

Cowlitz Hydroelectric Project
FERC No. 2016
Cowlitz Fisheries Technical Committee
Draft MS Teams Meeting Summary
August 2, 2022 from 9:30 – 3:30

FTC Representative Attendees:

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

Additional Attendees:

James Archibald	NMFS
Josua Holowatz	WDFW
Peggy Miller	WDFW
Sam Gibbons	WDFW
Brian Gale	WDFW
Todd Hillson	WDFW
Matt Bleich	TPU
Eric Shoblom	TPU
Chris Foster	TPU
Phil Sandstrom	TPU
Tim Hoffnagle	TPU
Melora Shelton	TPU
Steve West	LCFRB
Laura Wolfe	LCPUD
Russell Page	LCPUD
Steve West	LCFRB
Bill Sharp	Yakama Nation
Lyn Wiltse	PDSA Consulting / Facilitator

Remaining 2022 FTC Meeting Dates: Sept. 6, Oct. 4, Nov. 1, and Dec. 6

Approval of May and June Meeting Summaries

The revised version of the May FTC Meeting Summary was reviewed and approved with clarifying edits. The June FTC Meeting Summary was also reviewed and approved as edited.

Both will be posted for public review.

Updates

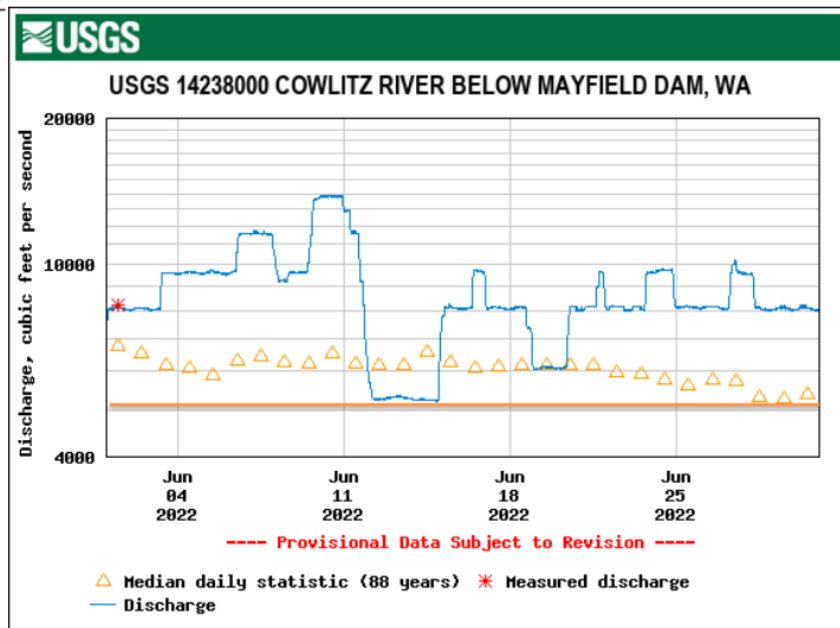
Water Quality/Monitoring: Anne requested that Matt Peter provide a brief water quality report during these meetings for now. It could include monitoring and the WQPP. The FTC looks to Ecology as the lead on this as they track key issues. Matt Peter was recently promoted (within the same group). Matt Bleich will follow up with the other Matt on Anne's request.

Hydro Operations: This presentation was emailed out on Monday before the meeting. As the FTC did not meet in July, this report covers hydro operations for both June and July.

- Inflows: High June inflows of 11,220 cfs (142% of average) were followed by July inflows of 4,127 cfs, which is right at the historical average despite the July heat wave.
- Snowpack: Paradise had melted out the end of July and White Pass at the end of June. Peak snow water equivalents were near or above average but were later than typical.
- Storage: Riffe Lake elevation on August 1, was 746.2' (just above the average of the last five years). Mayfield Lake continues its typical summer fluctuation of 421.5-424'.
- Outflow: June minimum flow requirement was 5,000 cfs, there were no exceedances. No fish transport flows were needed as flows each week reached at least 8K cfs. Minimum flow changed to 2K cfs July 1 and there have been no exceedances. The two downramps below 6K cfs met requirements. There were no unit trips or other unplanned flow disruptions.
- Mayfield gage: Cofferdam construction (starting July 12) has created a backwater effect at the Mayfield gage, similar to last year. Tacoma coordinated in advance with the USGS to provide estimated discharge data and establish a temporary discharge/stage relationship. USGS will true up the data and this will be updated on the USGS website and included in the annual report to FERC.
- Forecast: Dry with temperatures at/above normal. The freezing level is variable above 13,000'. Inflows will be in the mid-2,000s and Riffe will continue to draft. The current discharge of 5K cfs will ramp up to 7K cfs to test the Barrier Dam later today. Outflows are expected to vary below 7K cfs (max discharge during Barrier Dam work) through August 21. Max discharge will be 3.5K starting August 22 and going into the fall due to other projects.

Hydrograph for June:

Outflow

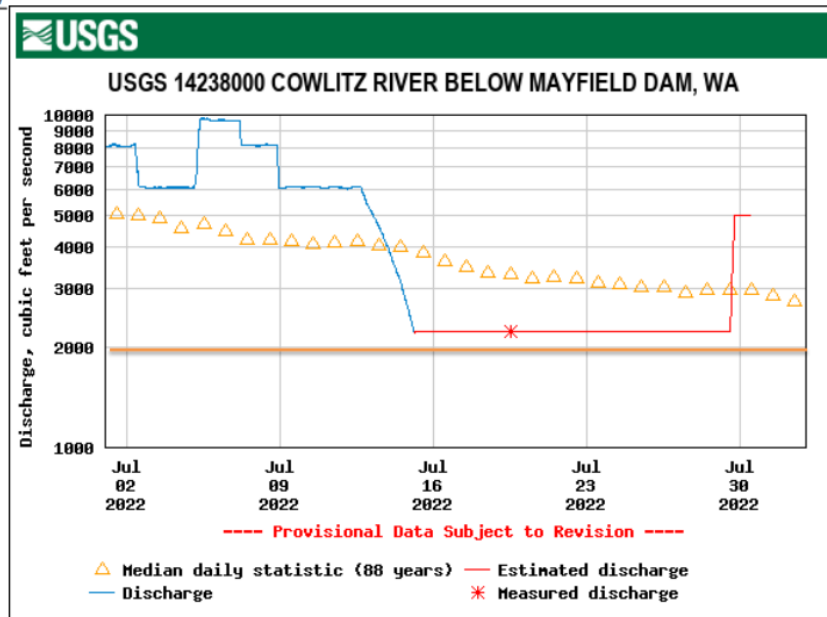


6/1-6/30 Minimum flow 5,000 cfs. No exceedances.
 No fish transport flows (all weeks have flow ≥8,000 cfs)

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

Hydrograph for July:

Outflow



7/1 - 8/1 Minimum flow 2,000 cfs. No exceedances.
8/1: 5,000 cfs

Barrier Dam Repair: Eric reported on Phase 2 of the Barrier Dam construction. He showed installation photos from July 26 and explained how they achieved a “dried in” state to allow for a fish salvage operation on July 28 that ended up being very successful and included clearing fish of the tunnel that connects the left bank fishway to the right bank fishway.

2022 Fish Salvage Numbers

	Parr		Smolt		MJX		Adult		Total
	HOR	NOR	HOR	NOR	HOR	NOR	HOR	NOR	
Chinook			71 (2)	9	10		1		93
Coho		167 (2)		24 (1)					194
Steelhead		2		2			1		5
Cutthroat				2					2
Sculpin								4	4
Whitefish								4	4
Crayfish								32	32
Shiner								5	5
RBT								1	1
Total:	0	171	73	38	0	10	2	46	340

() = Mortality Note: Mortality is included in the totals

Note: No lamprey were observed during the salvage effort

Flows of 5K cfs were used to test the coffer dam and will be increased to 7K cfs as a final test this evening. Crews had to dig out some gravel to get the pump down to the floor. This action created some muddy water. Tacoma noticed this in the first 15 seconds and halted the action, at the direction of Matt Peter, within 60 seconds. They took photos of the muddy water that had pumped into the canal. Eric was told three dead fish were found inside the

cofferdam area. Jamie is working on a report on this for NMFS. Eric will share the data for that report with the FTC as soon as it is available.

Fish Facilities:

Return Summary:

- Summer-Run Steelhead Adult Returns: Started collecting broodstock in early July and should easily meet broodstock goals. As of July 29, 1965 were recycled to the I-5 boat launch. Returns are in line with the ten-year average (much better than last year).
- Spring Chinook Adult Returns: Also seeing a good return. Have completed broodstock collection and have met our goals. As of July 29, returns included over 5K (4.3K HORs and 0.9K NORs). While jack numbers are not particularly high, crews have been noticing a lot of mini jacks. So far 4.3K HOR adults and an additional 2.4K mini jacks have been collected. Staff are differentiating Cowlitz vs. Kalama origin fish in the records. Tim has conducted some research in this area and can give a presentation in his findings to the M&E Subgroup and/or the FTC.
- NOR Spring Chinook Adult Returns: We experienced great returns in 2021 but this year is much better. This shows we are making good progress with more NORs going into the upper basin.

Mayfield: Staff conducted their first auto-flush for the secondary separator on July 19. This will be a recurring operation to remove fish that like to hang out there. Coho outmigrant numbers have dropped off as expected, they are getting 400-500 juvenile Chinook, most of which are sub-yearlings. Tagging operations continue per protocols.

Cispus Release Site: Now that flows have receded, it has become apparent that sediment accumulation at the release site has made the transition from the plunge pool to the thalweg extremely shallow.. Consequently, transported adults were stranding themselves on the gravel bar at the site. Tacoma is working with LCPUD to investigate short-and long-term alternatives. In the meantime, they will use the release sites at Lake Scanewa and the Franklin Bridge until water temperatures in Scanewa exceed 18C. Discussion:

- We need a good way to track when we change from the protocols.
- What about a temporary extension? It would have to be to be 80' over a flat area.

Eric is open to additional suggestions will keep folks posted on this. Laura assured everyone it is LCPUD's site and ensuring it is functional is a high priority.

Mill Creek Boat Launch: An accumulation of sediment there is preventing large boats from launching at low flows. An excavator is not available until late August. Eric will keep folks updated on this. Tacoma plans to dredge this out before their HPA work window closes on August 31.

Cowlitz Falls Fish Facility: Chris recounted some of the challenges they have worked through this season due mostly to the wet spring. 110K smolts have been collected so far. The 2022 trend is below the last four years of run-of-river collection. There was a significant amount of spill through CF Dam this year: 12.5% of the spring migration period (231 hours of spill). He reviewed a chart showing as spill increases, FCE tends to decrease.

- Steelhead Average Capture Efficiency: 45%
- Coho Average Capture Efficiency: 28%
- Chinook Average Capture Efficiency: 17%

Capture Efficiency percentages are subject to change.

Table 3. Spill events at Cowlitz Falls Dam during the spring migration period, April 15 – June 30, 2022. Data are derived from hourly average.

Spill Event	Start Date	End Date	Continuous ¹	Hours with Spill	Max Spill (hourly avg)	CFD Unit Discharge ² (hourly avg)	Reason for Spill
1	7-May	9-May	No	50	5,377	9,959	Over-capacity
2	17-May	17-May	Yes	3	2,728	7,061	Over-capacity
3	28-May	28-May	Yes	1	217	9,381	Over-capacity
4	28-May	28-May	Yes	1	300	9,368	Over-capacity
5	3-Jun	4-Jun	No	23	844	9,401	Over-capacity
6	5-Jun	7-Jun	Yes	56	4573	9,173	Over-capacity
7	10-Jun	13-Jun	No	92	10,921	9,226	Over-capacity, drawdown
8	16-Jun	16-Jun	Yes	8	6,375	3,949	Unplanned line outage

¹ Spill data are derived from an hourly average, continuous is defined as having a positive spill value within each one-hour period.

² Hourly average unit discharge during hours with spill.

Chris talked about increased spill events observed during the spring migration period. In anticipation of a high inflows, on June 10, there was a drawdown of Lake Scanewa when Cowlitz River flows approached 15K cfs in Randle. Drawdown events are not typical of spring and summer collection periods. This drawdown event halted fish collection activity until the lake was restored to a normal pool elevation. Also, there was an unexpected line outage on June 16 and LCPUD wasn't allowed to generate until the line was repaired. Last fall, and continuing into the spring, debris challenges have been impacting generation capacity at CF Dam. Reduced generation capacity compounded spill events by increasing spill frequency, longer duration of spill, and larger volumes of spill.

Downstream Adaptive Management Technical Work Group: Matt explained that after this group completes its review of the Draft Cowlitz Falls North Shore Collector (CFNSC) Spring Summary, it will be shared with the FTC. He looks forward to working with LCPUD to understand all available options to remain in prime collection operations as much as possible. When asked about potential for a secondary collector below Riffe, Matt responded the current focus is on improving the performance of this collector. Laura noted LCPUD will have an extended drawdown next summer during juvenile Chinook collection.

Gravel Augmentation Report: Anne asked about what was required and what has been done on this so far. No gravel was placed from 2016-2020. Tacoma is making up for that now. 795 cubic yards were distributed onto the Barrier Island in the same location as last year using the same gravel conveyor system in mid-July. The FTC is working on a plan that includes placement with what is needed. Travis will follow up with Anne on this and ensure she receives the entire DD package. Anne also noted the WQPP shows a map for the project area. It looks like the equipment that was used to distribute the gravel was positioned outside the approved boundary and inside the riparian area.

Mitigation Gravel: Travis will also follow up with the team on Peggy's question about if mitigation gravel on the right bank ended up in the supersacks. If so, it is important to avoid a net loss in accounting for the mitigation gravel (past mitigation gravel placed into super sacks then counted for 2022 gravel augmentation - double counting.)

- Action Item: Travis to follow up on mitigation gravel question.

Satellite Rearing Program

Presenter: Phil Sandstrom

Phil reported there was a Satellite Rearing Program meeting on July 1 for further discussions, primarily with WDFW staff and Steve Lewis (BIA). There was good input on infrastructure and

logistics, bio-programming considerations, and how best to measure success.

Recommendations including focusing on a segregated spring Chinook and kelt reconditioning program will be shared at September FTC meeting. There was a question about whether the DD 2021-07 (options 2 and 5) should be amended to note that the current direction/approach differs from what was outlined in the R2 document and the DD. After discussion, it was agreed that Phil will send out a new DD to reflect the change.

Phil also noted Chris has obtained 3 years of temperature data from Energy Northwest (EN). He will be the Project Manager for the initial phase. Many questions around infrastructure logistics and bio-programming remain to be addressed. Phil looks forward to continued discussions.

- **Action Item:** Phil to send out new DD to reflect the current intended direction and focus.

LCPUD Dam Operations

Presenter: Russell Page

Russell gave an update of the many projects the PUD is undertaking starting with this year:

- Unit 2 is currently shut down for maintenance. They will then move on to Unit 1.
- Cispus take-out site for kayaker/ rafter access project continues.
- Sept. 1-2: Spilling will occur for friction testing (in coordination with Tacoma, shutting down their sluice capture system to test trunnions on gates 2 and 3).
- Sept. 6-9: Transformer maintenance on Unit 2. This will involve bringing in a crane, killing the 230 line above the substation so will have to spill any excess flow. Unforeseen water in the oil can increase the time needed for maintenance.
- Sept. 13: Maintenance on Unit 1.
 - This work may involve taking an outage. Russell noted they can adjust flows later in the year, but not earlier. The contractor won't be onsite until Sept. 6. This repair has to be done before the flows pick up. There may be some flexibility within a weeklong window.
 - Russell noted the PUD will try to do sediment removal (from the October event) at the same time as it will be easier to remove sediment while the Unit is out.
 - An additional drawdown to inspect the debris barrier moorage site won't be necessary as they plan to improve efficiency during the inspection with a drone during this drawdown.
 - Following the transformer work, they will replace the transducers on fish gates 2 and 3 with a standard model that is easier to work with.

Projects for next year include:

- Feb/Mar timeframe: A tentative drawdown for debris barrier moorage work. (They are still waiting on permitting for this.) The new debris removal system will be less costly and more efficient. Hatch covers will be replaced at this time. It will affect the fish flume system.

Chris thanked Russell for all his efforts in coordinating activities with Tacoma and communicating this out to the FTC and the TWG.

M&E Subgroup

Presenter: Phil Sandstrom

Phil reported as their July meeting had light attendance, they discussed topics for the August 17 meeting: broodstock collection, sampling, and monitoring needs in the upper basin.

The Tilton River Salmon and Steelhead Transport Management Plan has been shared over the last three years and has been accepted as the Adult Handling Protocol (AHP) for the Tilton River. He noted the Bremer Bridge (BB) site is operational and has been used for all species to date. The 2022 recommendations are as follows:

- #3: Transport all NOR Fall Chinook, NOR Coho, and NOR Steelhead to the BB site and the majority (~3/4) of all HOR fall Chinook, coho, and steelhead to the site at Gust Backstrom Park (GBP). Transport a smaller proportion (~1/4) HOR Chinook, coho, and steelhead to the BB site for expanded fishing opportunity between the two sites. Identify a closed fishing area around the BB site.
- #10: Release all NOR sea-run cutthroat trout at the BB release site to reduce angler encounters at GBP.

Phil sees this as a form of adaptive management - separating NOR fish early on when they are vulnerable during harvest of HOR fish. As long as the FTC is supportive, AHP developed by WDFW and Tacoma becomes the transport document with no need for a DD.

Two reports are soon to be sent out for 30-day review:

- 2021 Lower Cowlitz River Monitoring and Evaluation Report
- 2021 Lower Cowlitz River Side Channel Monitoring and Use Report

All were encouraged to “channel” any question through Phil.

2022 Annual Program Review (APR) Process Update

Presenter: Phil Sandstrom

Phil reviewed the DD and explained that it requests FTC support for production sizes of each of the programs listed in Table 1: APR Production Goals. This strategy was developed with the FTC a few months ago and taking into consideration of input from the two public meetings. There was consensus approval of the DD by FTC voting representatives. Travis will send this out for electronic approval by FTC reps who were not present at this meeting.

CRR Fund / Habitat and Production (HAP) Subgroup

Presenters: Melora Shelton and Steve West

HAP Subgroup

Melora reminded all the draft DD and today’s presentation was sent out on July 27 seeking FTC support for Subgroup recommendation to move HAP projects into the 2023 CRR Grant Round.

She reviewed the background for the DD by describing the HAP Subgroup and the work it has completed so far, including developing a charter and revising guiding principles. Subgroup discussions have been around components of a successful project, support for proposal development, and the roles of Technical Advisors and the HAP Subgroup. They are also engaged with screening and scoring criteria, the grant round calendar, and guidance manuals and application materials and forms. With all of these things in mind, the goal is to be able to incorporate the HAP projects into the 2023 CRR Grant Round. The FTC will be making Habitat and HAP decisions at the same time.

Melora described three high-level phases for the 2023 Grant Round:

- August - February: Proposal Development
- February - June: Application
- July - September: Final Review/Decision

Next steps beyond approving today's DD include the subgroup developing workshop materials, the evaluation materials (screening and scoring), and detailed schedule along with application materials by the end of this year for the 2023 round. Tacoma will also develop the Grants Manual by the end of December along with a comprehensive update to the Implementation Strategy for approval by the FTC at the December 6 meeting.

There was consensus by FTC voting representatives present to approve the DD. Travis will email this out to allow FTC voting members not present to also weigh in.

LCFRB 2022 Cowlitz Restoration and Recovery Project Synopsis

As requested at the June FTC meeting, Steve W provided a brief overview of the 4 Projects seeking CRR funding:

1. Cispus Yellow Jacket Phase IV Restoration (Cowlitz Indian Tribe) - three separate funding sources, including the Salmon Recovery Funding Board (SRFB).
2. Creating Habitat on Cispus Tributaries (Cascade Forest Conservancy) (CRR only)
3. Kiona Creek Restoration (LCPUD) in cooperation with Lewis Conservation District (CRR only).
4. Upper Cowlitz Culvert Inventory of anadromous streams incl. the Tilton and the Upper Cowlitz (Lewis Conservation District) (CRR only).

Steve W also reviewed the process and preliminary results of TAC scoring:

Scoring summary

Eight TAC members submitted scores this grant round, although two members did not score the Cispus-Yellowjacket proposal and one member did not score the Creating Habitat on Cispus Tributaries proposal due to potential conflicts of interest. All participating TAC members indicated the four CRR proposals met eligibility requirements. A ranked list based on average TAC scores for each scoring question is shown in Table 1. Scoring and ranking summaries are included below based on submitted scores for the five CRR evaluation questions. TAC scoring rationales are included for each grant proposal at the end of this summary.

Table 1. Ranked CRR proposal project list based on averaged scores for each scoring question from participating TAC members. Proposals are shown in ranked order based on total project score.

Project Number	Project Name	Pass/Fail Eligibility Questions			CRR - Scoring Questions					Total Project	
		Q1	Q2	Q3	Q1	Q2	Q3	Q4	Q5	Score	Rank
		Pass/Fail	Pass/Fail	Pass/Fail	Score	Score	Score	Score	Score		
22-1273	Cispus-Yellowjacket Phase IV Rest.	Pass	Pass	Pass	3.0	3.8	0.7	2.7	1.7	11.8	1
CRR-2022-002	Creating Habitat on Cispus Tributaries	Pass	Pass	Pass	3.0	3.4	0.3	2.0	1.7	10.4	2
CRR-2022-003	Kiona Creek Restoration	Pass	Pass	Pass	3.0	3.1	0.1	2.1	1.4	9.8	3
CRR-2022-001	Upper Cowlitz Culvert Inventory	Pass	Pass	Pass	3.0	3.4	0.1	2.3	0.4	9.1	4

Table 2. Score summary for the four submitted CRR proposals for the 2022 grant round. Proposals are shown in ranked order, and the range of submitted TAC scores for the five evaluation question (minimum and maximum) and rank positions. Average rank position is included. Averages for the other questions are included the ranked list summary table above.

Project Number	Project Name	Question 1		Question 2		Question 3		Question 4		Question 5		Rank Position		
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Average
22-1273	Cispus-Yellowjacket Phase IV Rest.	3	3	3	4	0	1	1	3	1	2	1	2	1
CRR-2022-002	Creating Habitat on Cispus Trib.	3	3	3	4	0	1	0	3	1	2	1	3	2
CRR-2022-003	Kiona Creek Restoration	3	3	2	4	0	1	1	3	0	2	1	4	3
CRR-2022-001	Upper Cowlitz Culvert Inventory	3	3	3	4	0	1	1	3	0	1	1	4	3

The Cispus Yellow Jacket Phase IV Restoration project was ranked #1 among the project seeking SRFB funding by the TAC members. There was additional discussion around the LCFRB scoring methods. In order to fund additional SRFB projects, request for CRR funds for this project was increased.

The LCFRB will come to the FTC in September with a draft DD for a funding recommendation. The information provided by Steve W provides context for that DD and the final decision will be made in October.

Steve W invited all to contact him directly with any questions and explained the ranking list is draft until it is approved by the LCFRB on August 5.

FTC Public Meeting Process Review Presenter: Travis Nelson

Consensus was the June Public FTC meeting went well. It was good to keep public comments at the public comment period near the end of the meeting. We may want to restrict comments and questions to the topics on the agenda. It is important to be thoughtful about how we continue to receive public feedback. We could add a separate open comment period at the end. There wouldn't be an expectation for FTC members to necessarily respond to what was asked/said during that time.

Travis proposed all FTC meetings be open to the public. He reminded everyone that we, as the FTC, always have the option to go into executive session for discussions apart from the

public. The Open Public Meetings Act (OPMA) says when a group is voting on spending public money, those meetings need to be open to the public. As we move forward with the CRR program, we would be voting to spend public funding. This would qualify as something that falls under the OPMA. FTC voting reps reported all being supportive of this.

- **Action Item:** Travis will draft a DD for review at our September meeting and possibly finalizing it in October, depending on how the discussions go.
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Topics for September 6, 2022 FTC Meeting

- Updates incl. Hydro Ops, Water Quality
 - LCPUD Dam Operations
 - Fish Facilities
 - Satellite Rearing
 - Downstream Adaptive Mgt. TWG
 - CRR Fund / HAP Subgroup
 - M&E Subgroup
 - Review DD on FTC Meetings being open to the public
 - Preview October 4 FTC Meeting topics
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Meeting Evaluation

- Everyone followed the norms and was respectful of each other's time
 - Got out a few minutes late
 - Very productive - Approved 2 DDs
 - Great participation today
 - Kept up a great momentum throughout the meeting.
 - Todd and Melora shared helpful tech tips (F-5 for PPT and Ctrl + Scroll to zoom in)
 - Josua's Quote: "Life goes by fast. Enjoy it. Calm down. It's all funny. Next. Everyone gets so upset about the wrong things." Joan Rivers
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Closing Remarks

Travis thanked everyone for the great participation at today's meeting. Tacoma is so very appreciative of the hard work and collaboration that exemplifies this team. And he echoed the Joan Rivers quote asking that folks try not to take things too seriously.

Parking Lot

- Review/Update FTC Protocols to include remote meeting procedures
- Presentation by Tacoma's Power Management Group and/or from Grant PUD re improving SAR
- Review Steelhead Recycling Program