Rearing
-

Parking Lot

- Review Steelhead Recycling Program

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Cowlitz Salmon Hatchery
Final Meeting Summary
December 3, 2019 from 9:30 – 3:30

Attendees:

Travis Nelson	TPU
Bryce Glaser	WDFW
Carol Serdar	WA Dept. of Ecology
John Serl	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Josua Holowatz	Tech Rep for WDFW
Matt Bleich	Tech Rep for TPU
Eric Shoblom	Tech Rep for TPU
Melora Shelton	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Chris Foster (by phone)	Tech Rep for TPU
Laura Wolfe	LCPUD
Steve West (by phone)	LCFRB
Ann Weckback	Lewis County, Tech Rep for TPU
Rudy Salakory (by phone)	Cowlitz Indian Tribe, Tech Rep for TPU
Bill Sharp (by phone)	Yakama Nation
Lyn Wiltse	PDSA Consulting / Facilitator

Proposed 2020 FTC Meeting Dates: Jan. 7 (Public Meeting), Feb. 4, Mar. 3, Apr. 7, May 5, June 2, July 7, Sept. 8 (Sept. 7 is Labor Day), Oct. 6, Nov. 3 (Election Day), Dec. 1

FHMP Workshop Dates: Feb. 18 (10-2), Feb. 26 (10-2), and for the first 1-2 hours of the FTC meetings in March-June (see above for dates)

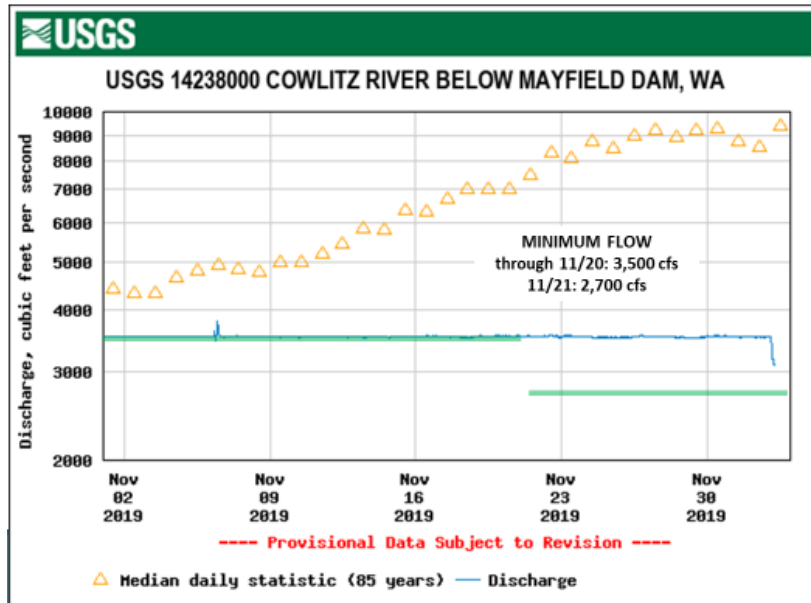
- Action Item: Travis: Send out meeting invites for 2020 dates, including FHMP workshop dates.

Updates

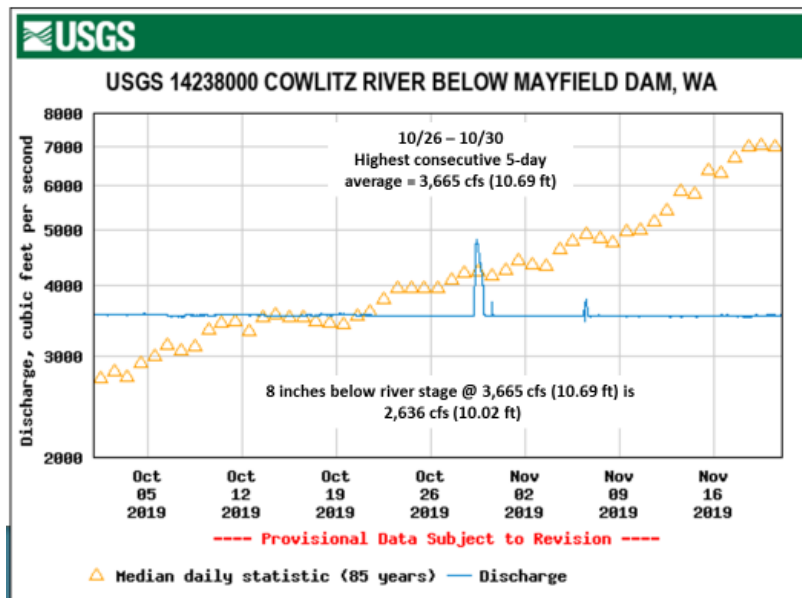
Hydro Operations: Melora reported inflows to Riffe Lake at 1,500 cfs. Storage is low, at 710', as is snowpack. Outflows for November were consistent at 3500 cfs (with no ramping or minimum flow exceedances, see outflow slide). The outlook remains dry. Inflows into Riffe are expected to be 1,500 - 1,800 cfs. Precipitation may come in the form of snow at higher elevations, potentially delaying its infill contribution.

Minimum flow change: The minimum flow reset to below 2,700 cfs on November 21, based on 8" below the average of the highest consecutive 5-day average that occurred between October 1 and November 21 (License Article 13, see minimum flow reset slide). TPU proposes to implement that at 2,700 cfs. As of the date of this meeting, TPU has reduced outflows from 3,500 cfs to 3,000 cfs (2.6" drop in elevation). Reduction to 2,700 cfs would be another 2.4" drop, a total of 5" inches from 3,500 cfs. TPU survey crews are monitoring for potential impacts to shallow water redds. Travis will share the findings of these surveys and how TPU implements the flow reduction.

Outflow



Minimum Flow Reset



Link to the USGS real-time Cowlitz River hydrograph:

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

Water Quality: Carol reported that she looks forward to receiving the 2020 Annual Work Plan that Matt Peter is drafting as Ecology is charged with writing a legislative report that includes the Project plan. Matt is also working on the Water Quality summary reports for the boat launch extension and the tire removal activity. TPU has hired a geotech consultant to assess the contamination within the slope that has oil oozing into Rainy Creek. (Sometimes Riffe Lake backs up into Rainy Creek and covers that area.) An emergency temporary cap is being installed which will involve pulling back some of the material and characterizing it before removing it (Alternatively, they may perform an excavated haul). Water quality sampling will include sampling for diesel, gas and eight typical metals. Carol continues to December 03, 2019 FTC Meeting

work with Matt Peter on the Water Quality Protection Plan. The long-term clean-up will require Ecology's Toxic Cleanup Program to write an Agreed Order for TPU based on Model Toxics Control Act (MTCA), as diesel and Bunker C are present in the soil and discharging to Rainey Creek. Carol closed by thanking Eric for taking her out to the tire washing location.

Out-of-Basin Transfer of Coho to another Columbia System Program

Presenter: Bryce Glaser

Bryce announced there is currently a shortfall of Coho returns to the Lewis River. As WDFW is under a legal obligation to fulfill requirements outlined in the US v. Oregon Management Agreement, which usually comes from the Lewis and Washougal rivers, they are looking at options to fill the shortfall. Such options may include shorting other programs to meet that obligation, which could trump meeting in-basin program needs. WDFW operates many hatchery programs on the lower Columbia River. Programs at Kalama, the Washougal, and the Cowlitz (both programs) are on track to meet broodstock needs. The goals of these programs are to support harvest and recovery. In addition to these programs, the State is responsible for a 3.5 million release in the Klickitat River as part of the US v Oregon Management agreement. Concerns about not being able to meet these obligations has prompted the closing of the fishing opportunity for Coho in the Lewis and Washougal; reducing bag limits on Cowlitz and Kalama Rivers down to one fish; and working to collect all excess fish returns from the sites with surplus.

In late November, WDFW reached out to TPU describing the Coho shortfall and requesting to potentially fill the shortfall with some of the extra hatchery-origin fish from the segregated program at the Cowlitz Salmon Hatchery that were destined for transport to the Tilton River. Fulfilling the US V. Oregon Klickitat Coho program is a high-profile topic at the Production Advisory Committee (PAC) who asked WDFW to consider all options to meet program needs. TPU is currently holding some (50-100) segregated fish from the segregated program (Tilton) to possibly be reallocated to the Lewis, based on WDFW's need. TPU is also currently following the handling protocol to move fish from the integrated Coho program into the Upper Cowlitz Basin.. Matt noted as TPU is focused on building abundance in the Upper Basin, they are not in favor of making the integrated program fish available for back-fill purposes. Bryce acknowledged this and explained further that ideally, there will soon be sufficient returns to meet the in-Basin need for the Lewis, eliminating the need to use any of the upper Cowlitz fish. It would be WDFW's last resort to try to adjust the handling protocol to move some of those fish out of the Basin. It will be clear in the next few days if there is a need for TPU to continue to hold the Tilton fish.

Action Items:

- Bryce: Provide an update on this by December 9 to Travis so he can send it out to all and also set up an FTC single-topic conference call if needed.
- Bryce: Contact Bill Sharp if it appears a conference call with the FTC is needed.
- Bill: Send his contact information to Travis to be added to the FTC distribution list.

M&E Subgroup Report

Presenter: Phil Sandstrom

Phil reported that at the last FTC meeting, he was asked to come back to the group with a revised draft decision document that addresses impact concerns and includes a transition plan to return the marking operation to Mayfield. There were concerns with the degree of

impact / stray rate to the fish being removed from the Tilton River population and moved up to the Upper Cowlitz. NMFS' involvement is another concern. Phil will bring the revised draft decision document to the FTC for review in early 2020. If teed up as a February FHMP Workshop topic, marking at the Mayfield Counting House would be deferred to the end of March/early April of 2020. There may need to be discussion about fallback potential and impacts to LCPUD's BIOP fallback requirements. This needs to be looked at through the lens of recovery; through building abundance.

Tilton Release Site: Eric explained that the grounds work was completed last week and TPU has determined the need for two modifications: moving the anchor point farther up the road and installing two bump stops to keep the truck from rolling into the river. There is currently an excavator on site, and they are dropping in the concrete blocks today. Eric will be on site tomorrow to help address an issue with the chute that might harm fish. The installation should be complete by mid-December. They are developing the testing protocol and impacts to fish after they have gone through the system. They will use segregated Coho (10-30 fish) for those tests. They will review the M&E recommendation on steelhead (putting a closure around the site). In the meantime, the Gus Backstrom site is available as needed.

Gravel Augmentation

Presenter: Melora Shelton

Melora reviewed the revised and simplified version of the 2019-11: Temporary Strategy for Gravel Augmentation Decision Document. Melora thanked WDFW for their clarifying edits to the document which calls for deferring gravel placement this year and for a 2020 draft work plan to be brought to the FTC for review at the January FTC meeting. Carol observed that there is no need to get a new 401 Water Quality Certification as it is included in the license. When Matt Peter writes the Water Quality Protection Plan for this Carol will ensure he notes this is covered in the license and outside the project boundary.

Travis explained that TPU is seeking to identify willing landowners who could provide access to suitable locations for gravel placement. Carol cautioned that it is imperative that landowners, even with best intentions, don't take matters into their own hands.

This revised version of the decision document, with WDFW's clarifying edits and Melora's correction to the math in one of the columns in the table, was approved by consensus.

Action Items:

- Travis: Send out this decision document to voting members who are not in attendance at this meeting for approval within one week (per FTC Protocols).

Cowlitz Restoration & Recovery (CRR) Fund: 2020 Program

Presenter: Melora Shelton

Melora announced that letters on behalf of the FTC were sent out to participants in this year's process. Florian and Melora had a conference call with Peggy to discuss the work that it will take to update the materials to address issues identified in a review of the 2019 process. TPU will step back and come up with a plan to address this in a way that allows enough time to cover everything necessary to build a robust process for the future (without being tied to the LCFRB grant schedule). At the January FTC meeting, they will present more specifics on what 2020 will look like. She announced the first annual FERC Report on the 2019 grant round will be out shortly after that meeting and is due to FERC in March 2020. There is an annual allotment to the CRR fund which would continue to accrue if not

used in any year. While some will be disappointed if there is not an opportunity to participate in a grant round in 2020, there would be no need for a decision document as Peggy noted the license only requires grant funding rounds to be conducted every two years. The extra time will allow the opportunity to host some early application workshops – for the next round and for working with people in the future. It will also allow for better CRR/FHMP alignment, particularly on the hatchery side.

Downstream Adaptive Management TWG

Presenter: Matt Bleich

Matt described the Adaptive Management Plan as a living document. The CF Northshore Collector (CFNSC) was constructed in 2017 and the first couple of years of operation were treated as baseline years. Through data collection, they have identified areas to target for improvement. Goals for the plan include:

- Promote recovery of Upper Cowlitz salmon and Steelhead
- Remove passage bottleneck
- Fish Passage Survival
- Working toward performance standard of 95% for Coho, Steelhead, and Chinook.

While Fish Collection Efficiency (FCE) data from 1996-2019 show a lot of variability, 5-year trend lines are positive relative to water years. 2019 FCE was similar to the past two years with good results for Coho and Steelhead. At their peak collection efficiency, Chinook performed well early in the season, then trailed off. Turbine cycling with a 2' band for reservoir operations (p. 5 and 6) may be a contributing factor.

Acoustic-tagged Chinook behavior differed by zones:

- Discovery Efficiency: Nearly perfect
- Entrance Efficiency: Needs improvement. Heat signature seems to be a factor
- Retention Efficiency: Mid-to-low 90s (percent)
- Capture Zone Retention Efficiency: Mid-to-low 90s

Acoustic-tagged Steelhead are friskier and have more ability to leave if they choose:

- Discovery Efficiency: Nearly perfect
- Entrance efficiency: In the 80s (percent)
- Retention efficiency: Mid 60s to low 90s
- Capture zone retention efficiency: In the 50s

Recommendations:

1. Understand how Spring Chinook contribute to recovery in the Upper Basin
 - Operate the CFNSC in an expanded timeframe (February - November)
2. Design a study to better understand adult returns.
 - The decision document will include development of that study design in concert with the new consultant they are hiring for that work.
3. Assess the benefit of testing the hypothesis that Spring Chinook outmigrants are moving on the increased hydrograph for storm events.
 - Work with consultants to do opportunistic testing at 750 cfs during the spring period. Matt observed this makes for a “logistically artful” study design. This option would reduce spill in the springtime by 250 cfs.
4. Modify the geometry of the capture zone floor to change the velocity that flows through the system.

- What changes will benefit Steelhead and not adversely impact the capture zone efficiency of the other species.
5. Address pump-back diffuser discharge
- Configure it to entrance directed discharge with the hope that additional flow into the entrance can help improve the entrance facility. Do this with a block study (e.g., off one week/on one week) throughout the Chinook season).

Action Item:

- Matt: Send out decision document for review prior to January meeting.
-

Mayfield Juvenile Collector

Presenter: Matt Bleich

Matt explained the focus for this collector is the Tilton River watershed (vs. Upper Basin) and this has its own license article and its own 95% Fish Passage Survival (FPS), entrance to the dam, all routes, with a focus on recovery and harvest.

Or In Lieu:

- High enough to support self-sustaining populations
- Fish migrating downstream has been maximized by all reasonable measures
- Adjustments to hatchery production (existing facilities) and/or habitat measures as required

He described the fish passage route which includes louver bays (popular in the 1960s) with gaps that are bigger than the fish (making them volitional). Fish can pass in three ways:

- Though spillway (very few)
- Through juvenile bypass structure (~2/3 go through this pathway, the preferred pathway) Survival is 99% for Steelhead; 80% for Coho; 50-75% for Fall Chinook
- Through the power tunnel/the turbines (~1/3 pass through, with 75-99% survival.)

Strategy: Improve FPS through the juvenile bypass structure

- After collection survival 50% for Chinook
 - 2 main problems: Dewatering (secondary separator); and the suspension bridge

Near-term Plans 2019-2020: If fish are successful going through the louver bays they go through the secondary separator. It can get crowded there. TPU previously conducted a block study and found that flushing the secondary separator was effective so now they are designing how to automate the flushing sequence (as the manual process is cumbersome).

Suspension Bridge – TPU hired a suspension bridge consultant to determine options.

- Structural engineering assessment – 2019
 - Options and costs to correct the sag in bridge (causing fish to hold and, in many cases, meet their demise) will vary depending on results
 - Design in 2020 and construction in 2021.
-

FHMP Update

Presenter: Matt Bleich

Matt reminded everyone of the February 18 and 26 stand-alone FHMP workshop dates. These will be held at the Cowlitz Salmon Hatchery from 10am-2pm. Topics for the initial workshop may include:

- CWT marking strategy for Coho

- Overall marking strategies for all species
- Paul's alternative strategy topic - better addressed sooner than later. Perhaps move this to the second workshop if Paul is unavailable for the first.

Request for Extension of Time (EOT): Travis put together the supplemental information requested by FERC to show the work that has been done by the FTC to continue with recovery effort in the Cowlitz Upper Basin from 2011 until now. This is undergoing internal review at TPU and they hope to send it out by December 6.

Action Item:

- Travis to reach out to Paul about his presenting at the January Public meeting and how to ensure there is TU representation at the February workshops.
-

Review of FTC Protocols

Presenter: Travis Nelson

Travis discussed the draft edits he made to the protocols, based on input he received at the November FTC meeting, including starting with the purpose of the FTC. The schedule doesn't yet mention the public meetings which are occurring quarterly. All agreed there is a need to be more intentional about sharing presentations and materials from the meeting within 5 days, as defined in the protocols. It is also important to ensure subcommittees are working under clearly defined charters and a basic agenda that subcommittees can follow because notes are not always taken. Subcommittee would develop their work plans and present them to the FTC for feedback, affirmation of priorities, etc. Include life expectancy for each task. FTC should look at a subgroup as an employee. Still to define: How signatories participate. As TPU's technical advisors? What about non-signatories?

Action Items:

- Matt: Ask consultant to work on a standardized structure for all subgroups to use to report back to the FTC. (February/March timeframe)
 - Travis: Send out the latest revised version of Protocols for all to review this draft, mark it up in track changes, and send it back to Travis. Include ideas on how to formalize the participation of non-voting signatories, technical reps.
 - Travis: If possible, send out Protocols showing earlier edits in track changes.
-

Approval of Meeting Summaries

The November FTC meeting summary was approved with minor edits and will be posted to the public website.

Meeting Evaluation

- Good discussion on protocol.
 - Josua shared the following quote: "Trust is involved in all the basic elements of a healthy relationship: namely, love (respect and consideration for another person), communication, commitment and honesty." - Harold Duarte-Bernhardt
 - It was another long meeting, and everyone stayed engaged!
-

Potential Topics for January 7 Public FTC Meeting

- Updates incl. Hydro Ops, Water Quality, Out of Basin Transfer
- Coho Fishery in Riffe: Queue up Assignments to Subgroup

- M&E Subgroup
 - CWT at Mayfield Decision Document
 - Alternate Tilton Release Site (Video/Photos)
 - Gravel Augmentation Work Plan
 - Downstream Adaptive Management TWG
 - Decision Document
 - FHMP Update
 - FERC's Response to EOT Request
 - TU's Alternate Recovery Strategy for Upper Basin
 - Cowlitz Restoration & Recovery Fund 2020
 - FTC Protocols
 - Satellite Rearing (?)
 - Set Topics for February 4 FTC Meeting
-

Parking Lot

- Review Steelhead Recycling Program