

**Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final FHMP Meeting Summary**

JANUARY MEETING CANCELED

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final FHMP Conference Call Summary
February 7, 2017 from 9:30 AM – 3PM

Attendees

Michelle Day	NMFS
Cindy Le Fleur	WDFW
John Serl	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Peggy Miller	FERC License Implementation Lead for
WDFW	
Carol Serdar	WA Dept. of Ecology
Paul Sparks	WA Chapter Trout Unlimited
Mark LaRiviere	Tech Rep for WA Chapter Trout Unlimited
Steve Manlow	LCFRB / Tech Rep for Tacoma Power
Keith Underwood	Tacoma Power
Matt Bleich	Tech Rep for Tacoma Power
Travis Nelson	Tech Rep for Tacoma Power
Eric Shoblom	Tech Rep for Tacoma Power
Kirk Kessler	Tech Rep for Tacoma Power
Florian Leischner	Tech Rep for Tacoma Power
Ann Weckback	LC / Tech Rep for Tacoma Power
Lyn Wiltse	PDSA Consulting / Facilitator

Invited / Absent

Mark Celedonia	USFWS
Bob Rose	Yakama Nation Fisheries
Debbie Carlson	BPA
Jim Pacheco	Tech Rep for WA Dept. of Ecology
Mike Kohn	LCPUD

2017 FTC Meetings 9:30-3:00 at Cowlitz Salmon Hatchery (unless otherwise specified)

Mar. 7, Apr. 4, May 2, June 6, *July 6*, Aug. 1, *Sept. 7*, Oct. 3, Nov. 7, Dec. 5

Action Item:

- All: Note the above meeting dates in *red italicized font* as they have been rescheduled from the usual first Tuesday of the month.

Announcements

- Status / Update on new M&E Schedule: Matt reported that this subgroup has not met since the last FTC meeting. They canceled the last M&E meeting as they

haven't received any new goals from the FHMP group so there is nothing around which to discuss strategy. Another meeting is set for mid-February.

- Downstream Adaptive Management Technical Working Group: Matt reported the Adaptive Management Plan is still undergoing internal review at Tacoma. Nevertheless, this TWG is about to re-initiate once again to discuss roles, responsibilities and goals for 2017-2018.
 - Action Item: Matt to put a proposal together describing the roles and structure of the TWG along with a supporting logic and bring to March 7 meeting.
 - Dept. of Fish and Wildlife Funding: Keith was pleased to announce the approval of \$33.5 million over a 4.5-year period (initial half-year will bring TP up to WDFW's budget cycle.) This will allow TP to be more nimble regarding M&E in the lower river, new activities for the Upper Cowlitz, enforcement officers, etc.
 - Action Item: Keith to send out a summary of what this will include.
 - Hydro Operations Update: Keith discussed FERC requirements for Mossy Rock Dam safety relative to its spill gates. TP is due to respond to FERC by March 1.
 - Action Item: Keith to send out official announcement on this to FTC members ASAP.
 - Lewis County Search and Rescue: Tacoma cooperated with Lewis County by reducing flows to assist with search/recovery of a missing person. Tacoma asked and received electronic support from FTC members on reducing flows to 3800 cfs for February 9 – 10. The Search and Rescue team aims to attempt a recovery the end of this week.
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Trout Hatchery

Presenters: Keith Underwood and Sam Gibbons

Regarding the recent, and still largely unexplained, ~70% loss of steelhead and cutthroat, Keith announced that the angling community is very frustrated at this loss. WDFW went before the WA senate to explain the loss Keith worked with Kelly Cunningham on the messaging which included aging infrastructure and bird predation issue. Keith was interviewed by the TNT last week – there was an article Saturday explaining this issue. The angling community is using this as a wedge issue to push against the increase in WDFW fishing license fees. Keith assured everyone that TP is working with WDFW to try to find solutions.

Sam explained that while they have made some changes at the hatchery, they are not yet sure how effective they have been. They changed the mesh size on the netting that is submerged – to prevent the Buffleheads from eating the fish food. Initially, they assumed a bufflehead could not go through a 2x4" mesh. They have now observed some of the smaller females doing just that. Recently, they chased buffleheads out of the lake. By the time the crew finished one end of the lake, the birds were already back in the prior end of the lake from which they had just been cleared. WDFW has increased non-lethal hazing (pyrotechnics) for all daylight hours. Anecdotally, they are seeing

fewer Buffleheads, but they are still flying around the facility. They are also working on preventing blue herons from feeding on fish at night by using a mono-filament to give a visual effect that the hatchery is covered. They don't have any data yet on the effectiveness of these measures. Sam said they are watching to see if feed conversions are changing and so far, they are not. They are hoping to add lethal removal to their toolbox by contracting with the USDA. Are also seeking permits to trap otters at the site.

They anticipate having a complete Master Plan complete in June. In the meantime, they will see if it is possible to improve the ponds as they focus on short-term improvement and long-term success of the program. They feel they are headed in the right direction.

CRR Fund Update

Presenters: Florian Leischner

Florian walked us through the progress made by the CRR Fund Subcommittee. He started by reviewing the background, explaining that the CRR fund was set up as an alternative to volitional upstream passage. As per Article 3, \$15 million is put in an escrow account and used for recovery projects in the upper basin instead. The Plan was finalized by the FTC in 2014. The USFWS approved it in 2014. NMFS has yet to approve the plan as there is concern about how the funds will be used by TP. TP has provided NMFS with a memo explaining what the funds would and would not be used on.

When the CRR Committee was formed and the more detailed plan / strategy was created. Many chapters have already been reviewed and approved by the FTC. They are in the final stages of completing the document. Florian hopes we can review and approve the plan at the at the March or April FTC meeting. The CRR strategy is to protect and promote restoration and recovery of Upper Cowlitz River Basin salmonid populations listed under the ESA. There is an emphasis on building partnerships to allow for cost-sharing on projects where possible. They will include projects in LCRFB's existing SRFB funding round with 1-2 rounds per biennium.

Afterward the LCRFB technical review would provide the CRR Fund Subcommittee with a list of ranked projects. The subcommittee would then review this and provide a recommendation to the FTC for discussion and approval.

Priorities are in the following order:

1. Spring Chinook in the Upper Basin,
2. Spring Chinook in the Lower Basin
3. Listed species in the Upper Basin
4. Listed species in the Lower Basin

There have been many discussions about the habitat assessment. A protection assessment was completed in 2014 and presented to the FTC. The restoration assessment will be substantially complete prior to allocating funds. There will be three different types of restoration plus another which is an aggregate of the following:

- Fish focused

- Habitat conditions focused
- Restoration project focused

The funding cycle will begin in 2018. Keith expressed a desire to see risk / reward / strength / weakness of each recommendation as part of a broader analysis. Peggy explained they are trying to get there as they work toward identifying the places that would provide the most bang for the buck regarding recovery. Short-term hatchery-related projects that are consistent with protection and recovery goals of listed stocks are available for funding and will not go through the LCFRB ranking and review. We still need to develop ranking criteria for hatchery-type projects. For project monitoring, an as-built report is required providing the basis from which we will be able to compare to future conditions.

Next Steps:

March FTC meeting: Discuss CRR Draft Strategy (likely to approve at April meeting).

April: NMFS decision to proceed, then complete MOU with LCFRB

April – July: Complete Application Manual Draft

May – Jan: 2018: Complete Habitat Assessments

Feb, 2018: First call for projects

Peggy reminded all that we are not supposed to spend any of this money until we receive approval from FERC. Keith responded that TP is more than willing to work with FTC on this and wants to keep HAG funding for the lower river.

Note: Paul reminded all that some are doubting the effectiveness of habitat restoration work. How best to connect fish and habitat? Much habitat work is ephemeral. There is a strong argument for buying the best habitat and working on fixing it later.

Action Items:

- Florian: Send out PPT presentation from today's meeting to all and post to website.
- Florian: By the end of February send out CRR Fund draft strategy for discussion at the March 7 FTC meeting with approval at the April 4 meeting.

CF Northshore Collector Update

Presenters: Kirk Kessler and Matt Bleich

Kirk started by announcing that the construction on the Northshore Collector is basically complete. While there are still some odds and ends to be done such as road paving and touch- up painting, the focus for the last couple of months has been all electrical.

Though the contractors are moving as quickly as possible, they have fallen behind schedule. The electrical work will now overlap with the commissioning – end of March – beginning of April. This will put the hydraulic balancing right (~one month to complete) after the start of the fish season.

TP has been commissioning some pieces of this as they begin to operate certain components. They collected their first handful of Chinook when testing the tailrace gates. WDFW, NMFS, and TP have agreed on a protocol for handling fish during the commissioning process. The delayed timing of the commissioning poses a greater risk to the health of fish.

M&E Component: Matt explained that the TWG is charged with how to implement the Adaptive Management strategy, and what data this will be based on. TP is putting out bids for assistance with doing a shakedown and monitoring of Chinook using PIT-tagging and radio telemetry. The committee received four different proposals from different teams for a one-year evaluation with potential for two additional years. To date, the group narrowed the selection down to two different responders and are close to selecting a consultant to do this work to feed into the collection strategy for the first year of data collection.

Action Items:

- Matt: Before March 7, draft a response to Michelle related to the delay in the commissioning of the collector and send out to all.
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2016 FHMP Process

Presenter: Keith Underwood and Matt Bleich

Keith opened the discussion saying TP is not where they want to be with respect to the FHMP. Some of this is due to the holidays. Another reason is a lack of resources at TP, which they are looking to fill with contractors. 2017-2018 are the busiest years ever for TP Natural Resources. They are keeping their heads down and working as hard as they can. Keith also explained that Travis will be taking a more active leadership role on this going forward.

He also acknowledged the need to get a better way to present the relevant information along with the various uncertainties to the FTC. With that in mind, TP met with WDFW regarding steelhead to try to build out various opinions / perspectives for the FTC to consider. That meeting ended with several ways to view this. Cindy is seeking support to run the AHA model to test out the different views. She hasn't been able to do this yet (also a resource issue).

We want to agree on a 6-year vision for each of the populations and come up with possibilities for the FTC to consider as means to achieve that vision. They are working on the packaging of all the information. TP is still in the contracting process to get more support from contractors.

Peggy appreciated this approach as she believes it will help with a common focus.

Travis will bring an outline of how to proceed to our March FTC meeting.

Action Item:

- Travis: Put together an outline of the sideboards, challenges, species, timeline (in response to request for a broad summary of what they are considering).
 - Travis: Schedule one or two more meetings before the March 7 FTC meeting.
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FTC Coordination with other Interests

Presenter: Keith Underwood and Cindy Le Fleur

Technical Rep Discussion:

Keith explained Pat McCarty will be meeting with the Commissioners in mid-March to discuss Riffe Lake. Ann agreed with Keith that Lewis County FTC membership will likely come up at that meeting. It has been a year since their initial request which we accommodated by adding Ann as a technical rep to Tacoma Power. Everyone agreed that her participation has absolutely been a value add to the FTC, At the time of the request, we said would get back to LC after a year.

The request originated from Lee Gross as he saw the HAG funds were retiring and the CRR funding was soon to be initialized. Lee had a keen interest in habitat acquisition / restoration projects. The Cowlitz Tribe has indicated a similar interest in participating in CRR Fund subcommittee discussions. In response to these requests, Florian will draft a governance document describing how expanding the membership of the CRR Fund Subcommittee this might work. The document will describe the role of the subcommittee and how the FTC would still have trumping authority, etc. We want to be as inclusive as possible and still be effective, while respecting the authorities defined in the SA.

Action Item:

- Florian: For discussion at the April FTC meeting, draft description of who participates on the CRR Fund Subcommittee, and the extent of their influence (recognizing that the FTC still has trumping authority, etc.).

Ad Hoc Rep Discussion:

Everyone agreed it was important to get feedback and suggestions on this from Ad Hoc members. We also want to improve transparency to the public.

Among the recommendations discussed at the Ad Hoc/FTC joint meeting on Nov. 4., Cindy highlighted the following:

- Allow one or two members to attend on a regular basis.
- Have an integrated meeting of both groups every 4 or 6 months.
- Make the FTC-password-protected site to be available to the Ad Hoc Group members or find some other way to share information in the timely manner.

Other ideas were put forward during the discussion:

- Treat the FTC meetings as open and public meetings with a Q&A period at the end. Note: This also came up as an option in the Ad HOC meeting discussion. We are not required to do this as TP does not include elected officials.
- TP to make a link of the Password-protected website available to Ad Hoc members? Keith explained it is currently difficult for TP to add any additional website. That said, TP is in the process of hiring a person to manage the website. That view may change. Note: Tacoma is now taking over the Cowlitzfish.net site which may be morphed to meet these needs.
- Build a Drop Box site for issues where we want to get Ad Hoc input or feedback. Cindy explained that WDFW has an existing website for the Ad Hoc Group. Cindy could add materials from the FTC onto this website.
- Set up a subscribers list and send out info to interested people (as is done by Trout Unlimited).
- Hold informational meetings periodically that are open to the Ad Hoc Group. Bundle this with presentations and subcommittee / TWG reports seeking feedback. and Q&A sessions. These would be non-decisional meetings which could include the Science Symposium that John hosts every year. We could also revitalize the FTC Annual Work Plan in accordance with this quarterly schedule and possibly integrate the APR (Annual Program Review) process as well.

There was concern that doing a quarterly schedule with Ad Hoc participation is too structured and might negatively impact our productivity and FTC members are already stretched in terms of being able to devote more resources than they already are. Caution was also expressed about starting something on a trial basis that we could not sustain, as it would unfairly raise expectations among the Ad Hoc members.

Action Item:

- Matt: Work with Travis to write up a proposal to proceed for us to discuss at our next meeting. This work plan will identify the right number of meetings that would be open to Ad Hoc Group members.
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Topics for March 7 FTC Meeting

1. Announcements
 - a. (Hydro Ops Update, Trout Hatchery Update, D/S Adaptive Management TWG)
 2. CRR Fund Update
 3. M&E Report / Work Group Update
 4. CF Northshore Collector Update
 5. 2016 FHMP
 - a. Approach and Strategies
 - b. Schedule
 6. FTC Coordination with other Interests
 - a. Ad Hoc Group Representation / Inclusion
 7. Set agenda for April 4 meeting
 - a. Continue work on 2016 FHMP Update
 - b. Review Florian's proposal for including other interests through CRR Fund Subcommittee
 - c. Update to FTC Protocols (?)
-

Conference Call Evaluation

- Great attendance!
- Everyone was good about staying on point
- Great job of hearing and honoring diverse viewpoints
- Efficient use of time
- It is helpful when people identify themselves as they begin speaking

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Apr. 4, May 2, June 6, *July 6*, Aug. 1, *Sept. 7*, Oct. 3, Nov. 7, Dec. 5

Action Item:

- All: Note the above meeting dates in *red italicized font* as they have been rescheduled from the usual first Tuesday of the month.

Announcements

- Retirements: Pat McCarty at the end of June; Steve Fischer in mid-April, and Pat Frazier in mid-May.

- Hydro Operations Update: Keith announced we have full snow pack. There was great rejoicing! He also explained TP will be keeping Riffe Lake lower this year FERC requirements for Mossyrock Dam safety relative to the spill gates. They will try to hit 749'. Any exceedance would be only for a few days. We will discuss MIFs this summer and how they will manage the lake. The lake elevation curves are still speculative at this point.
 - Trout Hatchery Update: Eric reported on the actions they have taken to address the predation problem including fencing to exclude buffleheads and nets to protect the smolts from the herons. Two blue herons were entangled and later released alive. For all daylight hours, there is monitoring going on. These measures seem to be pretty effective so far. The bird hazers suggest extending these measures more broadly. They have also been monitoring the feed conversions. Lake 1 was a high conversion lake and it is also the lake with the highest number of buffleheads so that is not surprising. The lethal hazing contract is still with USDA who will give TP a final proposal and work plan. They are dealing with ongoing counter issues which they are monitoring twice a day. It seems they can't really count on them. Keith explained TP just received an initial draft of the master plan from HDR and will discuss this with HDR in the near term and then share this plan and ask for comments.
 - M&E Report / Work Group Update: Matt reported that this subgroup has not met since the last FTC meeting. They are on hold until the subgroup puts together goals for the various populations. Another meeting is set for March 15.
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TP Response to FERC Letter
Presenters: Keith Underwood

Keith reported the letter they received from FERC cited unsafe operations with the frequent ramping rates. The letter also referred to the Trout Hatchery Operation asking why they had not been informed. The TP response was that their actions were within the authorized operational limits. The extra volatility was in an effort to meet load following. Wind has caused a lot of volatility in the power market. They also responded that they don't see this as a safety issue for the boating community. TP is currently working on achieving the right balance between the power market and moving the river around (which they are currently only doing in evenings). They anticipate this high reactivity to continue throughout the year.

Action Item:

- Travis: Send out the FERC letter and Tacoma's response to all. *(Done.)*

CF Northshore Collector Update
Presenter: Matt Bleich

Matt started by announcing that they are still in commissioning and making good progress. The commissioning is concurrent with the electrical components of the construction process. They expect both to be complete this month. The heavy part of the commissioning schedule is scheduled to begin the week of March 13. Hydraulic balancing should begin the second week of April. They have selected a contractor for the first year of evaluations with two additional option years. John reported a few hundred fry have been collected so far. Kirk Kessler the PM for this project resigned from TP and is joining his family business.

2016 FHMP Process Update
Presenter: Travis

Travis reported that he is encouraged by the last few meetings TP had with WDFW and NMFS and anticipates being able to meet the extended August 1 FERC deadline.

At their last meeting, Cindy presented an outline showing the goals and strategy for Spring Chinook and a reintroduction strategy for winter steelhead. They are working on getting contracted to do some AHA model runs (integrated vs. segregated options).

Similarly, TP is in the process of consolidating species information from various populations into a single table. They will put together a draft strategy for coho following a 2-page template drafted by Bryce (WDFW). There are rough notes from these meetings that will be shared with the FTC as they recognize and value this being an open and transparent process that is also as efficient as possible. They are working on crafting some overarching options as they see them and then solicit the FTC's recommendation as to the best way forward.

They hope to have something to present to the FTC in April or May. This will include species strategies. The complete document should be available for an official 30-day review by June.

Downstream Adaptive Management Technical Working Group
Presenter: Matt Bleich

Matt distributed the Decision Document for the transition from the DAMW to the Technical Working Group. During the last meeting, He explained the TWG will begin to implement its process including roles and responsibilities and goals for 2017-2018 while the draft plan is under internal review at Tacoma. The subgroup includes biologists from TP, WDFW, NMFS, and a third-party contractor to provide an unbiased perspective.

Engineers will be from TP, NMFS, and LCPUD. Others will be invited into the work group on an as-needed basis.

This TWG would provide updates to the FTC on approximately a quarterly basis. The FTC would make decisions based on the alternatives proposed by the TWG. Everyone agreed that communication beyond the TWG will be key.

Decision: Decision Document 2017-01 was approved with the added FTC Decision and Justification (See below.)

The FTC agrees with this decision document forming the TWG in the name of efficiency and effectiveness.

The charter will include, but not be limited to, the following:

- TWG will be open to FTC participants
- FTC will be informed of meeting schedule and agendas

Proposed FTC Workplan
Presenter: Matt Bleich

Matt distributed an outline of a possible format for our meetings, including a more goal-oriented thought process for the work of the FTC, and working toward an information sharing / decision making construct.

Monthly meetings would continue to be the first Tuesday of each month and the work plan would be treated as a living document. Public attendance would be permitted at the information sharing meeting every third month. The subgroups would describe the decisions they are working toward. They would report on progress and would include a deep dive into the topic in preparation for a decision to be made at the FTC meeting the following month. Mark related that Paul (TU) would support every third meeting being open to the public. We would need to provide a venue large enough to accommodate the public and the agenda would have to be published ahead of time and would have to be facilitated in a way that allowed for a balanced information exchange.

The meeting on the following month would not be open to the public. The idea is that after the information sharing at the prior meeting, the next meeting is where Decision Documents would be approved. Each entity would share the perspective of those for whom they advocate.

The following meeting (finishing up the quarter) would be around the ongoing FTC work tasks such as the FHMP. This meeting would also be used to make any decisions that were not reached during the preceding meeting as anticipated.

Keith suggested that some of the frustration with the angling community is that they want to “make sausage with us.” This would also provide TU an opportunity to mobilize the environmental community to attend and engage with the angling community.

After some discussion, it was suggested that perhaps a quarterly schedule might be overly ambitious. We don't want to set expectations that we are not able to meet. We agreed to try the initial meeting that is open to the public at the May or June FTC meeting. Cindy suggested announcing this idea at John's annual meeting (the week of April 24) and emphasizing that this three-month rotation of FTC meetings is a test. There was concern that the three-month model didn't account for the need for multiple presentations prior to making a decision. Keith committed to all that the process would be flexible enough to ensure that we make decisions in a timely manner and based on the best available information. Matt offered that this model is very doable and can drive efficiencies.

Action Items:

- Subgroups: Meet to develop work plans and identify key decisions.

- Matt: Flesh out this outline based on the discussions today, including the decision points for subgroup workplans, suggesting how their decisions might fit into the proposed three- month meeting rotation. Work with Monika to come up with a name for each type of meeting.
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CRR Fund Update

Presenters: Florian Leischner

Florian sent out the finalized strategy from the CRR subcommittee. He reminded all that the last few chapters had been previously been approved, in piecemeal fashion, by the FTC. Some of those chapters were changed within the context of the revised full document. He, therefore, encouraged all to review this as if it were a new document. Some of the ideas such as the assessment are still a bit on the generic side, but the goals have been identified.

The purpose of the plan is to protect and promote restoration and recovery of upper Cowlitz river basin ESA salmonid populations. This is a strategy document regarding the use of CRR funds (set aside in lieu of volitional fish passage facility). These funds are to be used for habitat restoration and a hatchery type processed. The focus is the Upper Basin and funds will be distributed through a grant funding process. The habitat protection and restoration projects will be solicited and reviewed alongside Salmon Recovery Funding Board (SRFB) projects as part of that annual review.

The habitat assessment that will occur prior to allocation of any funds to identify the best location and strategy for projects was copied from the SRFB policies. This is follow-up to the 2014 CRR Implementation Plan that was approved by USFWS and still needs to be approved by NMFS so they can begin spending the funds. Michelle explained that NMFS has issues with the administrative costs.

The Entrix report was very directed at protection so it is insufficient for the purposes of this plan. It just identified properties for us to purchase. We will build on this data set as we perform an additional habitat assessment which would identify what steps could be taken to improve it and how to address the limiting factors.

Discussion / Suggestions:

- There was concern about relying on EDT. This is the foundation on the Lower Columbia. The most recent update to EDT was in 2010. It was found to capture very well what those limiting factors were. Steve sees the EDT model as very strong.
- Michelle urged the group to remove the second-to-last paragraph on page 11.
- Add a blurb... in consideration of the goals and objectives of the FHMP in terms of population recovery. (Redundant?)

- Want to emphasize that these projects would lead to recovery (vs. fishing opportunities).
- Habitat Assessment – What is the need for a restoration plan if we have EDT data on high priority reaches? Often sponsor lack the capacity to do habitat assessments to define a project opportunity.
- Reference reach data vs. boots on the ground?
- We want to be able to rank opportunities to address life history bottlenecks where there are willing property owners. This lets you jump right into habitat protection / restoration projects and eliminates the “Bring me another rock” syndrome.
- The Recovery Plan includes a recovery strategy for the upper Cowlitz, but it is at a pretty high level.
- We don’t just want to spend the money because someone comes in and gives us a project.
- Steve explained a SRFB request would be to kick off the assessment. The current estimate is \$285K with \$70K plus or minus of that be matched. Then the planning and permitting would be done in 2018 and the work would be done in 2019. That means we would be ready for projects on the ground in 2019.
- Getting the habitat assessment done with SRFB dollars would allow other entities to utilize those data as well.
- March 24 is when the project requests are due.
- FERC would need to approve the plan for use of the funds.
- Using the funds to do an assessment vs. actual restoration is a difficult concept for some. The same holds true with using the fund to cover administrative costs.

Action Items:

- All: by March 28 send out any comments / edits to Florian on the Draft CRR Fund Implementation Strategy sent out a week ago, and distributed at this meeting.
- Florian: Work with Michelle to put together a meeting of the right folks at NMFS to discuss the funding of administrative costs.
- Steve: Get back to the group after he talks to Melody about a drop-dead date. *(Done – this date is August 14).*
- Florian: Call another meeting of the subgroup in short order to address this in a timely fashion. Bring three decision documents for approval to the next meeting.
 - 2017-02: Final version of the CRR Fund Implementation Strategy (in track changes)
 - 2017-3: LCFRB document with details on the pre-application
 - 2017-4: Approval document to use the LCFRB for habitat ranking process, asking that it be paid through CRR funds

Riffe Lake Update

Keith explained Pat McCarty recently met with the Commissioners to discuss Riffe Lake. He walked us through a Power point presentation explaining the USGS analysis on earthquakes that could occur in the Mossyrock area. The analysis showed that inner-plate shifting at a 7.5 level earthquake within 2 miles of Mossyrock would result in the piers being subject to failure. They would either sheer off the dam or the gate would

come unhinged. If the piers and/or gates failed, there would be an uncontrollable release of water.

In 12/06/16, TP received a FERC letter asking for interim risk reduction methods. FERC now wants a zero-risk approach. The dam is structurally safe. TP proposes mitigating this by keeping a lower reservoir at Riffe – approximately 30' below full pool. They suggested this in a letter to FERC and have not received a reply yet. They would like a new MIF of 500cfs so they would pass all spill through the new collector.

They assume they will have to construct a new boat ramp and swim beach area. Riffe is not an actively managed fishery. TP is considering a new management strategy and looking at potential stocking strategies. They are also looking at an emergency notification system and how best to protect cultural resources.

Predation Study: Mike was pleased to announce the Commission voted today in favor of funding this study which addressed mitigation trout in anadromous waters. They are using tags and mitigation trout (June 20 – August 8) that are good for a year. This ties to Issue Paper 14 and addresses the Lewis County PUD Bi-Op as well.

Mike also let everyone know that Joe First will be drawing down the reservoir again (to less than 20') on September 11, 2017.

Action Items:

- Keith: Work with Mike on plans for the 500 MIF.
- Mike: Send the predation study to Rich Turner (NMFS).

Topics for April 4 FTC Meeting

8. FHMP 2016 Process: Next Steps
9. Ad Hoc Involvement
10. FTC Technical Rep Discussion
11. Update on CFD Northshore Collector
12. D/S Adaptive Management TWG Update
13. M&E Plan
14. CRR Fund Decision Documents
15. Set agenda for May 2 meeting
 - a. Continue work on 2016 FHMP Update
 - b. Update to FTC Protocols (?)

Meeting Evaluation

- Great attendance!
- Covered a lot of ground
- We missed Paul and Carol

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Florian Leischner	Tech Rep for Tacoma Power
Ann Weckback	LC / Tech Rep for Tacoma Power
Lyn Wiltse	PDSA Consulting / Facilitator

Invited / Absent

Mark Celedonia	USFWS
Bob Rose	Yakama Nation Fisheries
Jim Pacheco	Tech Rep for WA Dept. of Ecology

2017 FTC Meetings 9:30-3:00 at Cowlitz Salmon Hatchery (unless otherwise specified)

May 2, June 6, *July 6*, Aug. 1, *Sept. 7*, Oct. 3, Nov. 7, Dec. 5

Action Item:

- All: Note the above meeting dates in *red italicized font* as they have been rescheduled from the usual first Tuesday of the month.

Announcements

- Pat announced that Cindy has been selected to head a critical new initiative for WDFW. He is stepping in temporarily as the new regional Program Manager. He will be with the FTC until the end of June. We appreciated her time with us and wish her well!
- Hydro Operations / Riffe Lake Update: Keith announced that TP performed an unusual operation over the last two weeks. They are now at 752' elevation. Each

day the market was going negative and they were getting substantial inflows so they performed an operational spill to avoid putting power into the negative market. They have been running between 107 and 109. Between 1500 cfs with both turbines running up to 4K cfs. They have since been pulling back on the turbines and watching the gap. These efforts have been successful and there have not been any water quality violations. They may go into another spill scenario depending on how fast things warm up and market conditions. They got a letter from FERC last Friday saying to keep managing the lake level at 749' to avoid damage from a potential catastrophic event such as an earthquake. With dam safety now evaluated to be adequately addressed, TP is now looking at how to mitigate the impact of low reservoir levels on other resources such as cultural and recreational. They will continue to keep the FTC in the loop in this. There hasn't been as much up and down ramping as occurred in January. They are doing any ramping during the evening hours so as not to adversely affect the angling community. Keith will be working with Mike about the 500cfs MIF.

- Trout Hatchery Update: Eric reported that the actions they have taken to address the predation problem seem to be working. WDFW is installing fishing line 18" above the surface of the water, 18" apart. Most birds are avoiding it. For the herons, they have installed nets along the shorelines to keep the fish in deeper water. WDFW staff are currently working on net installations at some of the lakes. They are also using cross fencing. The hazing has been increased to all daylight hours. There is a heightened awareness out there. They are not releasing fish until April 15th. One of the hazers observed a drone flying overhead. Keith reminded all that it is illegal to fly drones over TP property. There is a USDA contract for lethal hazing in front of TP now. The counters have been recalibrated and cleaned and will be operating as well as they ever have. There will be a short report detailing this from Smith- Root. TP is reviewing the initial draft of the master plan from HDR (including low, medium, and high costs). TP is now discussing with them what various strategies might look like so they can run the costs accordingly.
 - Action Item: Eric to post photo evidence of these measures to TP website.
- M&E Work Group Update: Matt reported that this subgroup met by conference call to discuss the M&E Work Plan which will be integrated into the FTC Work Plan. The group was enthusiastic about that approach. Matt is starting to include this in the Work Plan. They are also working on WDFW task orders in advance of the new contract. They also discussed the schedule.
- New hires: TP has hired fish biologist Phil Sandstrom. He is formerly with WDFW and has considerable modeling experience. Keith has also just received permission to hire another fish bio. Eric explained that Chris Foster (formerly with USFWS) has been hired at the Cowlitz Hatchery. There are no more openings currently.

CF Northshore Collector Update

Presenter: Matt Bleich

Matt explained the collector is largely complete with the exception of some electrical work. The commissioning is well under way. They set up April 3 to begin the hydraulic balancing. The balancing schedule was originally five weeks in length. The current approach is for them to check in with TP weekly, and depending on the run timing of the fish, the effort will be suspended. There are several monitors hanging from the system that might prove injurious to the fish. Monday will be the initial checking regarding progress of the hydraulic balancing. There will be a one-day period when they have to drain the facility, pull all the equipment, and then re-water the facility. Carol reminded Matt that the Construction Stormwater General Permit can't be terminated until all the temporary BMPs are pulled and bare and exposed soil is stabilized.

Downstream Adaptive Management TWG

Presenter: Matt Bleich

Matt explained the TWG had their first meeting March 22 to discuss implementation of the plan that was created by the DAMW. They began to draft a subgroup charter for the TWG. Matt will flesh these out prior to the next TWG meeting. When it is complete it will be shared with the FTC. They also put together a work plan which will be adapted over time. They discussed roles and responsibilities and when the first decisions will be. This season will be treated as a shake-down year where expectations and communication protocols are tested. They also discussed the third-party contractor to join the group. There were a number of applicants that expressed interest. The TWG reviewed all the applicants and agreed how to proceed. Matt will share who this is after the contract has been successfully negotiated. The next TWG meeting will be April 26 onsite at CF and Ed Meyer will be in attendance.

Action Item:

- Matt / Keith: Ensure FTC is informed about discussions with LCPUD regarding CFD minimum flows.
-

2016 FHMP Process Update

Presenter: Travis Nelson

Travis reported that they last met March 2 and plan to meet again April 12. The intent is to get clarity on where we've been and where we think we are headed. The posted version of the FHMP from last September has not been replaced and is still a work in process.

Travis is still optimistic about being able to meet the extended August 1 FERC deadline. Mark asked if there has been discussion about possibly re-establishing early winter-run

steelhead. Cindy is following up with Andy Applebee about running some models for this. All agree that the Chambers Creek stock ain't coming back! Pat explained they are looking at expanding the run timing to include earlier returning fish. How best to do this without the Chambers Creek stock? WDFW is still looking at developing some kind of indigenous stock for the Cowlitz that has earlier run timing. They hope to have a reviewed draft of the FHMP that is "meatier" than what is currently posted in the next month or so.

The official document should be out for review by the end of June.

Proposed FTC Workplan

Presenter: Matt Bleich

Matt reminded all that at our last meeting we discussed moving to a quarterly schedule where each subgroup would have the floor during each of the quarterlies. He recounted the proposed three-month cycle:

1. A topic would be presented at the informational meeting (likely open to the public – including and beyond the Ad Hoc Group).
2. The next meeting would be around making decisions (decision documents, etc.).
3. The third meeting would be to address any outstanding issues that kept us from making a decision at the last meeting. It would also include a description of work tasks for the subgroups.

He showed us an initial spreadsheet for the work plan for the various subgroups. (FHMP, TWG, APR process, M&E, etc.). He is meeting with them to get their tasks coordinated into the quarterly schedule. The technical subgroups would do the heavy lifting and bring well considered proposals to the FTC for discussion. They would document their thought process which would be heavily reliant on available facts and data.

Matt has seen schedules like this work well in the past. He encouraged all to try it out to see if we can gain some efficiency. At this point, Matt doesn't see us kicking off a trial of this process before June (at the earliest). He committed to getting a more detailed version of this out to all to review in advance of the next FTC meeting.

Many of the same concerns that were raised at the last FTC meeting were reiterated:

- Committing to meeting with the public on a sustainable basis. We want to set up something we can commit to long term.
- The workload of FTC participants may prevent them from being able to attend all of the subgroup meetings.
- Staff and equipment constraints may contribute to water quality compliance issues not being adequately addressed.
- Lack of FHMP experience among those working on it.

- We want to engage the public as part of this trial toward efficient and effective outcomes.
- Consider trying this out as a 4-month rotation allowing 2 months for the information sharing instead of only one month before the decision.
- Transparency is very important. We want to be very clear the way we announce the invitation to the public, including the agenda topics and the ground rules for participation.

Matt thanked everyone for their input. Several members agreed with the general approach and agreed to give it a try. The initial focus will be on getting the subgroups working effectively (including documenting their work and sharing in a timely and comprehensive manner with the FTC). When all agree that process is working well, then we can figure out how best to engage with the public. The primary driver is gaining efficiency with this group and knowing we are already having the information exchanges with the public (e.g., science meeting and APR process). There is a desire for increased accountability. Currently, decision documents are usually sent out only a week ahead of our meetings. Matt believes this process will allow for more time (a month) for FTC members to be prepared to make decisions. It is incumbent on the subgroups to outline and communicate all considerations that lead to the point of making a decision.

Efficiency has always been an issue for the FTC. Small subgroups have been used effectively in the past. The subgroups are technical in nature. Matt explained that all of the subgroups he has met with are excited about trying out this new model. All are welcome to attend any and all of the subgroups. The FTC is free to inform the subgroups of considerations such as policy issues that need to be considered.

Action Items:

- Subgroups: Meet to develop work plans and identify key decisions.
- Matt: Flesh out this outline based on the discussions today, including the decision points for subgroup workplans, suggesting how their decisions might fit into the proposed meeting rotation. Work with Monika to come up with a name for each type of meeting.

CRR Fund Update

Presenters: Florian Leischner and Steve Manlow

Florian announced there wasn't a CRR meeting since the last FTC meeting. He reminded all that he sent out the draft strategy before our last meeting and hadn't received any additional comments. The document is currently undergoing internal review at TP. The decision document for that will be out in advance of the next FTC meeting.

In the meantime, there were discussions around what administrative funds can be charged to this fund – including LCRFB involvement. TP has agreed to cover these

costs and will enter into a contract with the LCRFB about moving forward together, folding this into the LCRFB SRFB process for likely a two-year trial.

Florian suggested the CRR Subcommittee meet again to discuss this as well as the habitat assessment process and look at making a match determination at the May FTC meeting. The revised draft decision document will be out prior to our next meeting. The deadline for securing match is the end of August. We need to have things well defined by then. There was concern that we are forming a partnership with an entity that relies on federal funding. Steve agreed there is uncertainty about the future with the current administration and we should have more certainty about this in June.

Steve walked us through a presentation of the Planning Project Proposal process.

Action Items:

- Steve: Send out the updated version of Appendix C-2: Planning Project Proposal.
 - Florian: Call another meeting of the subgroup in short order to address this in a timely fashion. Bring two decision documents for approval to the next meeting.
 - 2017-02: Final version of the CRR Fund Implementation Strategy (in track changes)
 - 2017-03: LCRFB document with details on the pre-application
-

Riffe Lake Fish Plants
Presenter: Travis

We discussed fish being in Riffe Lake. Travis suggested some fish may be going over CF, some may be from over-production, and third, there may be some emergency plants occurring. What do we see as potential solutions? The angling community has expectations that this will be addressed. What is WDFW's strategy? John suggested that there were fish plants in Riffe many years ago, before the collector. There are no stipulations in the license that call for TP to plant fish in Riffe. They could divert plantings in area lakes to Riffe. The reason we haven't planted trout into Riffe Lake is that they didn't do as well as coho juveniles. Planting rainbows into Riffe would likely work against the coho situation which anglers seem to appreciate. No creel surveys are conducted at Riffe.

Spring Chinook

Sam explained they have an overage on the spring Chinook program (collected April - July and they are spawned late August-September). Last year, 25% of the males "turned into females" by the time they were spawned. They have 260K fry currently. They have planted overages in the past into Riffe Lake. They could also do a fry plant into the upper watershed. There was a suggestion to mark an index group or mark them all to facilitate our learning in the future. How much would it cost to mark them all? Sam estimated \$14K.

FTC recommendation for spring Chinook: Plant them in the Upper Cowlitz and mark a portion or all of them for M&E. Ask the M&E Group to recommend how many are marked.

Coho

Sam explained that 2015 had low fecundity. 2016 had 250K coho fry overage due to average fecundity. There are overages in the integrated (part of listing and are ad-clipped plus CWT) and the segregated programs. We have more integrated (~180K) than segregated (~70-80K).

FTC recommendation for coho: Rear the additional 180K integrated fish to smolt size and mark with ad-clip only. Excess segregated coho would be planted into Riffe Lake as unmarked fry.

Steelhead

The idea was discussed to possibly plant summer steelhead adults in Riffe Lake at the tailrace of CFD? This would be like recycling upstream. Some of these fish would be radio tagged so we could track their movements. This idea was discussed briefly with NMFS and their pathologist. Anglers have responded very positively to the occasional summer steelhead caught at Riffe. They have long been angling to get a chance to catch more of these fish. How would these fish get out of Riffe Lake? Through

operational spills? TP wants them to go to the lower port – they can take 1500 cfs through the valve. Keith explained that there wouldn't be any TDG concerns due to the position of the valve.

FTC recommendation for steelhead: Not to pursue the idea of planting steelhead because Riffe Lake is now regularly conducting operational spills and, with its lower elevation, there is riverine potential spawning habitat at the Upper end of Riffe Lake. These factors raise the risk of these fish interacting with natural populations in a negative manner. Another consideration is the potential need for a collector to be established in Upper Riffe Lake which would then capture production from the summer steelhead and confound the identification of the collected NORs.

Whatever we do, we will run it by Rich Turner (NMFS).

Action Items:

- John: Put together a decision document for the FTC recommendation to put spring Chinook in the Upper Cowlitz and whether we need to mark them all or is it sufficient to do an index (to preclude any complications in the future).
 - John: Do the same for the FTC recommendations today for coho and summer steelhead.
 - Travis: Send John a decision document template. *(Done.)*
-

Meeting with Cowlitz Angling Community

Keith suggested TP / TP and WDFW set up a meeting on April 12 (in advance of the Science Meeting on April 20). Keith is committed to doing this to improve understanding of the recent operational changes impacting fishermen. As Cindy is no longer available to convene this group, Pat will follow up with Keith on this. The intent is to clarify current operations – not to unduly raise expectations.

Action Item:

- Travis: Follow up with all about the details of this meeting.
-

Meeting Summary Approval

The March 7 FTC draft meeting summary was approved with minor edits.

Topics for the May 2 FTC Meeting

16. FHMP 2016 Process: Next Steps
17. Ad Hoc Involvement
18. Update on CFD Northshore Collector
19. D/S Adaptive Management TWG Update

20. M&E Plan
 21. CRR Fund Decision Documents
 22. Set agenda for June meeting
 - a. Continue work on 2016 FHMP Update
 - b. Update to FTC Protocols?
-

Meeting Evaluation

- Great attendance!
- Covered a lot of ground

**Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final FHMP Meeting Summary
May 2, 2017 from 9:30 AM – 2PM**

Attendees:

Michelle Day	NMFS
Pat Frazier	WDFW
Travis Nelson	TPU
John Serl	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Carol Serdar	WA Dept. of Ecology
Matt Bleich	Tech Rep for TPU
Eric Shoblom	Tech Rep for TPU
Kristin Williamson	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Ann Weckback	LC / Tech Rep for Tacoma Power
Debbie Carlson	BPA
Lyn Wiltse	PDSA Consulting / Facilitator

2017 FTC Meetings 9:30-3:00 at Cowlitz Salmon Hatchery (unless otherwise specified)

June 6, *July 6*, Aug. 1, *Sept. 7*, Oct. 3, Nov. 7, Dec. 5

Action Item:

- All: Note the above meeting dates in *red italicized font* as they have been rescheduled from the usual first Tuesday of the month.

Announcements

- Travis introduced Phil Sandstrom to the group. Phil was hired as M&E Manager. He has considerable fish experience in the northwest and has been with TP three weeks now. Welcome Phil!
- Travis also announced that Keith has named him as the official FTC chair. He will relay Keith's input on key issues. FTC members are welcome to also contact Keith directly on issues as needed. Keith will be available for discussion of issues where Keith needs to engage directly. This will allow Keith to engage in other areas at Tacoma Power in his role as the Natural Resources Manager.
- Hydro Operations Update: Eric reported they are currently at 742' and averaging 9,997 cfs which is a little above the average for this time of year. They are at 127% snowpack.
- Trout Hatchery Update: Eric reported that pictures and a description of the predation mitigation measures have been posted to the TP website. There have not been a lot of infrastructure or hazing changes since the last report. The

counters are in place and about half of the initial inventory of fish has been released so far through the counters (Steelhead and cutthroat). Things are proceeding according to schedule. The USDA hazers are complaining of boredom because few birds are now present. We'll see how that goes since the fish are being released. They are working with HDR on the second draft of the Master Plan. The lethal hazing contract has been approved by TP, but has no teeth as it is too late for this season, so it will not be implemented.

- **M&E Work Group Update:** Matt reported that this subgroup met since our last meeting and discussed the next series of task orders for 2017-18 and a strategy to progress the M&E description within the FHMP. They introduced Phil to the group and discussed working relationships as well as several technical work items. They expect to see the draft task orders pushed to TP in the next few days. Due to the lack of progress on the FHMP relative to goals, this group discussed how they could pursue some concurrent paths for the M&E description within the context of the FHMP. They will meet again prior to our next meeting to discuss tributary weir placement and how best to approach the GMR strategy, etc. with an eye toward future recommendations for the FTC.
 - **Riffe Lake Update:** Riffe is still operating at a max elevation of 749'. It is currently at 742'. TP will pull down the elevation to 735' in anticipation of spring runoff. Travis explained that a recent article on Riffe Lake by the Chronicle highlighted concerns about beach access for swimming areas, boat launches, and other issues related to the lower lake levels. TP is responding with a letter to FERC this month explaining what actions they are taking and how they are communicating with the public and what mitigation measures may be appropriate.
-

CF Northshore Collector Update

Presenter: Matt Bleich

Matt explained the collector is now complete. They concluded the hydraulic balancing last Friday for 500 cfs of flow and the collector is now operational. Balancing to 1,000 cfs will occur later. They did the test up to 500 cfs tailrace discharge (which is the max they will operate to for this season) and 500 cfs pump flow. That established a good baseline for this year and Matt felt it was sufficient and was concerned about any potential fish injury if they had continued. Fish collection began April 17. There are still bugs to work out (mostly electrical) though a bulk of the commissioning is now complete. John reported they are currently (as of May 1) 14% of the way through the steelhead smolt run:

- 1,175 steelhead smolts
- 263 coho smolts
- 269 cutthroat smolts

They released the first group of PIT-tagged steelhead last week and will do the second release this week. The bulk of the fish that have been recaptured appear to be coming

through the Northshore Collector vs. the old facility. Next week is the first week they will begin to get some CE estimates.

Matt reminded all that there will likely be a spill event between now and the next meeting and, in that event, Tacoma will operate in a way that is consistent with the agreements they have with Lewis County.

Action Item:

- Matt: Prepare a diagram (cross-section of the dam with a map view) that explains how the 500 cfs discharge out of the tailrace is being accounted for from a water quality standpoint, the water quality impacts of the water going through the tailrace at that location. Include this in next month's update.
-

Downstream Adaptive Management TWG

Presenter: Matt Bleich

Matt explained the TWG last met on April 26. It included a site tour at CF. They discussed the commissioning status and the hydraulic balancing. Ed Meyer and Michelle from NMFS were in attendance along with Joe First from LC PUD were in attendance. It was a good visit. A good time was had by all.

Action Item:

- Matt: Ensure FTC is informed about discussions with LCPUD regarding CFD minimum flows.
-

2016 FHMP Process Update

Presenter: Travis Nelson

Travis reported that they last met on April 12. He is still optimistic about August 1 deadline. He sees this as an important milestone which may actually kick off the 30-day review instead of being the date the document is submitted to FERC. TP is in the process of getting a contractor onboard to assist with this process. Travis will be meeting with NMFS and WDFW in advance of our next meeting to discuss key issues relative to the FHMP. Pat is excited about how we can include things in the FHMP that allow us to address them appropriately on a six year schedule (e.g., how and why we choose the programs, laying out the various options within the legal sideboards, the decision process we undertake, etc.). Perhaps we should create an annual report that is shared at the Science Symposium.

Tacoma will let the FTC know if it looks like they need to extend the August 1 FERC deadline and in need of letters of support.

CRR Fund Update

Presenter: Kristin Williamson

Kristin explained the CRR Fund Implementation Strategy has been in progress for several years. The document was sent out with a request for written comments by March 28. TP completed their internal review in April. The request was to send the document in track changes. This is the version of the document that Kristin distributed at this meeting.

DECISION MADE: The decision document 2017-6 was approved with one edit and the justification was drafted and also approved by a consensus vote.

Kristin announced that the CRR subgroup last met on April 12 where they decided to recommend allocating \$45,150 of CRR funding as match to LCFRB's \$249,450 DRFB request, this recommendation is included in the revised decision document 2017-2 for FTC review.

The Decision Document 2017-2 described the partnership with the LCFRB on DRFB proposals for the Upper Cowlitz-Cispus Habitat Strategy. Peggy explained that this document is written for a broader audience than the FTC. The subcommittee recognized that there may be a need for additional work outside of this assessment, including Tier 3 reaches.

DECISION MADE: There was a consensus decision to support Decision Document 2017-2 as edited.

Carol reminded all that there is a need to ensure that, whatever projects are funded, water quality issues are properly and proactively addressed. Kristin said the permit process would be included in both manuals and would also be included in the grant agreement.

FTC Decision Process

We agreed to amend the current decision making process to include a confirmation voice vote by FTC members when approving decision documents.

April 12 Meeting with Cowlitz Angling Community

Presenters: Travis and Pat

Travis reminded all that TP hosted a meeting with the angling community the afternoon of April 12. The meeting was well attended including a couple of lobbyists and there was a good exchange of information including recommendations on what type of fish to plant in Riffe Lake.

Members of the fishing community were dissatisfied with the TP reservoir operations and had reached out to FERC and their legislators. During the meeting Keith encouraged them to reach out to TP directly. Overall, the meeting was cordial and productive.

Many of the same anglers attended John's science meeting and were appreciative of the information being shared. They appreciated learning about the mitigation measures that have been taken to address the predation at the trout hatchery. There is still frustration at the timing of the expansion of the hatchery.

Travis and Pat will discuss next steps.

Science Symposium

Presenter: John Serl

John explained that there were approximately 65 attendees. The presentations were well received. Copies of the presentations were posted on the Tacoma Power website.

Fish Disposition / M&E Subgroup

Presenter: Pat Frazier

Spring Chinook:

WDFW has 260K excess spring Chinook fry on hand. The M&E Group did not come to consensus on whether they should be released downstream of the Barrier Dam or upstream of CF Dam. They kicked the decision up to Pat and Keith. Pat reported WDFW is in favor of marking these fish with an adipose fin clip and release them upstream to Packwood and the Upper Cispus. He assured all that WDFW would fund this marking effort and Keith reported remotely that Tacoma is in support of this action.

DECISION: FTC agreed with WDFW marking these fish and taking them upstream of CF Dam. This decision is for this year only. A Decision Document for this will be distributed prior to the next FTC meeting.

Coho:

The M&E group discussed the marking strategy for these ~250K fish and putting them into Riffe Lake. Sam explained that we are meeting the total release program for the year. WDFW will inventory what is left and then put these fish into Riffe Lake unmarked.

DECISION: We agreed to, for 2017; put the excess segregated, unmarked coho into Riffe Lake, knowing there will be no impacts past 2019. A Decision Document will be distributed prior to next FTC meeting.

Steelhead:

Not time sensitive – for future discussion.

Proposed FTC Workplan

Presenter: Matt Bleich

Matt is continuing to work on this. Stay tuned.

Action Items:

- Subgroups: Meet to develop work plans and identify key decisions.
 - Matt: Flesh out this outline based on the discussions today, including the decision points for subgroup workplans, suggesting how their decisions might fit into the proposed meeting rotation. Work with Monika to come up with a name for each type of meeting.
-

Meeting Summary Approval

The April 4 FTC draft meeting summary was approved with minor edits.

Topics for the June 6 FTC Meeting

- 23. FHMP 2016 Process: Next Steps
- 24. Ad Hoc Involvement

25. Fish Disposition Discussion
 26. Update on CFD Northshore Collector
 27. D/S Adaptive Management TWG Update
 28. M&E Plan
 29. CRR Fund Decision Documents
 30. Set agenda for July meeting
 - a. Continue work on 2016 FHMP Update
 - b. Update to FTC Protocols?
-

Meeting Evaluation

- Renewed confident energy in the room under Travis' competent leadership
- Covered a lot of ground
- Very productive
- Good paraphrasing to ensure good understanding

**Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final FHMP Meeting Summary
June 6, 2017 from 9:30 AM – 2PM**

Attendees:

Pat Frazier	WDFW
Travis Nelson	TPU
Paul Sparks	WA Chapter of Trout Unlimited
John Serl	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Tom Wadsworth	Tech Rep for WDFW
Matt Bleich	Tech Rep for TPU
Eric Shoblom	Tech Rep for TPU
Chad Druffel	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Ann Weckback	LC / Tech Rep for Tacoma Power
Lyn Wiltse	PDSA Consulting / Facilitator

2017 FTC Meetings 9:30-3:00 at Cowlitz Salmon Hatchery (unless otherwise specified)

Tentative meeting the week of June 19*; Aug. 1, Sept. 7, Oct. 3, Nov. 7, Dec. 5

** Note: The July 6 meeting has been canceled. Depending on how much work is completed by the FHMP work group, there may be a meeting the third week of June.*

- Action Item: Travis will announce the date of a possible June meeting ASAP.

Announcements

- Hydro Operations Update: Eric reported that Riffe Lake is at 746' Inflows to Scanewa are at 7,110 cfs. Inflows into Riffe are at 8,390 cfs. Cowlitz is flowing at 10,100 cfs below Mayfield. They are planning on ramping up some and then flows will be down ramped 30-50% in the Lower Cowlitz his weekend. Flows out of Mayfield into the lower river have been extremely varied due to energy prices and weather.
- Trout Hatchery Update: Eric reported that measures to combat predation are still proceeding according to schedule. All the fish have been released. They have counter numbers. This year the counter recorded a number that was in excess of what was actually put into the ponds. TPU and WDFW are working together on a strategy to estimate the loss along with perceived reasons for the over-count. They are working with HDR on the second draft of the Master Plan. They are reformulating the approach of the Master Plan to ensure clear option development

decisions and strategies that are fully justifiable. They are hoping to have meetings with all the stakeholders to create a single plan.

- M&E Work Group Update: Phil reported that they are working with WDFW on the lower river M&E contract and passing work orders back and forth. John assured all that they are working diligently on getting the work orders back to TP.
 - 2017 Upstream Fish Passage Annual Report: Travis sent this out to all for a 30-day review on May 3, 2017. He didn't receive any comments. The only comments Jamie received were requests for clarification from Debbie Carlson.
 - Action Item: Travis will let everyone know when the plan has been filed.
 - FTC Work Plan: Travis explained the timing for the trial of this new process with a presentation meeting, a comment meeting, and a decision meeting. More to come. Pat warned that if we start something publicly and then don't sustain it, this could lead to much frustration to all. Paul suggested that we work with a broader segment of the public than is currently engaged.
-

CF Northshore Collector Update

Presenter: Matt Bleich

Matt walked us through a schematic showing an overhead view of CFD. He described how spill will be discharged through the tailrace discharge (fish collector and dam) . He also walked us through a table showing the Exhibit F (easement agreement with LCPUD, BPA, and TP) that outlines a series of steps for how the routing of water is expected to occur with the collector in operation. The most common scenario they are seeing this spring is 1,800-10,500 cfs and 10,500 – 11,500 cfs. This spurred the question on water routes that was posed at the last FTC meeting. 5,250 is the max generation capacity for each of the two units. Current collector flow is maxed at 500 cfs due to where they are in the balancing process. The tailrace discharge system can be used at flows between 10,500 cfs and 11,000 cfs without CFD spilling water.

Paul asked, in a normal water year, do we have a facility that will give us enough collection to recover the fish? Matt explained that this is a wet year as defined by the adaptive management group. So far, every week that we have had study fish in the system, there have been spill events. Lewis County usually operates the spill gates with their SCADA operating system in manual mode when someone is at the dam and spills water as they see it coming through to address dam safety concerns. When they leave at the end of each day they put the system on auto, so it operates on an hourly time-set basis. Multiple spill events at the dam may occur when the system is in auto mode. Lewis County isn't able to communicate with TPU in these cases (nighttime or on weekends), so TPU hasn't had the opportunity to adjust the flow through the collector to reduce spill. The County doesn't have a real-time system in place yet and hopes to replace their outdated system with a new SCADA system in the spring of 2018. At that time, the new collector will be linked to the new SCADA system.

Matt displayed a table of preliminary CEs. These are preliminary because we are still collecting fish. Steelhead CE looks like 15-20% higher than previous high-water years. When Matt gets the flow data from LC, he will be better able to understand the impact to collection numbers. A successful communication strategy with LCPUD is critical to achieve a good CE. There is the potential to meet the 75% minimum threshold for steelhead during high-water years. We are in the ballpark for steelhead anyway. The balancing effort is ongoing and they are looking to improve in the future. Approximately 67% steelhead are moving through the new Northshore Collector. For coho, they are getting 90% of the collected fish through the Northshore Collector. This is especially encouraging compared to prior years when we were spilling and only the CFFF was in operation.

In summary, current collection rates are well above collection rates for previous high-water years.

Action Item:

- Travis: Distribute Matt's water flow schematic to all.
-

Downstream Adaptive Management TWG

Presenter: Matt Bleich

Matt explained the TWG met recently. They are working to implement Chinook downstream study in July. The study will include active telemetry information.

Action Item:

- Matt: Ensure FTC is informed about discussions with LCPUD regarding CFD minimum flows.
-

2016 FHMP Process Update

Presenter: Travis Nelson

Extension Request: It is now apparent that an additional request for time Beyond the August 1 deadline is needed to ensure a thoughtful plan is written that reflects the complexities of the fish management and mitigation plans for the Cowlitz. If granted, the new deadline would be February 15, 2018. Travis discussed this with Eric Gaedeke (FERC) and was told a request for a six-month extension would likely be easily supported.

Travis explained that TPU has hired a consultant (ESA) to assist with this process. They participated in an open bid process to do technical support for TP. They will focus on the technical aspects of the document. ESA has used Meridian as a subcontractor in the past. It is important for the FHMP to tell the story that is easily understood by those without a technical background. And it will also include considerable technical detail.

They will be putting together a work plan that will include frequent input from the FTC. TPU has met twice with NMFS and WDFW to discuss key issues relative to the FHMP. Otherwise, not much progress has been made since last September.

Discussion:

- It is helpful for FTC members to be intimately familiar with the work being done on the FHMP. There is concern that, with this new approach, a deep understanding among FTC members will be lacking and will slow down the process.
- Pat explained that WDFW is making good use of the ISIT tool for managing and evaluating hatchery programs throughout the State of Washington. He strongly suggested that we not move away from the ISIT model.
- Concern that six months is an insufficient amount of time. It would be helpful to talk through the work plan and corresponding timelines in order to calculate the length of time actually needed to complete the update.
- The lack of public engagement is something we were criticized for in the last FHMP. It would be good for us to build in a couple of months on the back end expressly for public review and comment.

We reviewed Pat's edited version of the Decision Document 2017-7 that Travis sent out to all to review on May 23. We made a few additional edits to clarify the reason for the request. We voted on this and approved the Decision Document.

TP, WDFW, and NMFS are developing 3-5-page strategies for each species. In so doing, they are maintaining what mattered in the previous document. There will be additional updates as more progress is made.

CRR Fund Update

Presenter: Florian Leischner

Travis sent out the CRR fund charter for all to review. Florian explained the CRR Group meets the third Tuesday of each month. They have developed a list of tasks in coordination with the Work Plan. They updated the charter and completed their work plan. The charter describes the FTC directives to the CRR subcommittee, an updated product list and membership. The focus of the charter no longer includes the implementation strategy because it was approved at the last meeting. The membership was changed from specific people to organizations. They would like to invite Lewis County and Cowlitz Tribe to participate. Ann said someone from the County would be interested in attending. Others responded that Ann would be perfectly qualified, as the work will involve acquisition and restoration (more weight on restoration). The main focus is the technical review of applications. Paul observed that the technical expertise the County has provided to the HAG in the past has been invaluable. The group will

define how to deal with conflicts of interests that will arise when participating members also put forward a project proposal.

Action Item:

- All: Review the Charter and send any comments to Florian by the end of June. When we all agree, we will memorialize it with a decision document.
-

Fish Disposition / M&E Subgroup

Presenter: Pat Frazier

At our prior meeting, we came to consensus on the disposition of spring Chinook and coho.

Pat memorialized those decisions in the form of Decision Documents 2017-3 and 2017-4 for spring Chinook and coho, respectively which we approved at this meeting.

Regarding summer-run steelhead, WDFW was considering the planting of surplus hatchery summer steelhead into Riffe Lake to provide additional fishing opportunity; however, with Riffe Lake elevation being well below past levels, it would be inappropriate to take this action. Summer steelhead are not native to the Cowlitz Basin and the reduced water level in Riffe Lake has created spawning habitat for steelhead that may allow these fish to establish a self-sustaining population upstream of Mayfield Dam. Establishment of this population could adversely impact populations of natural origin winter steelhead, which would be inconsistent with the Recovery Plan and WDFW's Hatchery and Harvest Reform Policy. Additionally, the lower lake levels have the potential to reduce water quality conditions in the summer due to warmer temperatures and lower dissolved oxygen levels. The reduced water quality conditions may result in excessive mortalities during the summer months, which could increase prevalence of disease and limit the number of fish available for harvest in the fall when these fish would be most susceptible to harvest.

Lake Scanewa Trout Predation Study

Presenter: John Serl

John walked us through the highlights of this study, on behalf of Mike Kohn who was unable to join us today. LCPUD is required to conduct a creel study of the trout fishery in Lake Scanewa every five years (part of the FERC license). John participated in the 2000 and 2010 creel studies. During the 2000 study they found the larger size class of trout (>12") had fish in between 3% and 14% of their stomachs, while less than 1% of the smaller trout (<12") had fish in their stomachs. Plants of the larger size trout were discontinued based on these results. The USGS has also conducted studies of trout fishery in Lake Scanewa, recently estimating that only about 7.5% of those planted in Riffe Lake remained in the lake and survived until the next spring.

The two main concerns about trout planting into Lake Scanewa were predation on anadromous fish juveniles and potential interbreeding with steelhead. The next USGS study should assess the potential for planted trout/steelhead interbreeding and plans to release 450 radio-tagged trout into Lake Scanewa, starting this month, in order to monitor movement within and out of the lake. The tags utilized for the trout study will still be active next spring. Additional radio telemetry of steelhead in the upper Cowlitz Basin are also planned for next year. This will allow the overlap of spawning steelhead and the remaining radio tagged trout to be assessed. Some of these fish may pass into Riffe Lake and could be monitored, if desired.

The USGS did capture video footage of natural trout in the immediate proximity of spawning steelhead this year. Paul pointed out we know very little about the native rainbow trout.

Meeting Summary Approval

The May 2 FTC draft meeting summary was approved with minor edits. Pat sent suggested edits to the April meeting summary to Travis and Lyn.

Action Item:

- Travis: Follow up on Pat's edits to the April meeting summary (already posted as final).
-

Topics for the July 6 FTC Meeting

31. FHMP 2016 Process: Next Steps
32. Update on CFD Northshore Collector
33. D/S Adaptive Management TWG Update
34. FTC Work Plan
35. CRR Fund

36. Set agenda for August meeting
 - a. Continue work on 2016 FHMP Update
 - b. Update to FTC Protocols?
-

Meeting Evaluation

- Missed Carol and Michelle (and Bob)
- Productive collaborative discussions
- Good lunch
- Made some decisions

JULY MEETING CANCELED

**Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final FHMP Meeting Summary
August 1, 2017 from 9:30 AM – 1:30PM**

Attendees:

Pat Frazier	WDFW
Travis Nelson	TPU
Carol Serdar	WA Dept. of Ecology
Michelle Day	NMFS
John Serl	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Tom Wadsworth	Tech Rep for WDFW
Thomas Buehrens (by phone)	Tech Rep for WDFW
Eric Shoblom	Tech Rep for TPU
Tim Hoffnagle	Tech Rep for TPU
Chad Druffel	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Ann Weckback	LC / Tech Rep for Tacoma Power
Lyn Wiltse	PDSA Consulting / Facilitator

2017 FTC Meetings 9:30-3:00 at Cowlitz Salmon Hatchery (unless otherwise specified)

Sept. 7, Oct. 3, Nov. 7, Dec. 5

General Action Items

- **Florian / Travis: Send out subcommittee meeting invites for all, including Michelle. Note: Sometimes there are issues when a document is embedded in an invite. Instead, send an email with a separate attachment.**
- **Lyn: Update FTC member List for the next meeting.**

Announcements

- **Hydro Operations Update:** Eric reported that Riffe Lake is at 746'. Inflows are at 2,900 cfs (well below the average of 3,400 cfs). Flows below Mayfield have been between 2,400 cfs and 3,500 cfs. They will be ramping up to 4,200 cfs today and over 6K tomorrow to catch some spikes in the energy demand market. This will likely continue for the next three days (in extreme heat conditions). We are sitting at zero snowpack with no precipitation projected.
- **Trout Hatchery Update:** Eric reported that they are finally underway on the Master Plan. The initial workshop was June 20 and focused on intake and water supply. Eric distributed a diagram showing the Cowlitz Trout Hatchery Master Plan Schedule. They just sent out to some local reporters a news release to announce

the overcount on the steelhead release numbers. Keith is following up on this with local officials. They plan to start construction on the lakes toward the end of 2018. It all depends on the successful deployment of the Master Plan. This will be discussed at the Ad Hoc meeting this Friday (at this location) from 1-4pm.

- CF Northshore Collector Update: Chris Foster is the new CFFF Manager for TPU. So far, around 77K smolts have been collected, 46K of which were NOR Chinook. Additionally, 78K of the 260K HOR juveniles that were released have been collected. There was great rejoicing as this is the most Chinook we have ever collected at CF. The previous record as 38K and we are currently at 46K with collection rate of 56.9%. All pumps are currently running and they are achieving 500cfs flow into the entrance of the collector. Average daily water temperatures will be in excess of 18 degrees Celsius. Travis cautioned that we temper our response to these good numbers as it is the first year of operating and we are still on a learning curve. There are still some issues with the LC SCADA system which should be resolved next year. We will be collecting 24 hours/day. Peggy has drafted a letter requesting that LCPUD reduce MIFs. She will get review and concurrence from NMFS and Ecology before she sends it. She drafted Decision Document 2017-8 which the FTC reviewed and approved to supporting reduced flows to ensure that all the water goes through the collector rather than some of it spilling. This would not affect the mainstem Cowlitz. Florian will work with WDFW and LC to get the license modification completed by December 31 unless arrangements have been made to extend the term. Carol asked about modeling of TDG for the new downstream fish collector and the 500 / 1,000 cfs discharge. There may be a need to amend the 401 Water Quality Cert.
 - Gravel enhancement below Barrier Dam: Florian announced that TPU is proposing to hold off on this year's gravel enhancement as they are reestablishing the road on the south side of the dam. They would like to hold off until they have the access road reestablished. They would put twice the amount of gravel next year.
 - Florian: Draft a Decision Document for this.
 - Florian: Ask Chad to get in touch with Ed Meyer about the inspection of Barrier Dam to inform future improvements.
 - Florian: Get the word out to let Ecology have 30 days' notice before any near or in-water work is done and a Water Quality Management Plan. This would include placement of the gravel.
 - Mike Kohn retires the end of today! We appreciate his many years of service.
 - Pat Frazier Retirement: While rumors of his retirement from WDFW have been grossly exaggerated in the past, Pat announced that he is really serious this time and his last day will be Thursday, August 17. We are sad to see him go and will miss him very much. He has been part of this group for several years, representing WDFW, LCFRB, and WDFW.
-

Boat Kiosk Discussion

Presenter: Travis

Travis reported that Monika Sundbaum (TPU communicator extraordinaire) has been working on some of the TPU kiosks. They are coordinating with the Sheriff's department to include all relevant information, including safety and some river operations. They want to do this in a standardized fashion.

Action Item:

- Travis: Check into condition of boat ramps at Blue Creek and Barrier Dam. Dam believes they need maintenance sooner than later.
-

Downstream Adaptive Management TWG

Presenter: Phil

Phil explained the TWG met recently. They talked about the adaptive management process they will be using in the future. They talked about the adaptive management process they will be using in the future. They did a dry run without having to make any changes. It appears that the process is reasonable.

M&E Work Group Update

Presenter: Phil

Phil explained this workgroup also recently met. WDFW has the task orders in house. Keith is waiting to see the signed versions. WDFW just submitted the annual report and TPU is in the process of reviewing it.

2016 FHMP Process Update

Presenter: Travis Nelson

Travis explained that TPU received a response from FERC granting an extension on the due-date for this document to the middle of February 2018. WDFW and TPU have been busy circulating drafts of strategies for each species. This would fit within chapters 3 and 4 (metapopulations and species strategies). They had scheduled a meeting for last Friday but schedules prevented them from meeting. They are working on how to integrate this information appropriately into the FHMP. WDFW and TPU are planning to meet again in the next couple of weeks to align the species strategies documents.

Travis reminded all that chapters 1-3 are in pretty good shape and have already been reviewed by the FTC. Pat expressed concern that WDFW fish managers weren't sufficiently engaged in the early drafting of this document and they will be proposing some significant changes from a philosophical perspective. Michelle explained that NMFS has similar issues with the document as expressed by WDFW.

Travis thanked WDFW for their considerable contributions to this document. He is optimistic about completing the draft document with sufficient time for review. Note: Mara is out of the country until August 18 and Pat retires August 17.

Action Item:

- Pat: Suggest some meeting dates (before August 17) to Travis, along with who (from a Policy perspective) will be on point for the FHMP. In general, Tom will be the point of contact going forward. Michelle will attend or give Pat her proxy.

Steelhead Hooking Mortality Study Update

Presenters: Pat Frazier and Thomas Buehrens

Thomas, WDFW research scientist, reported that the agency has done some recent studies on this with various species, but they lack a predictive model. They have identified the Cowlitz as a great location for such a study with the Barrier Dam as a collection site. Pat confirmed that WDFW is collaborating with TPU on this study. He reviewed the five objectives of this study:

1. Estimate short- and long-term mortality of salmon and steelhead released from angling gear relative to un-angled controls
2. Estimate the effects of anatomical hooking location on mortality
3. Estimate effects of gear type (bait vs. none, hook type and size, lure type) on mortality rates
4. Estimate effects of water temperature and fight duration on mortality rate
5. Use data in combination from existing studies to build a predictive model including above variables to enable the application of appropriate release mortality rates to specific fisheries that reflect the characteristics of those fisheries.

They are doing this with a treatment-control study design. For treatment, they are using specific fishermen catching fish below the Barrier Dam and downriver and employing a floy tag. They capture and tag control fish at the Barrier Dam and release them downstream. They recover treatment and control fish at the Barrier Dam. They place a portion of the treatment and control fish in brood holding to observe their long-term survival. They put another portion of these fish in-river (species-specific typical release locations) and monitor their long-term contribution to fisheries.

The control and treatment goals are independent of one another (don't need to be equal). Initial goals for treatment fish per year of study: 235 summer steelhead, 197 winter steelhead, 87 coho, 87 spring Chinook, and 65 fall Chinook.

The initial goals for control fish: 20-30 summer steelhead per week for a period of 8-10 weeks; salmon goals are TBD. Release sites are above traditional recycling: Barrier Dam boat launch, Blue Creek boat launch, and Mission Bar. They are using multiple sites so they can estimate the effect of the release site on recapture rates.

Study Update:

- Low return of summer steelhead
- As of 7/28, only 12 treatment summer steelhead tagged – projected total of ~50 for the year.
- No controls have been released yet.
- They propose releasing 20/week for four weeks and then reevaluating with the option to control releases depending on the return to endure brood is met.
- Currently, the probability of making brood plus buffer is very high (95%). Our max broodstock goal is around 900.
- They are now planning the control releases for fall salmon. Minimum sample size = 100. Ideally 200-400 per species for coho and Chinook spread across return period and three release sites. Greater sample size = greater probability of sufficient statistical power to conclude the study with fewer years of data collection.

They assume the stray rate of the treatment fish is due to natural causes. The only difference would be the hooking. They feel that can account for the effects of electro-anesthesia.

Michelle explained that Paul has questions about this study that could be discussed at the September FTC meeting.

Pat explained that, in addition to steelhead, WDFW also plans to do studies with fall Chinook and coho this year with a minimum sample size of 100 fish for control releases. The ideal size would be 200-400. They would be spread across the return time and be spread across the same three sites. This will be at least a two-year study.

Action Items:

- Michelle: Forward Paul's questions to Pat to send to Thomas. (*Done.*)
- Thomas: Prepare a brief presentation based on these questions and call in from his vacation in New York during our next meeting via WebEx to walk through the study and answer any outstanding questions. Send the PPT to Travis to distribute by August 31.
- Thomas: Work with Sam to keep the model updated daily to provide hard quantitative data about the run. Be clear about thresholds for altering a course of action.

CRR Fund Update

Presenter: Florian Leischner

They did not meet in July but will meet in August 15. They have been working on a habitat assessment in the upper Cowlitz, including identification of limiting factors. The LCFRB applied for SRFB funding to come up with good project suggestions and take it through to design. TPU proposed various methods on how to quantify limiting factors for Chinook, including hydraulic modeling. They have presented a suite of options to the subgroup and will then present their recommendation at the September FTC meeting.

The habitat assessment will be a two-prong approach. Steve explained the LCFRB board met last week and they expect the proposed project to be within the fundable range. The SRFB will make a final decision this winter. There may be a delay, pending the passing of the capital budget.

The CRR charter will be reviewed and approved at our next meeting via a Decision Document.

They need NMFS buy-off on the strategy before they can move forward. Michelle thinks the letter conveying the administrative costs is not yet where it needs to be.

Carol reminded all that Water Quality Protection Plans must be provided for any near- or in-water work. We all need to be on the same page about this.

Action Items:

- Florian: Draft Decision Document for the CRR charter and send out by August 31.
- Michelle: Follow up on the NMFS process for approving the letter on administrative costs.
- Peggy: Find the water quality assurance piece in the plan and run it by Carol to ensure it is adequate.

Meeting Summary Approval

We reviewed the version of the draft June 6 FTC meeting summary that included Peggy's clarifying edits (Thank you Peggy!) and approved it with a few additional edits.

Action Item:

- Lyn: Follow up with Travis on WDFW's edits to the April meeting summary (already posted as final).
-

Topics for the September 7 FTC Meeting

37. FHMP 2016 Process
 38. Update on CFD Northshore Collector
 - a. CF MIFs
 39. Condition of boat launches at Blue Creek and Barrier Dam
 40. D/S Adaptive Management TWG Update
 41. M&E Subgroup Report
 42. CRR Fund – Decision Document
 43. Gravel Augmentation – Decision Document
 44. When to discuss FTC Technical Reps and update to FTC Protocols
 45. Other?
 46. Set agenda for October 3 meeting
 - a. Continue work on 2016 FHMP Update
-

Meeting Evaluation

- Great last meeting with Pat in attendance
- Productive collaborative discussions
- The FTC is very functional compared to when Michelle joined in 2003.
- Great news about the juvenile collection rate!
- We are working collaboratively instead of from positions. That's a good thing.
- Made some decisions – Thanks Peggy for the quick turnaround on the Decision Document about MIFs.

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final FHMP Meeting Summary
September 7, 2017 from 9:30 AM – 2:00PM

Attendees:

Tom Wadsworth	WDFW
Travis Nelson	TPU
Michelle Day	NMFS
Carol Serdar	WA Dept. of Ecology
Paul Sparks	WA Chapter of TU
Jim Pacheco	Tech Rep for WA Dept. of Ecology
Dan Rawding	Tech Rep for WDFW
John Serl	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Thomas Buehrens (by phone)	Tech Rep for WDFW
Ian Coulter (by phone)	Mt. Hood Environmental for WDFW
Eric Shoblom	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Tim Hoffnagle	Tech Rep for TPU
Chris Foster (by phone)	Tech Rep for TPU
Kristin Williamson aka Willi (by phone)	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Ann Weckback	LC / Tech Rep for Tacoma Power
Lyn Wiltse	PDSA Consulting / Facilitator

2017 FTC Meetings 9:30-3:00 at Cowlitz Salmon Hatchery (unless otherwise specified)

Oct. 3, Nov. 7, and Dec. 5

General Action Item

- Steve: Send Lyn total solar eclipse photos to share with all.

Announcements

- Hydro Operations Update: Eric reported that Riffe Lake is at between 4-5K cfs. Not much flux. Reservoir is at 729' (Riffe) Current estimate is to be close to 725 at lowest before the rains. No snowpack. Little rain forecast. Inflows are slightly above average. Predicted to continue at 4.5 -5K CFS of river flow. No operational spills are planned for Mayfield. John reported they found 43 Chinook redds in helicopter spawning survey below Barrier dam.

- Action Item: Florian: Check to see if any operational spills are planned for Mossy Rock or Mayfield? (*Done: No spilling has occurred since June.*)
- Trout Hatchery Update: Eric reported that operations are normal. Working to redefine the scope to get to the Master Plan. Working with HDR to add some additional check-ins prior to workshops to ID areas of improvement for the hatchery in addition to how it's currently being used. Looking at possibly changing the 20cfs to 40cfs to ensure cleaner water is coming into the hatchery. They have reprioritized the lakes to be first in the Master Plan. They plan to start construction on the lakes toward the end of 2018.
- CF Northshore Collector Update: Peggy reported that, according to FERC, "short duration" temporary change to MIFs is considered to be 2-3 weeks. Erich Gaedeke talked directly with Peggy about this (the 500cfs) when they received her letter which is posted on FERC's website. LCPUD can ask FERC for a longer period before reducing MIFs beyond a 2-3-week period. They also told LCPUD to improve their monitoring of stranded fish, mortalities, etc., that are associated with reduced flows. LCPUD will draw the reservoir down in early September and begin operating again on Sept. 29.
 - Action Item: Peggy: Talk to Joe First about sending a letter to FERC about needing approval from FERC prior to the next reduction in MIFs (ASAP).
- Condition of boat launches at Blue Creek and Barrier Dam: Eric reported that, since out last meeting, a crew visited the boat launches and came back with a plan to address the degraded boat launches at these locations. Extensive permitting will be required. This will be a part of the water quality protection plan, so no action has taken place on this.
- Barrier Dam: This will be inspected on Sept. 13-14. They have already started staging equipment. Matt contacted Michelle and Carol on this and provided exemption from state permit requirements. They will be using divers to check for erosion issues (blocking off a 40' stretch). NMFS is looking at this from a fish passage standpoint. In the future, there will be robust communication on this. Construction of the new Barrier Dam is on hold pending the outcome of the inspection. This is a FERC requirement and we are in the midst of regrouping to see what actions we need to take and by when.
- Ad Hoc Meeting Report: WDFW hosted a meeting of the Ad Hoc Group at this location the afternoon of August 4. The meeting was well attended and Pat Frazier introduced Tom Wadsworth to the group as the new WDFW point of contact for the group. The meeting provided an update on the following:
 - Hooking Mortality Study
 - Steelhead Production Numbers, Spring Chinook Plants, Coho Plants
 - Nutrient Enhancement
 - Salmon Creek
 - Update on the timing of the 2016 FHMP Schedule
 - Keith's initiative to build a watershed-level group with all jurisdictions in the watershed working on a variety of issues including fish, recreation, etc. He

will also be getting together with representatives of signatory organizations of the Settlement Agreement to discuss these issues.

- Action Items:
 - Travis: Follow up with Keith in what he is really considering here. How does this fit with the license?
 - All: Send any thoughts on this to Travis on this ASAP to share with Keith.
 - Carol requested that if construction is to occur, Tacoma Power may be required to apply for a Construction Stormwater General Permit (Water Quality Certification (WQC) dated 1/15/2002 condition G.). Additionally, a Water Quality Assurance Project Plan (similar to an In-Water Work Protection Plan) will be required for any in-water work, and approved by Ecology (WQC dated 1/15/2002 condition E.).
 - Cowlitz-specific data on economic impact of summer and winter steelhead (This item was put in the parking lot.)
 - Side Channel Monitoring Report: Comments are due September 18, 2017.
 - Acquisition of Tilton River property (6 miles downstream from Morton): John reported that WDFW now owns that property (previously owned by State Parks) and it appears to have good potential for off-channel rearing habitat or possibly another release site.
 - Action Item: Florian to set up another HAG meeting before our next meeting.
-

Steelhead Hooking Mortality Study Presentation **Presenters: Thomas Buehrens and Ian Coulter**

Thomas, WDFW research scientist and Ian Coulter of Mt. Hood Environmental walked us through a PowerPoint presentation of the Steelhead Hooking Mortality Study.

Thomas and Ian reported that the agency has identified the Cowlitz as a great location for such a study with the Barrier Dam as a collection site. The objectives of this study include:

1. Building a model to estimate mortality in a variety of salmon and steelhead fisheries throughout WA with a focus on the Columbia River Basin
2. Quantifying the effects of anatomical hooking location, gear type, and water temperature on coho, spring and fall Chinook, and winter and summer steelhead hooking mortality rates
3. Determining whether landing rates differ between barbed and barbless hooks.

They felt the Cowlitz River was an ideal location to do the study – largest hatchery for salmon steelhead fisheries in WA. The salmon collector provided opportunity to recapture fish angled above the dam. Many anglers are interested in the barbless hook

issue. This also influenced the location for the fieldwork. They angled a variety of salmon and steelhead runs using a variety of techniques. They will also be monitoring water temperature, handling time, and other factors that influence survival. They are using two boats targeting summer steelhead. Most of the action has been in Blue Creek. They anticipate shifting to fall Chinook in the next week.

Control fish releases are currently underway with TPU's assistance. This will carry this into salmon seasons as well.

Survival = Relative recovery rate = Recovery treatment / Recovery control

Ian invited all to monitor study progress at: mthoodenvironmental.com/cowlitz

The fish handling practices include using flow tags and ensuring the fish are not removed from the water. While recognizing concern over illegal angling practices, the study evaluates the effects of legal angling.

2017 yielded a below-average steelhead return, so they are revising those estimates accordingly. It will likely take a few years to develop a full data set.

After our last meeting, Michelle submitted a list of questions from Paul. Responses follow:

Q 1: The Treatment-Control study design assumed only the difference affecting outcomes between Treatment and Control fish in the treatment. The differences in handling in this study is assumed to have a negligible effect on survival (e.g., anesthesia). They record three levels of angler experience so they can evaluate how this impacts mortality as well as fight time and handling time. Paul noted that angling culture relates to methodology.

Q 2: They are using controls for each species/ run timing. They need extra fish as only summer run steelhead are currently recycled (no salmon) and because releasing summer run steelhead higher in the system reduces angling opportunity.

Q 3. All angling, handling, and tagging will be completed by and under the supervision of MHE and WDFW to ensure adherence to protocols.

Q 4. Statistical power and sample sizes limit the extent to which they can evaluate mortality from the many gear types. Therefore, they limited the study to the most prevalent types. Results could be applied to circle hook-caught fish in hooking locations known for that gear type. In Paul's experience, results with circle hooks have been very impressive.

Q 5: Their literature review showed disparate results with confounding variables, negating the ability to predict fishery-specific mortality rates. Their goal is to build a unifying model to enable the application of fishery-appropriate mortality rates.

Q 6: Effects on juveniles was beyond the scope of this study and the study design precludes estimation of their mortality since they are not returning to the barrier dam.

Q 7 & 8: Flight duration and anatomical hooking location are measured. The effect of angler experience on mortality likely comes from more quantifiable variables than those mentioned.

Additional question from Jim about not including circle hooks in the study:
If including all the different gear types that exist, they likely would have ended up with one fish per gear type. Instead, they looked at existing WDFW creel data and used the most popular gear types to guide the study.

Downstream Adaptive Management TWG

Presenter: Phil Sandstrom

Phil explained the TWG had not met recently. There was a conference call on August 23rd. He will provide more substantive updates as they occur.

M&E Work Group Update

Presenter: Phil Sandstrom

Phil explained this workgroup also recently met. They are now working on the protocols and are nearly finished commenting on the annual report (primary focus is on the lower river) which will go back to WDFW shortly.

2016 FHMP Process Update

Presenter: Travis Nelson

Travis explained that TPU has recently met with NMFS and WDFW (as regulators) to discuss this document. They have generated some work products that are in draft format. Last fall the larger group (at the two-day workshop in Morton) generated a large table showing a short-term, mid-term, and long-term approach to recovery. This smaller group is now beginning to work through that table and fleshing out data needs (what is easily obtainable, not obtainable, etc.). This table has been revised through our M&E group with the intention of having this be the backbone of the FHMP document (focus on goals, etc.) throughout the next six years. It will include trigger points with adaptability built in to allow for course corrections along the way.

The species one-pagers (back in the days of Cindy), reflected a species strategy for each distinct population and how it ties to the larger table. Over the past few months, there have been some additional refinements to better describe a future state for each species. Mara reviewed the finer points of how to reintroduce a stock of fish and how to

manage the recovery (based on her Elwha experience). When they met next, TPU and WDFW reviewed this strategy and looking for common ground in terms of a strategic standpoint.

Travis assured everyone they are using the Recovery Plan as a reference document as they work on the recovery status goals. It is important to maintain consistency.

There was a request that information from this subgroup be shared with the broader FTC membership along the way instead of asking them to react to the whole document at the end of the time period. Travis assured everyone that they look forward to being able to do this in the future. They will look at the necessity of filing for another extension of time request of FERC as they continue to work toward the February deadline. He hopes to be able to share the species strategies at our next meeting. Peggy suggested following the CRR model to document and share disagreements along the way.

The next meeting will be a week from now and will be followed by an in-person work session.

Action Item:

- Travis: Send out a meeting invitation for this meeting and look into sharing species strategies at or prior to our next meeting.
-

CRR Fund Update

Presenters: Florian Leischner and Kristin Williamson

Florian reported this group last met on August 15. They have been working on a habitat assessment in the upper Cowlitz, including identification of limiting factors. We reviewed and approved the following Decision Document that Travis sent out a week ago:

- Decision Document 2017-8: Cowlitz Restoration and Recovery (CRR)
Subcommittee Charter: We agreed to approve this document.

Note: Decision Document 2017-6: Cowlitz Restoration and Recovery Strategy was approved in May of 2017 and posted to the website.

Kristin presented the habitat assessment data gathering phase. Some of the \$40K from the LCFRB will be used for this. The goal is to better understand habitat limiting factors for the primary life stage of spring Chinook in the existing Recovery Plan (based on diversity as well as hydraulic effects). She reviewed the LCFRB proposed SOW and showed a periodicity chart for spring Chinook along with a description of tasks:

Task 1: Compile (in January of 2018) and synthesize existing data and create a bibliography and electric library of relevant studies, publications, and data sets, looking

at when something was a reference reach, when it had data assigned to it and whether those EDT data were actually collected at that stream.

Task 2: Conduct a geomorphic assessment of the plan from evolution of the watersheds to see how they respond to the environment over time. Ann reminded all that Lewis County has geo-referenced maps of all the river channels in the entire county.

Task 3: Conduct hydraulic / flow modeling to illustrate the range of conditions the fish experience at a resolution not currently available in existing data sets or easily achieved through on-the-ground surveys. They propose starting with the lower 24 miles of “Big Bottom” valley area on the Cowlitz downstream of Packwood. They would first run the 100-year flood model through the entire Big Bottom area and then run smaller year models through areas they are more interested in.

Task 4: Develop habitat unit digitization and capacity estimates to create a production estimate tool to compare to EDT. This will help improve understanding of habitat deficiencies by type.

Task 5: Spring Chinook Productivity Estimates – continue to work with M&E Subcommittee.

Tasks 6 and 7: Consider climate change data synthesis and overall reporting to inform forward thinking solutions to habitat protection and restoration actions and create a finished reporting product that they will hand off to the LCFRB.

Steve reminded all that the SRFBD makes decisions on projects in December and, at this time, the State still lacks a capital budget.

Action Items:

- Kristin: Contact Ann about getting in contact with Lewis County’s GIS person regarding data sharing or paying for LIDAR. Possibility of cost sharing for habitat restoration as part of soft flood control.
- Florian: Send out more detailed Habitat Assessment Document to all to review and comment on in track changes by September 21st. *(Done.)*
- Florian: Send out Decision Document for this prior to our next meeting.

Gravel Augmentation Update
Presenter: Florian Leischner

Florian walked us through a discussion of the following Decision Document 2017-10 that he prepared and sent out a week in advance of the meeting proposing to delay adding more gravel to the existing pile until they have access to the other side of the river and/or alternative placement ideas, where it can be more effectively recruited.

Decision Document was approved as amended.

Action Items:

- Florian: Give Ecology's SWRO Federal Permit Coordinator (Carol Serdar) 30 days' notice before any near or in-water work is done and submit a Water Quality Management Plan (similar to an In-Water Work Protection Plan) for approval by Ecology (WQC dated 1/15/2002 condition E.). This would include placement of the gravel.
- Florian: Send out prior 2013 PPT that Mark L gave to the FTC, the report, and the plan to all prior to the next meeting.

Meeting Summary Approval

We reviewed and approved the August 1 meeting summary with minor edits.

Topics for the October 3 FTC Meeting

- 47. FHMP 2016 Process
 - a. Species Strategies
- 48. Update on CFD Northshore Collector
- 49. Barrier Dam
- 50. D/S Adaptive Management TWG Update
- 51. M&E Subgroup Report
- 52. CRR Fund
- 53. HAG Update
- 54. Scheduling Discussion of FTC Membership and Technical Reps and update to FTC Protocols
- 55. Scheduling Discussion of Methods to place gravel in 2018
 - a. 5- and 10-year Reports
- 56. Other?

57. Set agenda for November 7 meeting

Meeting Evaluation

- Nice to meet Dan!
- Nice to have Jim back with us
- Great presentation by Thomas and Ian – very informative!
- Very collaborative discussions – appreciate we can take the time to have honest and open discussions
- We approved two decision documents!
- Appreciate Travis' leadership

**Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final FHMP Meeting Summary
October 3, 2017 from 9:30 AM – 2:00PM**

Attendees:

Tom Wadsworth	WDFW
Travis Nelson	TPU
Michelle Day	NMFS
Paul Sparks	WA Chapter of TU
John Serl	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Eric Shoblom	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Matt Bleich (by phone)	Tech Rep for TPU
Tim Hoffnagle (by phone)	Tech Rep for TPU
Chris Foster (by phone)	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Lyn Wiltse	PDSA Consulting / Facilitator

Future FTC Meetings 9:30-3:00 at Cowlitz Salmon Hatchery (unless otherwise specified)

2017: Nov. 7, Dec. 5,

2018: Jan. 4 (Note: This is Thursday), Feb. 6, Mar. 6, Apr.3, May 1, June 5, July 10
(Note: This is the 2nd Tuesday), Aug. 7, Sept. 11 (Note: This is the 2nd Tuesday), Oct. 2,
Nov. 6, Dec. 4

General Action Item: Travis: Send meeting invites to all for the above FTC meetings.

Announcements

- Hydro Operations Update: Eric reported that Riffe Lake is at 723' and may go even lower. TPU increased MIFs in the lower river to 3500cfs. Inflows are around 1,000cfs. The Cispus is currently running at 500 cfs and the Upper Cowlitz is at 350 cfs. No snow and no rain are forecast.
- Trout Hatchery Update: Eric reported that work on the Master Plan continues. Eric re-worked the scope for HDR and they just sent him something this morning to review. They are working with WDFW and NNMFS on different release methods and isolating stocks within different rearing methods in hope of getting a better count. The hazing contract (including lethal hazing) has been approved and will soon go to the USFS for their signature. They plan to start construction on the lakes toward the end of 2018.

- CF Northshore Collector Update: John reported that LCPUD has Lake Scanewa drawn down around 6' for maintenance. They should be finished with the work in the next few days. LCPUD might alter the MIF. FERC said an extension of 2-3 weeks at a time could be considered a temporary alteration. Matt reported they are currently engaged in maintenance and clean-up activities. Balancing to 500 cfs has been done for the tailrace and pump back structure. The next stage (in February) will be 750 cfs and then 1,000 cfs. They will do this in coordination with WDFW and NMFS to find the "sweet spot." TPU will begin operating the facility as soon as the reservoir is full.
 - Action Item: Peggy: Talk to Joe First (LCPUD) about sending a letter to FERC about needing approval from FERC prior to the next reduction in MIFs (ASAP).
- Barrier Dam: This was inspected on September 13-14 of this year. Construction of the new Barrier Dam is on hold pending the outcome of the inspection TPU is currently working through some design issues. They had divers in the water to chart progress. This is a FERC requirement and is primarily a dam safety issue. TPU is evaluating what actions to take and by when in order to reduce the erosion around the dam and to increase the effectiveness of the left bank entrance (which has never been hydraulically effective). It may require several years before construction is complete.
- Lower Cowlitz Fish Regulation Changes: Tom announced that due to low returns to the hatchery this year, WDFW is no longer allowing harvest of Chinook in the lower river. WDFW will continue to monitor the returns to the hatchery, though reopening the fishery is unlikely. Sam reported we will be at 63% of the run by the end of this week – well short of brood stock goals. Tom noted this issue is broader than the Cowlitz.
- 2017 Side Channel Monitoring Report: Comments were due Sept. 18. Chris Brousseau emailed out a notification on September 28, 2017 that this report was filed with FERC.
 - Action Item: Travis: Make sure Chris' distribution list is updated to include Tom Wadsworth.
- Watershed-Level Group Idea: Travis explained that Keith's vision for this group is a public forum to discuss a variety of issues affecting the watershed. It would not take the place of any other group. It would give a voice to a broad group of stakeholders on a variety of issues, including fish issues. This would be a non-jurisdictional body whose focus would be the interdependence of many different factors that affect the watershed. Ideally, this would be coordinated by Lewis County (not TPU). This may take years to fully establish. Keith has begun to discuss this with some county commissioners and other elected officials. There was discussion about the positives and potential negatives of forming such a group and expectations would need to be managed. Stay tuned...
 - Action Item: Travis: Share this discussion with Keith, including top-down vs. bottom up, rotating chair, scope, membership, orientation to the FERC license, etc.

- Upstream Fish Passage Data – Trends or Annual Variation? Travis explained that this is something he and Paul have been discussing. He assured everyone that this steelhead topic is important and deserves time on the FTC agenda. Paul explained his concern that this year's ocean conditions are similar to those in 2014, when the productivity of steelhead tanked. He asked is this might be an indication of an ongoing problem. Might this be a symptom of a larger decline? Paul also expressed concerns about habitat, recreational mining, and catch and release (stresses fish) and wondered if there might there be some short-term actions we could take within the context of the FHMP.
-

Downstream Adaptive Management TWG

Presenter: Matt Bleich

Matt explained they ended the season close to 50% FCE for steelhead and coho. This is an increase of 15-20% compared to other high-water years. For Chinook, the FCE of 50+% is a big increase over the former FCE of 10%. This is only a starting point as FCE goals are 90%. This is a baseline year and they are optimistic about progress. LC is continuing the design and implementation of their SCADA system and this will represent another opportunity for fish collection as TPU will be able to link directly to this system.

They are narrowing down potential problem areas for Chinook and are looking forward to next year when they come to the FTC with a Decision Document that will be calling for a repeat of this year's study. They will focus in (with array studies) on the retention area so see how/where the fish are being influenced within that area. They are not making any adaptive management recommendations this year or next year as they lack sufficient data.

M&E Work Group Update

Presenter: Phil Sandstrom

Phil explained the annual report has been sent to WDFW for review and should be approved by November 30, 2017. This will outline M&E protocols. They are also working on getting accurate counts of the stocks and the species. Paul asked when we will get an idea of the number of native rainbow trout in the upper basin. This will be addressed through a radio-telemetry study by USGS, in concert with LCPUD. The aim of the study is to evaluate interactions between planted fish and wild stocks.

Paul asked if there had been an evaluation of the impact of recreational mining on the Cispus. Florian responded that he has been onsite and hasn't observed any recreational mining there. Matt reminded all to keep in mind that the M&E program is still in its infancy.

HAG Update

Presenter: Florian Leischner

Florian walked us through the PPT from the June 30, 2017 HAG meeting. So far, 638 acres have been purchased in four different areas, leaving \$150K remaining to be spent toward the goal of pooling resources to create and protect contiguous blocks of protection.

Their current priorities are:

- Acquisition of State Parks Tilton River property (109 acres / 4K ft. river frontage)
 - WDFW's intent is to take ownership of this property
 - **Action Item:** Florian: Discuss with WDFW (Peggy and Tom) the best strategy to move forward on this.
- Add-on parcel to Massey Bar property (The property owner has 2.5 acres on the bluff and offered to sell it to TPU for \$250K, which is five times its assessed value.)
- Match for Jorgensen Timber property (180 acres of which 150 are of interest downstream of Barrier Dam)
 - \$450-\$900K if purchased outright. They will look at partnering opportunities and other creative solutions.
- Evans property split (Two 5-acre slivers downstream of Toledo – mostly upland)
- Continual property management of HAG properties

Next steps: Reconvene via phone call prior to the November FTC meeting for input and decisions relative to these properties.

2016 FHMP Process Update

Presenter: Travis Nelson

Travis provided an update on the progress of this group which last met on September 12, 2017. He reported that this process is finally in a good place now, after some upheaval related to staffing changes at TPU and WDFW that occurred over the last six months. He explained there have been philosophical differences between and within the organizations along with the staffing changes.

He briefly walked everyone through the history of the FHMP process including initial work products from the September 2016 workshop in Morton where we began to populate the fall Chinook table. At that time, it was decided to form a smaller subgroup to flesh this out – what is possible within current constraints. From this small group came the idea of drafting 1-2 page strategy for each species, including fisheries objectives, monitoring issues, current decision rules, short- and long-term goals, etc.

Travis explained that TPU and WDFW have since been discussing whether the focus of the FHMP should be recovery itself, or of it should be a step-by-step progression toward

recovery. Travis assured everyone that TPU is very committed to long-term recovery and is seeking to meld everything together that would be included in that would go into a species strategy (aka crosswalk) through a matrix of triggers and targets in a similar manner to what WDFW did for the Elwha. WDFW's Mara, Bryce, and Pat did some work on this initially and TPU is now working through this to get the species strategies closer to a final format for the FHMP.

Travis also displayed a color-coded table with headings to show what data are "available but need a lot of work", "available with some concerns", "good to go", "not available", and "not needed." He noted that had started off as the fall Chinook table at the Morton workshop and had evolved to an all-species table.

He reminded all that the intent of these preliminary TPU/WDFW meetings is come up with draft work products that are supported by both organizations, thereby reducing the amount of time required for FTC-wide consensus. Dan and Keith will meet soon to discuss a common strategy to proceed, noting how different this FHMP needs to be compared to the prior FHMP. Paul reminded all that the SA defines a prioritized focus on recovery first and on harvest second.

Several participants requested an early look at the draft documents, citing a desire to review and weigh in on these as they are being developed rather than waiting until they have already been agreed to by TPU and WDFW.

Steve explained that there are temporal considerations associated with threat reductions and that all the goals set forth in the Recovery Plan have goals and strategies that should be reflected in the FHMP. Travis reminded all that the main discussions have been around the structure of the FHMP and what is appropriate to include.

Action Items:

- Travis: Send out meeting invitations to FTC participants for these meetings.
- Travis: Send out drafts of the current work products of this group prior to our November meeting.
- All: Direct any questions directly to Travis regarding these draft work products.

CRR Fund Update

Presenter: Florian Leischner

Florian announced that sadly, Kristin Williamson has returned to her former employer. We wished her well.

This subcommittee has been working on a habitat assessment in the upper Cowlitz, including identification of limiting factors. On September 8, 2017 Lyn, on behalf of Kristin, sent out the Habitat Assessment Document for all to review and get comments

to Florian by September 21. No comments were received. We reviewed and approved the following Decision Document that Florian sent out a week ago:

- Decision Document 2017-9: Cowlitz Restoration and Recovery (CRR) Habitat Assessment: We agreed to approve this document.

Michele reported that NMFS approval of Plan to Abandon Volitional Passage is close to being approved by NMFS. There was great rejoicing.

Action Item:

- Florian: Report on Kristin's discussion with Lewis County's GIS person regarding data sharing or paying for LIDAR, including the possibility of cost sharing for habitat restoration as part of soft flood control.
-

FTC Membership / FTE Technical Representatives

Presenter: Travis Nelson

Travis described how he sees these two topics. He observed that the way we are currently dealing with the technical rep issue seems to be working well, i.e., members are free to bring in anyone as their tech rep as they see fit. FERC has reiterated (verbally) to TPU that they can use the FTC's input as they see fit.

We agreed that "if it ain't broke, don't fix it." We also agreed to postpone this discussion until Ann is back in the office (November 29, 2017).

We agreed to address the potential of public participation in this group at our November meeting. In preparation for this, Travis will send out some ideas about how we might do this.

Action Items:

- Travis: Send out ideas about how we might integrate public participation into FTC meetings.
 - All: In preparation for this discussion, consider how you see your role on the FTC (current vs. what you would like it to be).
 - All: Consider the effectiveness of the technical rep process in its current form.
-

Meeting Summary Approval

We reviewed and approved the September 7 meeting summary with Carol's edits. Thanks Carol!

Topics for the November 7 FTC Meeting

58. FHMP 2016 Process
 - a. Species Strategies
 59. Update on CFD Northshore Collector
 60. Barrier Dam
 61. D/S Adaptive Management TWG Update
 62. M&E Subgroup Report
 63. CRR Fund
 64. HAG Update
 65. FTC and Public
 66. Schedule Discussion of Methods to place gravel in 2018
 - a. 5- and 10-year Reports
 67. Other?
 68. Set agenda for December 5 meeting (possibly to include FTC Membership)
-

Meeting Evaluation

- We will miss Kristin and wish her well
- Very collaborative discussions – appreciate we can take the time to have honest and open discussions
- We successfully approved the CRR decision document
- There was confusion with the call-in number (will be corrected next time)
- The meeting allowed for sufficient discussion and ended a few minutes early

**Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final FHMP Meeting Summary
November 7, 2017 from 9:30 AM – 2:30PM**

Attendees:

Tom Wadsworth	WDFW
Travis Nelson	TPU
Michelle Day (by phone)	NMFS
Paul Sparks	WA Chapter of TU
Laura Bouchard	LCPUD
Debbie Carlson	BPA
John Serl	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Eric Shoblom	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Matt Bleich (by phone)	Tech Rep for TPU
Tim Hoffnagle	Tech Rep for TPU
Steve Manlow	LCFRB / Tech Rep for TPU
Lyn Wiltse	PDSA Consulting / Facilitator

Future FTC Meetings 9:30-3:00 at Cowlitz Salmon Hatchery (unless otherwise specified)

2017: Dec. 5 (Conference Call)

2018: Jan. 4 (Note: This is a Thursday), Feb. 6, Mar. 6, Apr.3, May 1, June 5, July 10 (2nd Tuesday), Aug. 7, Sept. 11 (2nd Tuesday), Oct. 2, Nov. 6, Dec. 4

Announcements

- Hydro Operations Update: Florian reported that Riffe Lake is at 726.5'. Inflows are at 3,800 cfs and outflows are between 5,000 and 5,500 cfs. They may go as low as 4,500 cfs. There aren't any storms in the forecast. The snow level is ~5-6K'. Cowlitz Falls is at 3,500 cfs. There is currently a very strong east wind that is causing a lot of debris to get trapped in the separator. They have been operating around 2.5 days a week for the last two weeks. They saw a lot of fish after the first week of operation and fewer since then. They will continue aiming to work three days a week through November
- CF Fish Facility (CFFF) Update: Eric reported that the drawings for the CFFF remodel are out for review. There is a meeting with potential contractors November 8. Demolition will occur in December – January (2018) timeframe. They are considering installing a temporary holding facility for the fish during the remodel. Eric is working on those designs now.

- Trout Hatchery: The hazing contract (including lethal hazing) has been approved and has been signed by the USFS. The lethal piece of this has been put on hold and non-lethal hazing is currently underway. Eric is preparing to present the case for the lethal hazing to the Utility Board. WDFW and TPU implemented a PIT-tagging study to help with the enumeration of fish next April (poor quality of data from the counters).
 - Trends and Annual Variation of Fish Returns to the Cowlitz: Paul distributed a document that explains his concern about a dwindling steelhead population and his hope that we can do something within the context of the FHMP to address this issue. He would like to see increased protection for the steelhead and would like us to treat the upper basin as if we were in recovery mode now. The general assumption was that we wouldn't start recovery actions until we have passage to the lower basin. He feels that if we don't start recovery now such as changing the harvest rules, we may lose the upper basin steelhead populations. John said based on previous smolt collection, 500-800 steelhead should return next year. WDFW makes fishery-related harvest decisions based on the available data. There is a tension between fishery and recovery goals. We won't know the size of the run until the April timeframe next year. Run size will determine if there is a reoccurring issue. Travis agreed that this is an important topic and that it would be helpful to look at this with other species as well. All agreed it makes sense to take this topic up again in the April timeframe. Travis will work with the FTC to ensure the topic is fully vetted in a timely manner and with a relevant data review. Perhaps we can discuss the values portion of this issue before April of next year.
 - Action Item: **Travis: Work with FTC to schedule time in upcoming FTC meeting to discuss. Ensure all have time to review background materials prior.**
 - Welcome Laura Bouchard! Laura introduced herself to the group as the LCPUD biologist who is stepping in for Mike Kohn since his recent retirement.
-

Downstream Adaptive Management TWG

Presenter: Matt Bleich / Phil Sandstrom

Matt reminded all that the initial "shakedown" season of the CFFF provided an opportunity to collect baseline PIT-tag data for coho, steelhead and Chinook.

Collection rates for coho and steelhead were lower than the prior 5-year average but higher than last two high-water years by 15-10%. Chinook showed increase from prior 5-year average from 10-50% CE rates. They got strong discovery efficiency, moderate entrance efficiency and high collection efficiency. There were low rates of retention in a particular zone of the collector.

Matt reviewed with all Decision Document 2017-11 Cowlitz Falls Dam 2018 Evaluations suggesting how to respond to these data. It recommends repeating the PIT-tag study

with steelhead and coho. For Chinook, they want to investigate further the cause of the zone. They will do this with hydraulic and acoustic evaluations.

Discussion: Impact of high-water years? This should be minimal, especially with coordination of LCPUD's new SCADA system. Operational tailrace is designed for 500-1000cfs. Last year they balanced at 500 cfs. This year, they will begin by balancing to 750 cfs. They need to find the appropriate balance between CE and fish health.

The Decision Document was approved by consensus.

Action Items:

- Matt: Update the Decision Document to show that it has been approved and post it to the website.
- Travis: Send the Decision Document out to Bob Rose, Carol Serdar, and Tim Romanski (the new USFS rep replacing Mark Celedonia as of November 10, 2017).

M&E Work Group Update

Presenter: Matt Bleich

Matt explained that at the last meeting of this subcommittee they discussed FHMP ongoing monitoring and evaluation in a general fashion. They also discussed protocol documents and the trout hatchery management plan. The side channel monitoring methodology was presented by TPU along with potential changes for the future, based on the last major stranding event. At their next meeting the discussion will focus on how to bring the M&E topic into the FHMP process.

Fish Health

Presenter: Eric Shoblom

Eric announced that TPU put out an open bid for the fish health monitoring of the Cowlitz hatcheries. They have selected WDFW to continue in that role (no changes).

HAG Update

Presenter: Florian Leischner

Florian explained that they are in a maintenance phase of the 638 acres they own, they are considering selling select upland properties. An example of this is the upland piece of the Evans property. He showed us Google Earth views from various years to show how the channel has shifted over the years. The property is currently split into two parcels horizontally. They are discussing splitting it vertically into an upland and downland parcel. They would put the upland piece (~8 acres) of the parcel on the market (money from the sale would help to replenish the HAG fund) and keep the riverside of the access road (Inman Lane). The primary function of the piece they keep would be

riparian habitat. The side channel that existed there in 2014 has disappeared. TPU will be asking the HAG to move forward with consideration of this idea.

Tilton River State Park Property: The contact person for is on leave until the end of the year. Stay tuned...

Next Steps: Florian will discuss this with Lewis County and see how subdivision rules impact this idea.

2016 FHMP Process Update

Presenter: Travis Nelson

Travis provided an update on the progress of this group. He explained that they are now planning to seek an additional extension from FERC. They have hired a consultant who will assist with the completion of the product. They intend to have a draft of this document to show to FERC when they request the extension (beyond February 2018 deadline).

At the last meeting of this subcommittee they reviewed the purpose and the core elements of the plan. They also reviewed an updated roadmap to the FHMP revisions: 2012-2016. They are looking at reorganizing the document to make it more readable and user friendly to its various audiences. They hope to have a review document in the January – February timeframe.

Travis reiterated that this is a TPU document and they are seeking to work with the FTC as much as possible to ensure the updated version reflects the interests of stakeholders. They will ensure everyone has an adequate chance to review and comment on the drafts they produce. Ultimately, TPU is responsible for the content of the document and will accept responsibility for any deficiencies in the document.

The “Big Table” will be connected to lifecycle models and feed into the monitoring and evaluation. They are now working to update all of the parameters of the data and broaden to include all stocks.

At the last subcommittee meeting, Phil walked everyone through a basic lifecycle modeling and population demography, decision rules, etc. They also discussed a condensed Big Table which is the same as the Big Table except it is species specific.

At the end of the meeting, there were constructive discussions about next steps along with the timeline. TPU ended the meeting with a commitment to update the Big Table. They will also propose a template for managing each of the species for each of the stocks covered in the FHMP. They will do this by merging the initial WDFW version and the TPU version. These products will be out for review in mid-November with an in-

person meeting in early December. Travis and Bryce agreed to share the responsibility for ensuring the notes are clear, complete, and correct.

Concern was expressed by some that this version of the FHMP might be less consensus-based than the prior version. Travis reminded everyone that the intent of this document is to reflect the interests of the FTC.

Action Items:

- Travis: Send Subcommittee notes out to FTC by November 10.
 - Travis: Set up another meeting in early December.
-

CRR Fund Update

Presenter: Florian Leischner

Florian announced that this subcommittee hasn't met since the last FTC meeting. In 2018, they will begin meeting every third Thursday. They have been working on how to evaluate projects that are proposed. At their last meeting, they discussed using the LCRFB application manual and having an appendix for CRR-type projects. Michelle explained her preference to have a separate application manual. This will be discussed further.

Steve reported Washington State is still without a capital budget. The SRFBD will be making decisions in December about what to do with projects already in the queue and how best to proceed.

Meeting Summary Approval

We reviewed and approved the October 3, 2017 meeting summary with minor edits.

Topics for the December 5 FTC Meeting

69. FHMP 2016 Process
 - a. Species Strategies
70. Update on CF Fish Facility (aka CF³)
71. Trout Hatchery Update
72. D/S Adaptive Management TWG Update
73. M&E Subgroup Report
74. CRR Fund
75. Placement of gravel in 2018
 - a. Preliminary monitoring results
 - b. Goal / FERC Requirement / Next Steps

76. Set agenda for January 4, 2018 (Thursday) meeting

Meeting Evaluation

- We got off to a “rockin’ good” start!
- We are happy to welcome Laura to the group!
- Lots of candid discussions, including during lunch
- Good food
- We successfully approved the CFD 2018 Evaluations Decision Document (2017-11).
- Travis performed well under pressure.

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Final FHMP Conference Call Summary
December 5, 2017 from 9:30 – 11:00AM

Attendees:

Tom Wadsworth	WDFW
Travis Nelson	TPU
Michelle Day	NMFS
Paul Sparks	WA Chapter of TU
Carol Serdar	WA Dept. of Ecology
Jim Pacheco	WA Dept. of Ecology
Laura Bouchard	LCPUD
Debbie Carlson	BPA
John Serl	Tech Rep for WDFW
Sam Gibbons	Tech Rep for WDFW
Peggy Miller	Tech Rep for WDFW
Eric Shoblom	Tech Rep for TPU
Florian Leischner	Tech Rep for TPU
Matt Bleich	Tech Rep for TPU
Tim Hoffnagle	Tech Rep for TPU
Chris Foster	Tech Rep for TPU
Phil Sandstrom	Tech Rep for TPU
Steve Manlow	LCFRB / Tech Rep for TPU
Rudy Salakory	Cowlitz Indian Tribe / Tech Rep for TPU
Lyn Wiltse	PDSA Consulting / Facilitator

Future FTC Meetings 9:30-3:00 at Cowlitz Salmon Hatchery (unless otherwise specified)

2018: Jan. 4 (Note: This is a Thursday), Feb. 6, Mar. 6, Apr.3, May 1, June 5, July 10 (2nd Tuesday), Aug. 7, Sept. 11 (2nd Tuesday), Oct. 2, Nov. 6, Dec. 4

Announcements

- Tim Romanski is now the FTC Representative for USFWS as Mark Celedonia has now moved over to NMFS. We thank Mark for his service and wish him well. We look forward to working with Tim.
- Welcome Rudy Salakory! Rudy introduced himself to the group. He is the Aquatic Habitat Restoration Manager for the Cowlitz Tribe. We look forward to working with him.
- Hydro Operations Update: Eric reported that Riffe Lake is at 738'. Flows below Mayfield are 11,900. Inflows are at 9,000. They are pretty much at full generation. There is lots of rain and warmer temperatures in the forecast. They don't expect

inflows to jump too high. There was a 2am spill due to a unit outage at Mayfield and the unit was back in operation at 9am the next morning.

- Action Item: Florian will send out the notification of evening spill (Nov. 30?) due to unit outage at Mayfield.
- CF Trout Hatchery: The M&E Team has discussed PIT tagging protocol for the Trout Hatchery to better enumerate the outmigrating smolts. They hope to use that information to get an idea of how many fish were lost. Currently, about half of PIT-tagged fish have been populated out into the lakes. Hazing is occurring for all daylight hours as occurred last year. Lethal hazing is still pending as internal discussions on this continue at TPU.
- CFFF Remodel: Eric reported that they are working with HDR on rearing protocols and the Master Plan. Carol observed this will likely require permitting. Eric agreed and said they would be proactive in seeking the necessary permits once the plan is finalized. At this point, they are not even sure if they would be constructing raceways or circulars. After they finalize the plan, they will identify construction phases and work on associated permitting. They hope to break ground in 2019. TPU just got all the bids in for the construction contract. They will finalize contractor selection by the end of the month. They plan to have the facility operational by the end of 2019. There will be temporary facilities set up (beginning in February) for the fish in the interim, so as not to impede functionality during the fish season.
 - Action Item: Eric will provide review of design of temporary holding facilities at our January meeting. Also, be sure to engage Ed Meyer (NMFS) on this.
- Gravel Augmentation: Florian reminded all that we skipped 2017 placement so are one year behind what is specified in the plan which calls for 500 cubic yards/year. We will discuss if we should place 1,000 cubic yards of gravel in 2018 and if so, how and where. We will discuss the goal for this at our January meeting.
 - Action Item: Florian will share available data on the results of prior gravel placement and bring proposals to January meeting about how to proceed.

- Additional fish release location on the Tilton River? Tom explained that WDFW is very interested in pursuing an additional release location on the Tilton. There is the potential State Park's Tilton River property acquisition that we discussed previously. This location would require significant construction. A lower-cost option might be at the Cascade Aquaculture Facility. It is also on the Tilton and has an access road to their water intake dam.
 - Action Item: Travis will discuss possibilities with WDFW staff involved in this and provide an update at our January meeting.
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Downstream Adaptive Management TWG

Presenter: Matt Bleich / Phil Sandstrom

Matt reported the work group will meet again December 14. They will discuss progress of the analysis for this year's reporting cycle. They plan to repeat last year's evaluation based on data from this year. The main focus is the efficiency of the retention zone (downstream from the collector entrance). TPU hopes to get a draft report on this from the consultant just before or after the technical working group meeting on the 14th.

Next steps will be to generate a draft final report for FTC review and comments. Matt reminded everyone that they didn't balance to higher than 500 cfs last year as they were near fishing season. Phase 2 of the balancing effort will occur in the February – March timeframe. For this phase, TPU will work with Alden Research Labs to evaluate CE and fish health as they do some additional work at 500 cfs and then move to 750 cfs and potentially up to 1000 cfs.

M&E Work Group Update

Presenter: Phil Sandstrom

Phil reported they got the annual report back from WDFW. TPU is reviewing it and plans to send responses back to WDFW. This is an iterative process and after agreement is reached, they will get final M&E report to the work group to review.

CRR Fund Update

Presenter: Florian Leischner

Florian announced that this subcommittee will meet at 11am today. TPU is awaiting NMFS review and approval of the Plan to Abandon Volitional Upstream Fish Passage before scheduling additional meetings of this subgroup in 2018.

Michelle reiterated that NMFS' approval of the Plan to Abandon Volitional Passage is still underway. She doesn't anticipate any issues that would prevent the approval of the plan. They are currently seeing how the plan aligns with the Biological Opinion.

Steve reported Washington State is still without a capital budget. At the SRFBD meeting on December 7, they will discuss how they want to proceed with projects statewide.

2016 FHMP Process Update

Presenter: Travis Nelson

Travis explained that progress on this has been delayed as TPU works through some challenges with their consultant. They had anticipated getting something to the workgroup to review in mid-November. Travis now expects this to occur in the next few weeks. In response to concerns expressed by some that the FTC is not being sufficiently included in this process,

Travis assured everyone that these documents will be shared simultaneously with the FTC and the FHMP subcommittee.

Tom cautioned that it may be difficult for WDFW to review the review documents prior to the January 4 FTC meeting. As Tom is not likely able to attend the meeting, however he will ensure there is proper WDFW representation at that meeting for those discussions.

Action Items:

- Travis: Send out FHMP-related documents to all as soon as they are available.

Meeting Summary Approval

We reviewed and approved the November 7, 2017 meeting summary with minor edits. Thanks Peggy for the careful review and edits! Thanks John for the clarifying edits.

Topics for the January 4, 2018 FTC Meeting

77. Additional Fish Release Site on the Tilton
78. FHMP 2016 Process
79. CF Trout Hatchery Update
80. Update on CF Fish Facility (aka CF³)
 - a. Designs for Temporary Holding Facilities
81. D/S Adaptive Management TWG Update
82. M&E Subgroup Report
83. CRR Fund

- 84. Placement of Gravel in 2018
 - a. Preliminary monitoring results
 - b. Goal / FERC Requirement / Next Steps
 - 85. Other?
 - 86. Set agenda for February 6, 2018 meeting
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Conference Call Evaluation

- Conference call went well
- We are happy to welcome Rudy to the group
- Good discussions and we ended a few minutes early
- Would be good next time to identify ourselves before we begin to speak