

## COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM

July 19, 2023

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: <http://pweb.crohms.org/tmt/agendas/2023/>. Suggested edits for the summary are welcome and can be sent to Colby at [colby@dsconsult.co](mailto:colby@dsconsult.co).*

**Review Meeting Summaries & Minutes** – Official minutes and facilitator's summaries for the July 12 and 14 meetings will be reviewed at the next TMT meeting.

**Dworshak Operations** – Willow Walker, Corps, provided an update on current operations and forecasting at Dworshak Dam. The project is currently running full powerhouse flow, about 9.9 kcfs, with a pool elevation of 1,583 feet (about 17 feet below full), drafting about 1 foot/day.

Natural flows on the Snake River at Orofino and Anatone are in the low 70s F. The Lower Granite tailwater is 67.86 degrees F, close to the 68-degree F threshold. There is still stratification in the forebay at the 20-meter mark in the Lower Granite forebay. The 15-meter mark is 67.5 degrees F.

From now through the end of August, the inflow forecast is below the average, which is trending in the lower Snake and Clearwater basins. Low inflows for this time of year are reducing the water supply at Dworshak. The reservoir filled at the beginning of July and the project has not been releasing more water than normal, but with lower-than-normal inflows the Corps is closely analyzing how much water is left to get through summer.

Regional temperatures are forecasted to get hot on Thursday and Friday then cool back down Saturday through the end of the 10-day forecast. Today Lewiston is expected to reach the high 90s, rising over 100 degrees F on Thursday and Friday, and falling back down to 100 degrees F or cooler on Saturday, with relief from heat (low 90s) at the end of the 10-day period.

Dworshak is expected to hold the Lower Granite tailwater near the 68 degrees F threshold through the heat wave, and with the heat relief after the weekend, hang about 1 degree lower. Releases will keep at full powerhouse, and no additional spill is planned at this point.

Jonathan Ebel, ID, requested the Dworshak project team model alternative operations to analyze potential effects of allowing the temperature in the Lower Granite tailwater to rise to 69.5 degrees F in the first 2 weeks of August. Willow presented four scenarios, including Jonathan's request (#3 below):

1. **Default operation with a mild remainder of summer.** No Dworshak releases needed higher than powerhouse discharge, water could last for the remainder of the season.
2. **Default operation with a hot remainder of summer.** Additional water needed from Dworshak to combat heatwaves, which could result in about 3-day shortage in ability to maintain 68 degrees F at the end of August.
3. **Lower Granite tailwater temperature criteria raised to 69.5 degrees F from August 1-15.** Based on current conditions this could provide an excess of about 7 days beyond August 31.
4. **Lower Granite tailwater temperature criteria raised to 69.5 degrees F for about 6 days in the first 2 weeks of August.** Based on current conditions this could meet the August 31 target.

Willow noted that all the day-estimates are approximate and could shift by 1-3 days based on actual conditions. The alternative scenarios do not consider other significant impacts that could occur in extreme conditions, such as wildfires or unexpected unit outages.

*Questions and Comments from TMT Members*

- Kelsey Swieca, NOAA, noted that when a similar situation occurred in 2021, as alternatives 3 and 4, the project took a staged approach to raising the tailwater temperature criteria over a series of days. Willow confirmed that the same approach was assumed in these scenarios.
- Jonathan noted that the reason for Idaho's request was to get bookends on the situation moving forward and understand what the potential options are in advance.
- The concept of raising the tailwater criteria by 1.5 degrees does have ramifications for fisheries, but doing so for a short period in August may end up being more beneficial in the long run for the season. Brian Marotz, MFWP, thought alternatives 3 and 4 looked promising.
- Charles Morrill, WDFW, noted that the issue was discussed at FPAC, and today's response is timely and appropriate given forecasted conditions and low flows. Historically there have not been observed impacts during that time unless going above a 1.5-degree F increase. WA believed the impact may be minimal, and that maintaining water is beneficial.
- Erick Van Dyke, ODFW, wondered if the RFC data showing STP trends is available over the whole water year; it is not, only the 120-day period.
- Jay Hesse, Nez Perce Tribe, noted that managing Dworshak flows is the only tool available to potentially manage or influence the Little Goose fish ladder temperature with the pump down, and this complication should be considered when looking at alternative operations at Dworshak. Willow noted that quite a bit of water would be needed (about 10 days) to impact stratification at Little Goose.

It was noted that the 68 degrees F criteria (NOAA BiOp stipulation) has not been relaxed, these are just scenarios analyzed by hydrologists to provide fish biologists with bookends for potential operational alternatives depending on weather conditions for August operations. Any request to go above 68 degrees F would need to come from an SOR and be coordinated with the TMT. Willow reminded the group that as water takes roughly 4 days to reach its destination, an SOR would be needed by the next TMT meeting (July 26) if TMT wishes to raise Lower Granite tailwater temperatures by the first week in August.

**Adult Sockeye Conversion** – Jonathan provided an update on adult sockeye abundance and passage across the system and conversion rates (posted to the TMT website). As of yesterday morning, there were an estimated 4,400 sockeye over Bonneville (hatchery PIT-tags), decreasing upstream with only 520 passing Lower Granite. There's been an observed increase in the conversion rate, despite a significant decrease in fish at Bonneville, but increased conversion between all points in the system is a good thing. Jonathan didn't think the conversion rates were great for this time of year which is a concern, but they are improving. Fish appear to be slowing down a bit with the high temperatures, and this is being closely monitored while observing the condition of fish arriving at Lower Granite.

Travel times are within the normal range during hot conditions. Today's average travel times from Bonneville to The Dalles is 1.5 days, and 13.8 days to Lower Granite (4 fish arrived). Average travel times for fish making it through the reaches has been observed to increase over the last week. IDFG is watching the situation closely, and Jonathan can provide another update at the next TMT meeting.

**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 19, 2023, at 9:00 AM.**

**Columbia River Regional Forum  
Technical Management Team  
OFFICIAL MINUTES  
Wednesday, July 19, 2023  
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 – July 12 and July 14**

- Both are still pending.

**2. Dworshak (DWR) Operations – Willow Walker, Corps-NWW**

a. Current Hourly Data

- Full Powerhouse flow: 9.9 kcfs
- Elevation: 1583 feet
  - ~17 ft below full pool.
- Drafting: 1 foot/day

b. Snake & Clearwater Rivers Temperature Data

- Natural temperatures (°F):
  - Anatone: low 70s
  - Orofino: low 70s
- Natural flows coming to the confluence of the Snake are quite warm.
- Lower Granite tailwater: 67.86°F
  - Near the 68° threshold.

c. Lower Granite Forebay Temperature Strings

- Still have a stratification in the forebay at the 20m depth.
  - Good news – keeps a thermal barrier for where most of the water is coming through the spillway.
- 15 m water: 67.5°
  - Nearing tailwater temperature.

d. Dworshak Extended Inflow Forecast

- Period from now to end of August trends:

- Low inflows for this time of year
  - Reducing water supply
  - They did fill DWR at the beginning of July – great news – and they have not been releasing more water than normal, but the inflows have been lower than normal.
  - Meaning the Corps is looking at how much Dworshak water they have to get through the rest of summer.
- e. 10-Day Regional Temperature Forecast
- Forecasted max temperatures over 100°F in the Lewiston – Lower Snake area coming up Thursday and Friday.
  - Starting to cool off again Saturday, Sunday, Monday, and the rest of the 10-day.
- f. Weather Forecast for Lewiston, ID
- Today (Wednesday July 19, 2023): High 90s
  - July 20 & 21, 2023: >100°F
  - Saturday (July 22, 2023) as they update the weather forecast has been falling. It is down to 100°F now. Walker expects that this could be a little cooler.
  - Back to the low 90s with some relief from the heat toward the end of the 10-Day.
- g. Current Model Results - July 19
- Near the 68°F threshold and expect to stay there throughout the weekend.
  - With relief after the weekend, things will cool down to 1° below which is more in that comfortable threshold they would like to hang out at moving forward.
- Operation:
- Keeping DWR releases at full powerhouse and no additional spill from Dworshak
- h. Alternatives Requested
- The Corps at DWR was requested to look at the normal expected operations as usual and then what would happen if they allowed the temperature out of Lower Granite (LGR) to rise to 69.5°F rather than 68°F during the first two weeks of August.



## ALTERNATIVES REQUESTED



	Alternative Operations	End of DWR Flow Aug.	Notes
1	Default operation with a <b>mild</b> remainder of summer	~August 31 <sup>st</sup>	With no Dworshak releases needed higher than powerhouse discharge, water could last remainder of season
2	Default operation with a <b>hot</b> remainder of summer	~August 28 <sup>th</sup>	Additional water from Dworshak need to combat intense and extended heatwaves could cause a ~3 day shortage in our ability to maintain 68' at the end of August
3	LWG tailwater temperature criteria raised to 69.5° from August 1 <sup>st</sup> to August 15 <sup>th</sup>	~August 31 <sup>st</sup> + 7 Days	Based on current conditions, this operation could provide an excess of ~7 days beyond August 31 <sup>st</sup>
4	LWG tailwater temperature criteria raised to 69.5° for ~6 days in the first two weeks of August	~August 31 <sup>st</sup>	Based on current conditions, this operation could meet the August 31 <sup>st</sup> target

1. Dates are all approximate and could slide sooner or later by 1-3 days based on actual conditions that develop
2. Alternatives do not consider other significant impacts that could occur in the extreme conditions, i.e. wildfires that disable a transmission line, unexpected unit outages, etc.

- Put this out for the region to allow TMT to begin thinking. If the hot summer persists there is a chance that DWR will not have enough water to cover the end of August at 68°F.

Stranz wanted to clarify whether the request to look at the alternatives came from FPAC.

Walker said that the email came from Jonathan Ebel. She was not sure about the details beyond that.

Jonathan Ebel, ID, said just from him.

Kelsey Swieca, NOAA, said thank you for the update and the effort that went into the modeling work that was done. Swieca asked for clarification about the Alternative Operations 3 and 4. She said that the last time these were discussed in 2021 it was a discussion centered around a staged approach to raising the tailwater criteria from 68°F to 69.5°F over a series of days. She asked if this modeling raised the tailwater criteria over a 1-day period or if it was a staged approach as was discussed in 2021.

Walker said that they used more of the staged approach. They had it taking three days to allow the water to come up.

Ebel thanked Walker, it was exactly what he was looking for and the reason for his request was just to get some bookends on situation as we move forward knowing what options are available. He said that Walker and crew did a great job. He said that he is not sure that it needs to be discussed today but it provided TMT with options in advance.

Brian Marotz, MT, said that this was great work. He thanked Ebel for teeing it up. He asked the Fishery representatives what the ramifications for fisheries of increasing the temperature 1.5°F. He asked if someone could fill him in.

Ebel said that they have a draft limit on DWR for refill and then for ramping down flows in September through the Dworshak Board and the Nez Perce agreement and that is somewhat related to fisheries. The concept of raising the temperature 1.5°F, while it is not good for the fish that are there, doing so in this short time-period in August

corresponds with the lowest abundance of adults at LGR. There is a period that last for 7 – 10 days where fewer fish are moving in that area because it is hot, and it is between runs of Sockeye and when Fall Chinook and Summer Steelhead start to arrive. It allows a “tool” to be used in case it is looking like we are going to be short of water.

Marotz said he is not sure if he is being conservative or pessimistic, but it is his kneejerk that Option 3 or 4 look pretty good to him right now.

Stranz said that it makes sense after his last week.

Charles Morrill, WA, said that Ebel’s request is very timely. He thanked Walker for putting it together. They talked about this in FPAC yesterday, but did not come to a decision and are not ready to implement it now. He said it is timely and appropriate. He said that his other point is if we are at a point where fish numbers are low, but we have not seen any adverse impacts on adults. Unless they have had really gone above that. He said yes there is some thermal impact to adults that are there, but they believe any impact is minimal and the benefit of retaining water into September has been addressed at past TMT meetings in the notes. He said that he would also like to share that with Marotz for additional information.

Marotz thanked Morrill.

Erick Van Dyke, OR, said that he appreciated how thorough Walker’s presentations have been. The information is helpful to see. He said that the forecasting slide that had the trends on it started in July. He asked if it is available showing the entire water year. He said that the STP forecast starts in July he asked if it was available through the whole water year.

Aaron Marshall, Corps, said that it is an RFC product, and it only includes a 120-day period as the dates indicated. He said unfortunately it is not a dynamic or interactive tool.

Van Dyke said that is too bad since TMT manages water beginning at the beginning of the water year. He said it would be helpful to really track when we talk about how we manage water, over the entire water year, even if it is just partially forecast issues. He said maybe he can talk to someone else about how he could go about getting a better representation of what TMT has done thus far. His second question was related to the “Alternatives Requested” slide, he asked if there has been interaction with those who regulate water temperature to identify that increasing current regulations by 1.5°F is something that they promote.

Walker said they are hydrologists not fish managers in her office so this analysis was done depending on the region’s fish biologists to come to us and say what operations might be okay with fish and what might be best for the region temperature and water supply wise. Based on the request they get; they can do an analysis to give some book ends on what may happen. That was the impetus for this analysis and the exact 69.5°F temperature range that they looked at. She said that Ebel may be able to share more information on that as well. She asked if that answered Van Dyke’s question.

Van Dyke said that it answered his question in the way that Walker can answer it, which is that she responded with what she was asked to do and that is appreciated. He said that the regulation of 68°F has not been relaxed, that he was aware of, but that is the question.

Walker said that the 68°F regulation is still there and for the Corps to plan operations to go above it that would come to them via an SOR through the TMT process.

Stranz said that she would recap what Walker said, if there is a request to go above the 68°F threshold it would have to come via an SOR from TMT.

Swieca wanted to clarify that because the 68°F is specified in the BiOp it has not been explicitly relaxed this year to date as well. She said that as Walker mentioned this is exploratory analysis that Ebel asked Walker and her crew to do. She reiterated her clarification; it has not been relaxed. She said that NOAA is interested in continuing these modeling exercises. They have considered an operation like this in the past, 2021 specifically, but for this year it is simply exploratory at this time.

Ebel asked for a clarifier on Van Dyke's question. He asked if Van Dyke was asking about State Water Quality and Temperature Regulations.

Van Dyke said yes, that would be included. He said that Swieca's input was also a part of that. He said that this is a big regulated system so the Water Quality Agencies also play a role in identifying temperature issues and regulate that.

Ebel asked for help remembering how it was handled in 2021. He said that these were just options that he had asked Walker to put up, and like Swieca said they are just exploratory. He said in 2021, it was just hot everywhere, and it was brutal. He asked how the topic of Washington's temperature criteria came up, whether it was the Fish Managers or the Corps that brought it up, he does not remember it happening.

Swieca said that she was just reviewing those notes because she was not here in 2021 and she did not see any indication of communication with the Washington Water Quality Agencies around this topic. She said that Morrill may be able to clarify.

Morrill does not recall that TMT engaged with the Water Quality Agencies. He said that the SOR was distributed to all, including the agencies but he does not recall any specific engagement or concerns relayed to TMT by Washington DOE.

Stranz said that even if it was not captured in the conversation, the expectation is that there is coordination from the representatives with their sister agencies when things like this come up. She said that we can revisit that as needed this year.

Jay Hesse, Nez Perce, responded to the question on the 68°F temperature. He said that it is his understanding that it is a Biological Opinion threshold. He said that it is his understanding that the SOR and the pending decisions on the SOR are covered. The change from that last year was not State Water Quality. He asked about the temperature at the Little Goose (LGS) ladder, understanding DWR operations and the criteria are for the tailrace at Lower Granite. There is the situation currently where the cooling tower pump at LGS is nonfunctional and currently, as Hesse understands it, the only tool to influence or manage the LGS ladder temperature is DWR operations. He said that when we have these alternatives for future considerations, he thinks TMT needs to be thinking about LGS. He said that he is not sure if TMT needs to look at the forebay string data now or if it is something that TMT should be aware of for future consideration.

Walker said when they share alternative analysis, they can add that. They have not explicitly looked at that yet because it has not come in as a request. She can share that being that low in the system, they would need to start using quite a lot of DWR water, on the order of 10-days to keep the LGS ladder cool. She said it is something to keep in mind.

Morrill said that Hesse's comment was spot on and that this was an exploratory look and it was a good placeholder for TMT to look at potential options depending on how the weather plays out. He reiterated that it is a placeholder, an exploratory look, and is a very pertinent exercise at this point in time for August operations.

Walker added that based on today being July 19 and the travel time of DWR water to Lower Granite being roughly four days, if TMT were to have an SOR that would allow temperatures to increase in the first week of August they would need it by next TMT so they would have time to adjust operations. She said that it is not possible to wait until the first of August to make that decision because then you are looking into the second week of August for how those operations would actually impact things.

➤ Stranz said this will be kept on the agenda for next week. TMT will keep an eye on it and then the conversation will evolve as needed. If an SOR is going to come forward July 26 is the best time to ask to raise those temperatures by the first week of August.

### 3. Adult Sockeye Conversion – Jonathan Ebel, ID

#### a. Adult Snake River Sockeye Passage

- Sockeye Abundance Estimate (0800 on July 18, 2023)
  - Bonneville (BON): ~4400 PIT tags
  - Lower Granite (LGR): ~520 PIT tags
- Conversion Rates
  - Translates into a number of conversion rates which they monitor in real-time how they change.
  - There has been an increase in the conversion rate despite an increase in fish at BON. Both affect the rate as they measure it.
  - An increase in conversion between all points in the system is a good thing.
  - Ebel said that he would not say that these conversion rates are stellar for this time of year, but they are headed in the right direction.
  - Fish appear to be slowing down a little under the high temperatures and they are watching that extremely closely.
  - They are also taking a look at the condition of fish that are arriving at LGR.
  - The Conversion rates of McNary to Ice Harbor is particularly concerning but it is headed in the right direction.
- Average Travel Times – Normal or what we typically see when it is hot.
  - Bonneville to The Dalles: 1.5 days



- Bonneville to Lower Granite      13.8 days (4 fish)
- 2021 “The Catastrophic Reference”
  - Those fish that survived the Columbia were moving fairly quickly through it and then slowed down in the Snake where the thermal stress accumulation tends to hit hard.
  - They have begun to see average travel times of fish that make it to these reaches start increase and have increased over the last week.

**4. Public Comments: None**

**5. Set agenda for next meeting – July 26, 2023**

- a. Dworshak Update and Alternative Operations
- b. Adult Sockeye Passage Conversion
- c. Operations Review

Today’s Attendees:

Agency	TMT Representative(s)
Army Corps of Engineers	Doug Baus (Chair), Julie Ammann, Lisa Wright
Bonneville Power Administration	Tony Norris
Bureau of Reclamation	Joel Fenolio, Chris Runyan
NOAA Fisheries	Kelsey Swieca
US Fish & Wildlife Service	Dave Swank
Washington	Charles Morrill
Oregon	Erick Van Dyke
Idaho	Jonathan Ebel
Montana	Brian Marotz
Nez Perce Tribe	Jay Hesse
Umatilla Tribe	Tom Lorz (CRITFC)
Colville Tribe	
Warm Springs Tribe	
Kootenai Tribe	
Spokane Tribe	

Other Attendees (non-TMT members):

COE – Willow Walker, Dan Turner, Leon Basdekas, Aaron Marshall

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

Energy Keepers – Eve James

NW Power and Conservation Council – Kate Self

Clearing Up – K.C. Mehaffey

Portland General Electric – Ruth Burris