COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM
July 10, 2024
Facilitator's Summary
Facilitation Team: Emily Stranz & Colby Mills, DS Consulting

The following Facilitator's Summary is intended to capture basic discussion, decisions, and actions, as well as point out future actions or issues that may need further discussion at upcoming meetings; it is not intended to be the "record" of the meeting. Official minutes can be found on the TMT website: https://pweb.crohms.org/tmt/agendas/2024/ Suggested edits for the summary are welcome and can be sent to Colby at colby@dsconsult.co.

Review Meeting Summaries & Minutes – TMT Members approved the official meeting minutes from the May 17 meeting, and the minutes and facilitator's summary (pending a minor typo) from July 3.

Dworshak Operations – Jonathan Roberts, Corps, reported on current conditions and temperature trends at Dworshak Dam (DWR). The project is releasing full powerhouse capacity, about 9.6-9.7 kcfs; currently the pool is about 6.5 feet from full, drafting slightly under 1-foot/day which will pick up to 1-foot/day.

Flows at Anatone are picking up, with more water from the Hells Canyon complex as it increases power generation during this current heat wave. Natural temperatures continue to increase on the Snake River mainstem and tributaries. Temperatures at Orofino are rising faster than Anatone, as the volume of flow in the Clearwater makes it more reactive to heatwaves and will spike higher and faster. While the Snake River does gradually go up or down, the larger volume makes it less reactive, allowing temperatures at Anatone to remain more constant.

The Lower Granite (LWG) tailwater is around 66 degrees F. Temperatures yesterday fluctuated around 66 degrees F, degassing in the afternoon with generation flow picking up and pulling cold water from the bottom of the LWG reservoir, which is around 64 degrees F. The project is spilling 18 kcfs, with a portion of that through the RSW where water is warmer. The 15-20-meter mark is holding between 64-66 degrees F, and the Corps is working to manage stratification through the extended heatwave.

Flows are below average into the reservoir, this has more of a long-term impact if conditions persist throughout summer and could result in losing 1 or 2 days of extra water capacity. The Corps is monitoring this closely. There isn't much relief from the heat in the regional 10-day forecast; Jon noted that the local forecast shows wind, which will help to cool the top of the reservoir at night, although temperatures are not as ideal for significant nighttime cooling.

Today's modeling results show the LWG tailwater staying just under 68 degrees F through the next eight or so days. Jon noted that the model results show no additional DWR spill, and the Corps is modeling once or twice a day to assess augmentation needs. Modeling results help to track the long-term water supply, and currently show enough water to run DWR at full powerhouse capacity through end of August with an additional 5 days to run at the 110% TDG spill cap. In response to a query, Jon clarified the Corps is working to ensure the model is converging well in the next 3–5-day window to be as efficient with water as possible, which in turn sacrifices a bit of the 7-10-day model calibration; Anatone temperatures are not expected to come all the way back down as indicated in the model.

Jon reported that Doble testing will be conducted later this summer at LWG, likely the 2nd full week in August. He reminded the group that the T1 transformer will go offline, which will reduce the powerhouse capacity. Typically, the project must send extra water ahead of the Doble test to manage water temperatures, which could require 1 or 2 days of spill depending on weather conditions. Jon noted that the

Corps will be tracking weather conditions and available water for the fish trap during fall Chinook broodstock trapping on August 17.

Charles Morrill, WDFW, asked if relaxing the LWG tailwater criteria to 68-69 degrees F is still a tool for providing an extra day of water through the end of August if needed? Jon noted that this is still a possibility, although it does have tradeoffs and impacts. Another tool is closing the RSW for a day or two if conditions warrant. Currently there is no need to relax the tailwater criteria.

Sockeye Update – Jonathan Ebel, IDFG, reported that the abundance estimate at Bonneville (BON) has unexpectedly increased for Snake and Columbia River and sockeye; the Snake River run is not great, but not catastrophic. Conversion rates and travel times are still below average, but within expected ranges.

Jonathan noted discrepancies between window count and PIT-tag expansions for hatchery fish at Ice Harbor (ICH), which is expected, and LWG. The discrepancy at LWG could mean that something is off, PIT expansion at LWG does not include natural origin fish, that are known to be present. A similar discrepancy is apparent at Lower Monumental (LMN). This could be a discussion for FPOM.

The lowest conversion rate is currently from McNary (MCN) to ICH at 70%, IDFG will continue to monitor this closely as well as ICH to LWG due to the potential for high temperature differentials to cause blockage during the heat wave. The longest travel times are at the John Day (JDA) pool, while the shortest times are at the Dalles (TDA) pool, as expected.

Jonathan reported that due to lethally hot conditions upstream from LWG, particularly in the Salmon River, IDFG and NOAA are collecting Snake River sockeye at the LWG trap and transporting them to Eagle Hatchery. The trap and transport operation started yesterday, with fish collected and held in tanks at LWG on Mondays and Wednesdays, and then transported to Eagle Hatchery on Tuesdays and Thursdays. Jonathan noted appreciation for the administrative assistance from LWG staff and the Corps Walla Walla District. Trapping will continue at normal monitoring rates used for Chinook and steelhead, and although trap rates will slightly increase at the project, the operation will keep within BiOp(s) take limits. Kelsey Swieca, NOAA, added that the trapping operation was contemplated in the CRS BiOp and is included in NMFS' 2020 incidental take statement, which permits trapping to occur when temperatures exceed 70 degrees F in either the Columbia, Snake or Salmon rivers.

Finally, Jonathan added for the record the desire for regional support to keep USGS temperature gauges operating. Losing gauges in the unregulated parts of the river system will make it increasingly difficult to make management decisions.

Charles asked what temperatures in the upper Columbia looked like for sockeye? Kelsey and Keely Murdoch, Yakama Nation, noted that temperatures in the Okanagan are high, with a thermal barrier at the mouth which happens annually. The thermal barrier criteria is 21 degrees for a 12-hour period.

Expanded Pool Operation at Little Goose Dam – Tom Lorz, Confederated Tribes of the Umatilla Indian Reservation, asked the Corps for more details on the 0.5-foot raised MOP at Little Goose (LGS), and the specific reasoning for the raised pool. He requested more information on the project limitations and asked the group to consider any potential fixes that could be made to avoid expanded pool operations in the future, when possible, for the benefit of fish. Eric Chow, Corps, responded that the raised MOP operation was to stay above the minimum project tailwater. Julie Ammann, Corps, added that the project minimums are intended to manage multiple project needs, including fishway entrance criteria, and impacts to fishway pumps, flow deflectors, and erosion concerns. Chris Peery, Corps, noted that a significant concern remains issues with the fish pumps, and the conditions will persist until the fish pumps are fixed or replaced.

Other Salmon Managers shared concern for the ongoing use of raised MOP and asked for in-depth exploration of ways to address issues (such as the fish pumps) that can be fixed to lessen the raised MOP operations as much as possible. Chris said that he would add it to the FPOM agenda and if needed the issue will be elevated to RIOG for further consideration.

Questions and Comments from Members of the Public – There were no questions or comments from members of the public.

The next scheduled TMT meeting is on July 17, 2024, at 9:00 AM.

Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, July 10, 2024
Minutes: Andrea Ausmus, BPA (contractor, CorSource Technology Group)

Today's TMT meeting was held via conference call and webinar, chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. A list of today's attendees is available at the end of these minutes.

1. **Review Summaries and Minutes**

   a. Draft Minutes for May 17

   - Ebel requested that minutes be received sooner so that they are clearer and closer to mind.
   - The comment on page 12 was about phrasing but Ebel did not remember how to correct it. The comment of concern was not one to keep from approval.

   b. Draft Summary & Minutes for July 3

   - July 3 Minutes and Summaries – approved pending change.
   - Change: There was a typo last paragraph page 3 "JSS" should be "JFF".

2. **Dworshak (DWR) Temperature Augmentation Update –** *Jonathan Roberts, Corps-NWW*

   a. Current Hourly Data

   - Releasing: 9.6 – 9.7 kcfs
     - Releasing at full powerhouse.
     - This will slowly shift up as they draft the pool.
   - Elevation was down: ~6.5 feet
   - Drafting: >1 foot/day
     - Expect as storage diminishes to pick up to a foot per day at this current release.

   b. Snake and Clearwater Rivers Temperature Data

   - Anatone (Snake River):
     - Flow: 30.72 kcfs
       - Increasing as the Hell's Canyon Complex is adding a little more water. Makes sense during this heat wave as they are doing power generation.
     - Temperature: ~70°F

- Orofino (Clearwater Mainstem):
  - Flow : 4.36 kcfs
  - Temperature: ~72°F
    - Natural temperature is increasing as the tributaries are warming due to the heatwave. Will see these rise faster than Anatone because of the volume in the river system.
    - Orofino is more reactive to the heatwave, will see it spike higher and faster.
- Lower Granite (LWG)
  - Tailwater Temperature: ~66°F
  - 7/9 Temperatures: 65 – 66°F
    - Fluctuated through the day as we picked up with more generation flow during specific times, we picked up more cold water off the bottom of the reservoir. That is helping to keep the temperature down.

c. Lower Granite Forebay Temperature String

- Bottom of Reservoir: ~64°F
  - Where the water from the turbines is pulling from for the generation flow.
  - Running 18 kcfs spill with a portion through the RSW with some of the warmer water.
- 15/20m line: 66 – 64°F
  - Holding steady with the high temperatures
  - See how well it defines stratification with the thermocline, they are watching this closely and working diligently to hold onto the stratification through the extended heatwave.

d. Dworshak STP Extended Inflow Forecast

- Seeing below average inflow into the reservoir.
  - Short-term: does not make a huge difference.
  - Long-term: can reduce the capacity of having a little bit of water.
    - They could typically lose 1-2 days of extra water by being below average over the course of a 60 – 90-day period this summer.
- They are tracking this in the model results.

e. 10-Day Regional Forecast (July 11 – July 20)

- Back in 2021 we had an extensive heatwave that was in late June, while this year it started sooner it is not as intense. 2024 is a longer heatwave.
- Good News:

  - Starting with a full allocation of water to support it.
  - Started closer to on-time.
- But:
  - There is no relief from the extreme heat, we are pulling a long heat wave.
  - The region is seeing a lot of heat.
- There is a chance for it to ease up a little bit toward the end of the 10-day.

f. Weather Forecast for Lewiston, ID

- Temperatures: 103 – 104°F
  - May drift down late in the 10-day.
- There is a little wind on the top of the LWG reservoir and throughout the lake which is helpful to move some of the water and to move the air on top of the lake.
  - Breeze helps to move the stagnant air off to help cool the lake at night.
- It is still not getting down to the temperature that they would like it to be at night. Night temperatures are still in the low-70s would prefer 60s.

g. Model Results – Updated July 10, 2024

- Last couple of days show a trend of temperatures going up.
- Also see that the tailwater temperature is able to stay below 68°F.
  - They expect it to run close as the heatwave continues through the next 5 – 8+ days.
- Model currently shows no additional spill, but they are looking at it multiple times a day to make sure that is still a viable option.
- Plan: Returned to PH flow and will continue to forecast.
- There is an additional note on the top of the model results to track the longer-term water supply.
  - Current Water Supply: Run full PH capacity through August 31 with an additional 5 days to run at 110% TDG spill rate.
- Reminder: LWG Doble Testing Dates
  - August 12 – 16, 2024
  - T1 Transformer has to go offline, reduces the PH capacity. They typically have to send a little extra water.
  - This could utilize one or two days of spill.
- Will track fish trap temperatures in August and through September.

Jonathan Ebel, ID, asked when Doble testing occurs would we expect a slight breakdown or deepening of warmer water in the LWG pool. He said that he was thinking about trap temperatures. Typically, we have discussed that Fall Chinook broodstock trapping begins

on August 17 and it is around a three-day lag from DWR to LWG in terms of temperature. He asked if the Doble testing pushing up a little close on the switch in trapping.

Roberts said Doble testing in the FPP is the second full week of August and it depends on how the dates fall but they will be tracking that in looking at how much water is available and ensuring that we are tracking the trap temperature at that time as a secondary objective to ensure that they push the thermocline to the right level and send the appropriate amount of water. He said that sometimes we can get some overcast or a brief summer shower in there that can help so it will depend on how much water we have available and what the actual weather conditions are. They will be tracking it to see the impact on the fish trap.

Ebel said thank you, it is a ways out, but it is good to look way out for water things. He said that he is surprised at the temperature predictions for Anatone. He said that they had dramatically changed over the last week and even from yesterday to today. He said that Roberts had mentioned wind and asked if it was something of a wind effect. He said that having Anatone come back down to 68°F is very surprising.

Roberts said no, he would look at the model for the next three to four days. He said that is why we are running it today and then they will run it again this afternoon, and again a couple of times tomorrow. He said they are really only tracking Anatone temperature really close for the next three to four days. While it does show it coming back down at the end of the 10-day he would not expect it to come all the way back down. Right now they are just trying to make sure that their model is converging really well within the next three to five day window so that they can ensure that they are getting the right releases out right now and are being as efficient as possible with the water. That is sacrificing a little bit of the seven-to-ten-day model calibration in an effort to run it to the three-to-five-day outlook window. He said that he would expect that to change day to day when looking out that far in the Anatone and the Clearwater temperature right now.

Ebel said thank you and that was informative. He asked if the increase in generation at Hells Canyon, in Roberts' opinion, leading to a slightly lower temperature at Anatone over the next three to four days than otherwise would be there or which direction did Roberts think that was pushing the temperature at the moment.

Roberts said that it allows Anatone or the mainstem of the river to stay more constant. We have seen that over the last 10 days looking at the model result how the Clearwater is more reactive, it allows the Snake River, because it is a larger volume of water, longer for it to change temperature. While it does gradually go up or gradually go down, it is not as reactive and so we do not have to counteract such a large volume of water in a reactive sense. We still have to plan for it but it does not make it reactive so that is helpful to some degree. It does not really help us per se in the temperature going up or down, but it does help us plan for the increase of the slight decrease in temperature.

Charles Morrill, WA, thanked Roberts for an excellent update, he really appreciates Roberts' attention to detail and running the models. Morrill said a thought he wanted to share was when we look at having water all the way through August at times, we have relaxed the 68° to 69° to ensure that we have an extra day or two of water. Morrill said that he presumed that will still be in the tool bag should we need it.

Roberts said that is a possibility in the tool bag. He said as a reminder, we have that potential, it has its trade offs and impacts later in the Spring. Another tool that we have used is closing the RSW for a day or two if the conditions and the tradeoffs warrant an improvement. In a way, to help to track if we are going to need to start looking at those discussions a little more. That is one of the reasons, in discussions with Jay Hesse, this year he started to put the water supply up there as a note. If we start to see that number drift in the 1 – 3 days of water left, and we still have 30 days to go then those discussions might be something to consider in looking at risk and tradeoff for other criteria. But as of right now we have 5 days of water, so we are still able to maintain the temperature as of now. Roberts said that he is not sure if there is a need to consider that at this moment quite yet.

Morrill said that he agrees that knowing we are losing 2 – 3 days due to the Doble testing, so let us hope for the best. Jay did share that he had that discussion with Roberts at FPAC.

3. **Sockeye Update –** *Jonathan Ebel, ID*

- Abundance at Bonneville (BON) has increased for both Snake River Sockeye and Columbia River Sockeye.
  - Columbia River Sockeye run is big, Snake River Sockeye is not great but not catastrophic.
  - Fish are moving up the system
- Discrepancies between the window counts (in paratheses) and PIT tag expansions (hatchery fish only) at Ice Harbor (IHR) and Lower Granite (LWG)
  - Expected: Given the size of run of Columbia River Sockeye that we would see a discrepancy with a higher window count than hatchery origin PIT tag expansion estimate at IHR.
    - That plays out because there are number of Columbia River Fish that will make it past IHR, and some make it as far as LWG.
  - The discrepancy at LWG between the PIT tag expansion of 439 and the window count of 250 is intriguing.
    - There are three groups passing LWG that can be counted at the window; one of those groups is in the PIT tag expansion.
    - The PIT tag expansion being 40% higher than the window count suggests that there could be something off.
    - Even at the LWG trap last week they trapped 9 unclipped natural origin fish and 20+ hatchery fish.
    - The PIT expansion does not include any natural origin fish.
    - We know there are natural origin fish going past the window, but there we have this large discrepancy.
    - May need to talk about this in FPOM and do some QA/QC on the window count at LWG.

  - Note shown: Window count at Lower Monumental (LMN) aligns closely with the PIT tag expansion.
    - 552 (531)
    - We seem to be missing a component of natural origin fish that we know are there.
- Conversion rates
  - Have been looking okay
  - Temperatures are not catastrophically high
    - Temperature have increased to at or above 68°F from The Dalles (TDA) to IHR.
    - This has not been atypical over the last few years.
  - Fish are moving:
    - BON > LWG should continue to see this increase as more PIT tag fish successfully make it through the system.
    - MCN > IHR lowest conversion rate at 70%.
    - It looked like there might have been some issues at LMN, but some PIT tags crossed, and that conversion rate came up.
    - Ebel is watching conversion from MCN > IHR and IHR > LMN closely because of the higher ladder temperature differentials at those Projects that could cause a blockage during this heatwave.
  - Travel times are below average. Fish are moving faster than average.
    - Ebel expects that they will slow down shortly.
- 2024 Collection Effort at LWG
  - As communicated to TMT on Friday, IDFG with assistance from NOAA staff at LWG are collecting Sockeye at the LWG Trap and transporting them to Eagle Hatchery.
    - Made this decisions because of conditions upstream of LWG, the LWG pool deteriorated rapidly and particularly in the Salmon River with the prolonged heat wave are not going to recover anytime soon.
    - Conditions above the hydro system went into the range of being lethal for a good portion of their migration range after moving through the hydro system, so they made the decision that Trap and Transport was going to be necessary.
  - Started collection July 9, 2024, and will collect five days a week.
    - Fish collected on Mondays and Wednesdays will be held in tanks at LWG and then transported to Eagle Hatchery on Tuesdays and Thursdays.
    - Ebel will look to see if they are transporting on Fridays.
    - Trapping will continue at normal monitoring rates used for Chinook and Steelhead.

        - When a Sockeye is seen in the window the trap is opened until the Sockeye is captured, this will increase the trap rate slightly at LWG, but they will keep within the take limits that are placed within many biological opinions.
    - Ebel said that he appreciated the assistance from LWG Project and Walla Walla District in getting all the permits through and the trainings done and everything else so that we can have the hatchery staff and Sockeye research staff access the dam.
    - Ebel asked for a regional push to keep USGS from dropping temperature gauges from their data sets.
        - If we continue to lose temperature gauges in the unregulated part of the river system, it is going to be increasingly difficult to make these management decisions.
        - Specifically, Ebel lamented the loss of White Bird's cancellation in 2019.

Morrill thanked Ebel. He asked to drift over to the Upper Columbia, he asked for a synopsis of what the temperatures in the upper end of the Columbia look like for Sockeye right now.

Kelsey Swieca, NOAA, said that she had a little information. She said that she knows that the temperatures in the Okanagon were concerningly high. She said that there was a declaration of a thermal barrier in the Okanogan. She said that is all the information that she had; she did not know what the actual temperatures were, but we should be able to find that information quickly based on that update.

Keely Murdoch, Yakama, said that she has not been tracking the Upper Columbia as close as she should but a little more information about what Swieca discussed, the thermal barrier at the Okanogan. She said this is something that sets up every year. It is not something that is unexpected and in fact, this year it has set up a little later than it does in most year. She said that the criteria that is commonly used is a measure of what she though was 22° for a 12-hour period from the Malott temperature gauge. She might be wrong on the exact criteria. But it is expected, and it does happen every year, it is just a matter of when.

Swieca said that she looked at her notification 21° for 12-hours.

Murdoch said 21° makes a lot of sense. So that is the temperature out of the Okanogan and so then what happens is the Sockeye hang out in the Wells Pool until the temperatures decrease later in September and then they continue on.

Morrill said that it is an annual issue, and it can lead to mortality but hopefully that is minimal.

Swieca said that Ebel briefly touched on this, but she wanted to note that the trapping operation that is currently ongoing was contemplated in the BiOp and is included in the NMFS' 2020 Incidental Take Statement and is permitted to occur when temperatures exceed 70°F in either the Columbia, Snake, or the Salmon River.

4. Additional TMT Questions/Comments

Tom Lorz, CRITFC, asked the Corps about an email sent out by Aaron Marshall. It said that they are going to have to go to expanded MOP at LGS. Lorz said that he wanted to confirm that it was not for navigation.

Eric Chow, Corps, said that the half-foot raised MOP at LGS was to stay above the minimum project tailwater.

Lorz said that he knows, but there is minimum tailwater for navigation because there is a navigation marker and he had looked at it and that was above its threshold. He said this raised MOP is for whatever reason, if it is project operations, that is what Lorz is trying to get to. If it is not for navigation, he would really like to know what project limitations LGS has below 633 so we can go to FPOM. If these are projects that we can fix, then he wants to make sure that we get that on the list for future remedies because if we do not need it for navigation and it is for something at the Project that is something we can fix and take care of ourselves then that is something Lorz wants to do so we do not have to keep going to an expanded pool operation if we do not need to. He said that he wants to run this to ground for a bit and ask for clarification on what else needs to be run to ground.

Julie Ammann, Corps, said TMT went through an in-depth explanation in May 2023 and walked through all the issues that we are seeing at the Project and laid out the Corps Operations so this is consistent with that. She said that she is not entirely sure what Lorz is exactly getting at. The Corps laid out several issues that they are working around which include: fishway entry criteria; impacts to fishway pumps; flow deflector; and erosions issues. She said that this is consistent with that. Last year the Corps said that they would keep an eye on things like they have been. They monitor the tailwater elevation and allow short duration excursions below 633 but when they could not keep it up or maintain it anymore, they would raise it. She said that she does not know if we want to reopen the discussion that we have had over and over. She said that she thinks the Corps has been clear about what the Project's operating limits are and so she is not sure where Lorz is going to go from here.

Lorz said they have dealt with some of the issues, because they have talked with the Project about the fish pumps, and it was his understanding that the tailwater does not affect those. Lorz said that they are just trying to go through the list and see what else there is, if there is anything else, that we can address to make sure that we do not have to do this operation because from their standpoint the deflector would change half the operational change would not do much. The erosion is kind of a new one Lorz said that he would need to run that together and find out what erosion concerns we are talking about. Entrance criteria, we have been running again entrance criteria since 2008, so that is a new if that is now being raised to this level of concern. Lorz said that he is trying to go through, if there are things that we can address at the project, so we do not have to do this operation he wants to do that. He just wanted to clarify that it was not navigation. He just wants to go through the project concerns and find out if they are things that we can fix or not because we are having a negative detriment for fish.

Swieca said that there are a couple Salmon Managers that have similar thoughts and concerns along the lines that Lorz raised but she does not have anything additional to add.

Stranz said from a process perspective when we have talked about this issue in the past it was called out that it would go to an FPOM work group for offseason discussion. She said that she did not recall where that landed. She said that she also remembered talking about it when we were talking about the operating limits, it was something that at the TMT-level do not have decision making authority on. She said that she wanted to check in to see if this is a conversation for FPOM, if this is a conversation for any of the technical forums or if this is a conversation that needs to bump up to higher decision makers.

Ammann said that Stranz is correct in that TMT has been talking about this issue for quite a while now and she feels like the Corps has been clear why they are doing what they are doing. She said that she is surprised that Lorz said that some of the topics are new to him because they did do a thorough briefing last year in May and that PowerPoint presentation is out there. She said that maybe Lorz was not at the meeting. She said that Stranz brought up a good point that this is an operational constraint from the Corps perspective, and they are working to do as much as they can to try to minimize their time above MOP. She said that she thinks they are getting a lot of those operations dialed in over the last several years as they are not changing everything all the time, they are seeing how things are really working out and they have been able to maintain a lower MOP elevation than they have in the past. She said that she understands that is not maybe good enough for some at TMT's perspective. That any raise is not acceptable however at this point maybe it does need to be elevated. She told Lorz that she does not go to FPOM, so she does not know how much of this has been discussed. Lorz has said that the fish ladder pump issues have been worked out. She said that she does not know, she would have to check in with Chris Peery but as far as the guidance that she has received and that they have coordinated with the District and the Projects and Division is this is the Operation that they have committed to, and this is the operation that they are implementing now.

Stranz said that maybe that is something that FPAC needs to talk about and consider a little more internally moving forward.

Chris Peery, Corps, said he wanted to point out that we did discuss this quite a bit at FPOM. He said that he would not agree with the statement that this is not affecting out fish pumps. He said that we still have the issue with fish pumps. He said that there is some disagreement with some of the data the Corps has shown and trying to correlate that with tailwater elevation. It is not a clear correlation because the Project bends over backward to try to maintain their fishways and criteria doing whatever they can, so it is not always obvious when there is an issue. But there is an issue with those fish pumps. For example, they cannot run Fish Pump 1 at the fast speed with the low tailwater elevation, it overheats and trips off, so they are not currently using Fish Pump 1 for most of this season. Fish pumps 2 and 3 quite often need repairs. Peery said that they could talk about this more at FPOM about what is the issue or what might be the correction. He said that he thinks the changes that have been made in terms of how tailwater elevation has been measured and the metrics that are used when to make that decision about changing the tailwater elevation have been effective at reducing the number of changes

this year and the Corps is not in the position to change the criteria, the minimum tailwater elevation is the minimum tailwater elevation. They have tried closing the floating orifice gates to see if that would help with maintaining the criteria, Peery said that he thinks that it has helped some, but it is difficult to show in a graph or table the actual changes or impacts. Peery told Lorz that they can definitely bring this up again at FPOM again and talk about it in more detail if he would like. Until we have the biggest concern, the fish pumps are replaced or rehabbed the condition will persist.

Lorz asked Peery to add it to the agenda on Thursday because they always need more things to talk about. He said that this gets back to his point if there is something that we need to fix, fish pumps, then that might change priority or the desire to get more money to that. He said that gets back to the main issue he is having, the 633 is the criteria, but what is the criteria for and are there things that we can do to ensure that criteria is not having other impacts. If it is we have to have this criteria because the existing pumps cannot operate then we need to fix the pumps. So that criteria do not become a problem for those pumps. That is what he is trying to get to, are there things that we can fix. He said that he appreciates all the things that the Corps has done, they have done a great job in reducing the amount of time above MOP but if we can reduce it more why wouldn't we. That is our job.

Stranz said thank you for that and thank you for acknowledging the work that his partners had done on this one. It has been a long time since we have been talking about this and at times it has been a really frustrating conversation for all of TMT. She said that she appreciates that tone. She said that he guess is that Peery has a full agenda on Thursday but if he could pencil in the time to talk at FPOM specifically about the pumps or anything else that can potentially be fixed or changed within the criteria or to support the effort. She asked Lorz to circle back with herself so she could be tracking things. If needed this could be one worth talking to the higher ups about, it continues to be something that is an issue.

Lorz said it would be wise to run this to the ground and as we are preparing for the FOP next year, we can ensure that we have the right information in there and if there are changes available that would be the time to tackle them.

Ammann said that next week TMT meeting the Corps wants to talk about Libby Operations and about how the inflows are coming in higher than we were expecting, and we have had to make some flow changes. Leon Basdekas will be on to walk through where we are at with Libby just because the operation this year looks a little bit different.

5. Set agenda for next meeting – July 10, 2024

a. Dworshak Update
b. Snake River Sockeye Update
c. Libby Operations

Today's Attendees:

Agency	TMT Representative(s)
NOAA Fisheries	Kelsey Swieca
Oregon	Erick Van Dyke
Washington	Charles Morrill
Kootenai Tribe	
Colville Tribe	Dennis Moore
Umatilla Tribe	Tom Lorz (CRITFC)
Yakama Nation	Keely Murdoch
Bureau of Reclamation	Chris Runyan
Army Corps of Engineers	Doug Baus (Chair), Julie Ammann, Lisa Wright
US Fish & Wildlife Service	
Idaho	Jonathan Ebel
Montana	Brian Marotz
Spokane Tribe	
Nez Perce Tribe	
Warm Springs Tribe	
Confederated Salish and Kootenai Tribes	
BPA	Ben Hausmann

Other Attendees (non-TMT members):

COE – Alexis Mills, Leon Basdekas, Jonathan Roberts, Eric Chow, Tiffany Dixon, Chris Peery

Washington Ecology – Thomas Starkey

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

Clearing Up – K.C. Mehaffey

Columbia Basin Bulletin – Mike O'Bryant

Avista Utilities – Patrick Maher

Snohomish PUD – Kevin Constella