**COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM**
July 23, 2025
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://public.crohms.org/tmt/agendas/2025/. 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 and facilitator's summary from the July 16 TMT meeting.

**Sockeye Conversion Update** – Jonathan Ebel, IDFG, provided an update on adult Snake River sockeye conversion, the updated data will be posted with next week's TMT agenda. Passage at Bonneville (BON) has slowed down, indicating the tail end of the run. Some fish are still moving upstream in the hydrosystem, but it is unlikely they will make it back to the Stanley Basin at this point in the season. Conversion from BON to The Dalles (TDA) is 92%; to McNary (MCN) is 77%; and to Lower Granite (LWG) is 58%. No PIT-tagged Snake River sockeye have been detected in the upper Columbia River, a stark difference from last year.

Tony Norris, BPA, questioned if the relatively good performance in passage (compared to the 10-year average) despite the low-flow year can be attributed to the SOR operation implemented at the beginning of the run. Jonathan emphasized that from ID's perspective, the relatively good passage was likely due to the lack of sustained heat waves that kept water temperatures tolerable throughout the system. Thermal stress is cumulative, and this season's fish didn't have significant heat stressors early on. Jonathan noted that it is still early to conclude impacts, and ID is interested to see how many fish return to Red Fish Lake, as well as results of PIT-tagged fish that remained in-river compared to those collected at LWG and transported.

Emi Melton, NOAA, emphasized the complexity of the issue, highlighting that passage at lower Snake River dams is critical for sockeye to reach native streams. Early in the season, warmer temperatures were anticipated, supported by Anatone and Orofino gage data showing that only about 5-20% of the years have had hotter water temperatures than this year in June and July. Because of the anticipated warm temperature, the emergency trap and haul operation was implemented at LWG this year. The Corps' modeling noted last week that the SOR operation delayed tailwater temperature increases and maintaining stratification. Recent temperatures have also been cooler, helping delay temperature increases at Ice Harbor (IHR), which from NOAA's perspective likely benefitted sockeye. Emi added that from NOAA's perspective, providing cool water helped sockeye conversion rates in the Snake River, with counts at LWG at 151% of average YTD, while upper Columbia River sockeye are about 50% at Priest Rapids (PRD). No Snake River sockeye PIT tags have been detected at PRD, contrary to last year. Current conversion rates for the upper Columbia River do not reflect the full season, more data and analysis will come later.

Charles Morrill, WA, added that from WA's perspective, the SOR provided cooler water from DWR early on to achieve a small temperature difference at IHR. The better-than-expected conversion rates could be related to less accumulated thermal stress from BON to IHR. He emphasized that target temperatures and Total Maximum Daily Loads (TMDLs) for the Snake are 68°F; WA Ecology was not able to provide input on the SOR prior to its immediate implementation, which remains a concern for WA, as the SOR included exceedances to WA temperature standard.

In response to a query, Jonathan noted that based on about 15 years of data, there have been very few, if any, PIT-tagged sockeye that successfully converted to the Stanley Basin after reaching BON after this point in the summer. Emi confirmed that historically, the latest PIT-tag detection at LWG reaching the spawning grounds has been July 23.

*[Facilitator's Note: the following conversation took place during 'questions and comments from the public,' but is included here as it pertains to the sockeye discussion.]*

Erin Cooper, FPC, noted that years with observed poor sockeye conversion between IHR and LWG are also years with poor conversion between BON and MCN; there was not poor conversion between BON and MCN this year, which is something to consider when looking at impacts of the SOR. Also, the timing for sockeye in the upper Columbia and Snake Rivers are not the same; Erin noted caution when interpreting comparisons of conversion results between the two prior to the end of July.

Thomas Starkey, WA Ecology, emphasized previously noted concerns about temperature management, adding that WA is implementing a compliance schedule under the 401 authority for Corps of Engineers dams to reduce temperature exceedances at the Snake River projects. WA Ecology requested that for future SORs that deliberately exceed the State's criteria, WA Ecology be given an opportunity to review and comment prior to implementation as similar operations could conflict with ongoing efforts to mitigate temperature issues. Jonathan was interested to learn more how water management operations for fish will evolve under the 401 process. Charles reiterated the concern that the SOR operation used about 10% of DWR volume. While the operation provided small gains in temperatures, benefits to sockeye are not certain yet and the operation resulted in ongoing concern for temperatures exceeding 68°F and up to 71°F with potential heat domes.

Jonathan added that from ID's perspective, updated sockeye data show a clear timing effect on survival: those passing BON before July 1 had an 82% conversion rate to LWG, while those passing after July 2 have only a 17% conversion rate so far. He will provide a table in upcoming updates to better inform future discussions. Charles reiterated the significance of thermal accumulation impacting survival, noting that this example highlights the impact of thermal accumulation especially below MCN and IHR. He agreed a more detailed data analysis could help better inform future management. In conclusion, Emi added that from NOAA's perspective, due to the limited size of Snake River sockeye, even a few fish can be significant for the natural population.

**Dworshak Operations –** Willow Walker, Corps, reported on current operations at Dworshak Dam (DWR), further details and modeling results are posted to the TMT agenda. Current elevation at the project is 1,577.46 feet, inflows have increased to about 1,500 cfs (mainly from recent rainfall), and outflows are 6,400 cfs. Current inflows allow for drafting about 0.7 feet/day with outflows of 6.4 kcfs, down from 0.8 feet/day with 8 kcfs outflows.

Water temperatures in the region have cooled since the recent heat wave, with Orofino water temperatures dropping about 10 degrees from the upper 70s/80°F; Lewiston temperatures are back down to 52/53°F from 54/55°F. The LWG tailwater is hovering about 68.2°F.

Willow noted that data from the LWG forebay temp string sensor is still pending from the outage on July 14. A "perfect storm" of warmer surface temperatures (down to the 15-20-meter mark) and inflows on July 17/18 led to a slightly warmer tailwater temporarily. Temperatures have since cooled with the cooler weather conditions. Regionally, the same warming trend occurred July 17-19, with relief from the heat in the last few days that continues to trend downward.

Recent cloud cover and rain in the system will provide some cooling in the upper Snake region over the next few days, although not as much near DWR. Local temperatures are not expected to reach the 100°F range until early next week and then will trend downward heading into August. Lewiston will hang in the mid-low 90s this weekend, hit 100°F+ on Tuesday, then drop back to the low 90s.

Short-term modeling shows a significant dip in water temperatures making its way into the system, allowing for the drop in DWR discharge from 8 kcfs to 6.4 kcfs to take advantage of the cooler incoming water; outflows will need to increase back to the 8 kcfs range early next week with the bump in heat to keep LWG tailwater temperatures below 69.5°F. Willow noted that outflows will not drop below ~6 kcfs this summer to maintain thermal stratification in the LWG reservoir.

The long-term outlook for summer shows that running DWR at 6.3 kcfs has saved enough water to significantly lower the risk of experiencing 2 days of 71°F in the LWG tailwater during the July 23-August 14 period. The highest risk period for the remainder of summer falls within the window for Doble testing at LWG and during any significant heat waves (especially if they occur at the same time). Willow confirmed Doble testing is scheduled at LWG for August 11-13. The end-of-August target elevation for DWR is 1,535 feet.

**Operations Review**

*Reservoirs* – Chris Runyan, Reclamation, reported on Bureau of Reclamation projects:

- **Hungry Horse (HGH)**: inflow yesterday was 1.8 kcfs, with outflows of 2.2 kcfs, and a midnight elevation of 3,557.6 feet (2.4 feet from full). The project has drafted 0.5 feet since last week and will operate at 2.2 kcfs outflow until the end of September to meet the draft target of 3,548.3 feet. Temperatures over the last few days in the Flathead region have been cooler than normal, with about 1.5 inches of rain in the last couple of days. Columbia Falls flow was at 5.9 kcfs yesterday.
- **Grand Coulee (GCL)**: inflow yesterday was 93 kcfs, with outflows of 95.2 kcfs, and a midnight elevation of 1,287.0 feet (3 feet from full). The project has drafted about 1.1 feet in the last week and filled to its refill target of 1,289.5 feet on July 12 (0.5 feet from full to account for the Lake Roosevelt incremental storage program). The project is currently operating to meet the end of August draft of 1,277 feet; 12 feet of draft for flow augmentation with an additional foot for Lake Roosevelt incremental storage. Flows are expected to remain steady and/or drop across the month to target this elevation.

Catherine Dudgeon, Corps, reported on Corps of Engineers projects:

- **Libby (LIB)**: current elevation is 2,447.4 feet, with average inflows yesterday at 13.7 kcfs, and current outflow at 7 kcfs. The project is maintaining the bull trout minimum through August.
- **Albeni Falls (ALF)**: current elevation is 2,052.1 feet, with average inflows yesterday at 12.6 kcfs, and current outflow at 12 kcfs. The project is operating within the summer elevation band.
- **DWR**: current elevation is 1,576.97 feet, with average inflows yesterday at 1.4 kcfs, and current outflows at 6.4 kcfs.
- **LWG**: yesterday's average outflows were 29.7 kcfs; the project is operating within MOP.
- **MCN**: yesterday's average outflows were 124.7 kcfs.
- **BON**: yesterday's average outflows were 132.8 kcfs. The project received another request for Treaty Fishing, scheduled for July 24-26 and July 28-31.

*Water Quality* – Alexis Mills, Corps, reported TDG values are below the summer water quality standard (WQS) of 115% in the project forebay and 120% in the tailrace. She noted one erroneous reading of 135% at Lower Monumental (LMN) likely due to the previously reported ruptured membrane on the sensor; Corps Walla Walla staff are working to replace the faulty sensor, and the bad values will be removed from the database. Since MCN switched to a low flow spill pattern, no exceedances of the 120%

standard have been observed in the tailrace. Some TDG values of 116% were observed at the IHR forebay, but none since July 16; there was no need to implement a uniform spill pattern at LMN to manage TDG at IHR due to sufficient winds to strip TDG out of the IHR forebay.

*Fish* – Emi Melton, NOAA reported that ongoing juvenile outmigration is primarily sub-yearling Chinook and has ranged at LWG from 1,500 – 5,000 in the last 2 weeks. Trapping at BON ceased around July 13 due to water temperature concerns.

For adults, summer Chinook are winding down in the mid-Columbia and Snake River systems, with the Snake showing a pattern of higher relative returns compared to the mid-Columbia returns. PRD counts ranged from about 400-700 in the last week, YTD at 73% of the 10-year average. IHR counts ranged from 40-83 last week, YTD about 101% of the 10-year.

Steelhead at BON have increased, with counts ranging from 1,600-2,200 last week, YTD at 130% of the 10-year average. At LWG counts ranged from 20-80, and some have reached the mid-Columbia including 5 at Wells (WEL) last week. Snake River sockeye counts are less than 50/day at LWG, YTD about 150% of the 10-year. Upper Columbia River sockeye counts ranged from about 1,800-3,200 at Rocky Reach (RRH), YTD at 37% of the 10-year. Finally, shad counts have decreased at BON, ranging from 300-5,000 in the past week, YTD at 77% of the 10-year.

Charles highlighted the importance of natural sub-yearling Chinook from the Clearwater system still migrating in late summer, despite the low hatchery sub-yearling passage numbers. Jay Hesse, Nez Perce Tribe, added that there is overlap in run times between summer and fall Chinook in the Snake. 16 fall Chinook PIT-tags were detected at BON, with 4 having migrated past IHR. The presence of fall run fish prior to their official date is important to consider, from the Tribe's perspective, especially relative to temperature management strategies for fall Chinook migration; the transition date at LWG is August 18, but fall fish are already in the system.

Dave Swank, USFWS, reported on adult lamprey at BON. So far this season, daytime ladder counts are pretty low; a lower return year is likely. YTD daytime count at BON is 14,589, or 50% of the 10-year average, similar to last year on this date. He highlighted that more fish seem to be passing ladders at night this year (over 37,000) than typical, for reasons unknown.

*Power System* – Tony Norris, BPA, reported that temperatures have moderated some without extreme heat waves in the forecast; BPA is meeting load.

**Questions or Comments from Non-TMT Members** – See *[Facilitator's Note]* above in the 'Sockeye Conversion Update.'

**The next scheduled TMT meeting will be on July 30, 2025, at 9:00 AM.**

**Columbia River Regional Forum**
**Technical Management Team**
DRAFT **OFFICIAL MINUTES**
**Wednesday, July 23, 2025**

Today's TMT meeting was held via Microsoft Teams and conference call, chaired by Doug Baus, Corps, and facilitated by Emily Stranz, DS Consulting. Minutes were collected by Andrea Ausmus, BPA (contractor, CorSource Technology Group). A list of today's attendees is available at the end of these minutes.

1. **Review Summary and Minutes**

   a. July 16 Facilitator Summary and Minutes

   - Approved

2. **Sockeye Conversion Update** *(as of July 23, 2025) – Jonathan Ebel, IDFG*

   - Overview
     - Passage at Bonneville (BON) has slowed down.
     - We are entering that time period where the tail of the run, if the fish have not passed BON by now, they are not going to make it.
     - There are still some fish in the system but the fish that are still somewhere in the hydro system are likely not going to make it back to the Stanley Basin because of conditions both within and upstream of they hydro system.
   - Conversion Rates:
     - BON > The Dalles (TDA): 92%
     - BON > McNary (MCN): 77%
     - BON > Lower Granit (LWG): 58%
     - Upper Columbia: No PIT Tags detected, completely different from last year

   Tony Norris, BPA, asked if the relatively good performance to average in such a low water year be attributed to the SOR operation.

   Ebel said no. He said that he did not think so, because what we see is that, one, it has not been warm relative to the past in the Lower Columbia, maybe a little bit warmer than average right now but the start is we did not lose 50% of the fish below MCN. If we look at the end here shortly, we can parse it out and why we had an average year despite low flows. Ebel said that he thought that it is more attributable to the lack of sustained heat waves that have kept, especially early heat waves that kept water temperatures tolerable across the whole system, particularly lower down. He said that was what he thought, and when he pulls up the numbers and put them relative to past years to try to explain it, he thought that was probably the case. Because thermal stress is cumulative and the real interesting part is going to be how many of these fish convert. Because it is one thing to get them to LWG, but the goal is to get them to Redfish Lake. So that is another thing that we will look at for the PIT tags that remained for in-river

migration versus those that were collected at LWG. Hopefully there are a lot of PIT tags out there but maybe there will be enough to at least get some insight into that. So, remains to be seen.

| *Charles Morrill (Unverified)9:09 AM*

| *I agree with Jonathan's comments*

Emi Melton, NOAA Fisheries, said that she thought that Ebel kind of talked about the complexity of the issues, which she completely agreed with. She said that there are a couple of pieces that she wanted to expand on. As Ebel said, she thought ultimately what we want to see is how many fish are making it back to Stanley Lake. But the passage at the Lower Snake dams, specifically at Ice Harbor (IHR), is one of the critical pieces of Sockeye making it back to their natal streams. So, the SOR really focused on that piece. Recently temperatures have been cooler but one of the reasons why we started thinking about this operation is because we were expecting a warm June and July ambient temperature. Some of that is already supported by the temperatures that we have been seeing from gauges at Anatone and Orofino, which contributes to temperatures in the Snake River. Looking back at the last 10 days, her understanding was that only 20% of the years have been hotter than this year in June; and this year at Anatone and Orofino gauges in July, approximately 5% of the years have been warmer than this year. So, there are pieces of the Snake River that have been warmer. At the beginning of the season, another thing that she thought folks were anticipating was that it was going to be a rough time for Snake River Sockeye and her understanding was that it was part of the reason for why the IDFG emergency Sockeye trap and haul has been running at LWG. Another piece she wanted to highlight was that she thought that TMT heard from the Corps last week that the SOR did delay the tailwater temperature increases at IHR and so it supported cooler stratification in the forebay, and the temperature data showed that the IHR tailwater temperature remained below the expected minimums according to their modeling from last time. She said that she thought we see a few things that support the providing cooler water did help Sockeye, it is hard to say how much it really did, but there is information showing that Snake River Sockeye are doing better than expected this year and part of that she thought is the conversion rate discussion, which she understood is not a full season yet, so it remains to be seen what that will look like. She said that another thing, and she will cover it later in the fish update, is Snake River Sockeye is at 151% of the average relative to the average year to date at LWG whereas Upper Columbia Sockeye are at about 50% at Priest Rapids. So, there is something going on where Snake River Sockeye has been doing better than its average relative to what the Upper Columbia Sockeye has been doing. And the second thing, and she thought Ebel also mentioned it too, is that Snake River Sockeye are actually coming back to the Snake River and we have not detected any Snake River PIT tags at Priest Rapids.

Stranz said that it is an interesting year for sure.

Charles Morrill, WA, said that he appreciated Melton’s perspective of NOAA from the operation and he thought there was one more element that we really have not talked

about, but the operation provided for using Dworshak (DWR) water early on to try to achieve a small difference at IHR. He said that Ebel mentioned appropriately that thermal accumulation is a critical factor and that thermal accumulation begins when it crosses BON all the way up to IHR. So in terms of success this year, in terms of conversion rates, we have seen better than expected. The perception that it could have been a warm year, could have been a hot year, he thought that we all shared that, but the other thing that he had briefly touched on before is our target temperature and TDL for 68°F and Washington Ecology has not weighed in on the operation, and they may choose to do so at some point and Thomas Starkey and David Gruen are both on the phone today. He said that he thought that is something that was not taken into consideration when the SOR was given to us hours ahead and implemented immediately by the Corps. Morrill said he thought that is a concern. He said that he would stop there and leave it to David and Thomas if they choose to share their viewpoints from the TDL concern standpoint.

Dave Swank, USFWS, said that he had a question for Ebel. He said that he had been hearing partly from Ebel for a few years not about this idea that if the Sockeye that reach BON after a certain date, which is sometime around now the Snake River Sockeye that reach it by this date just do not successfully convert. He said that he was wondering how absolute that is. He asked if that was like zero percent, low percent that convert. He asked if it varies from year to year. He asked if Ebel could talk a little bit more about that problem that we are seeing.

Ebel said that he would have to go back into Idaho's reports. He said that if it is not zero, it is like a PIT tag or two over the history of the program.

Swank asked how many years, roughly are we talking. He said that he was just curious.

Ebel said a lot, at least 15 years.

Swank said okay so it is very low numbers at least.

Ebel asked for Swank to let him talk to his Sockeye Biologist. He said that four years ago when they were looking at this question and how to implement the trapping in 2021 and how to make these decisions, he looked into that, but he did not remember off the top of his head. It is very low. He said that he would go dig around again because that specific number got pushed out of his head by all the other stuff coming in through his ears.

Swank said fair enough.

Stranz said yep, fair enough. She said that maybe Ebel could provide that next week in his update.

Melton said to get to Swank's question, at least when she was looking into the PIT tag history, she had looked back as far as 2016, maybe. The latest PIT tag detection she saw at LWG that eventually made it to the spawning grounds was July 23, which happens to be today. She said that did not this speak to the proportions or anything like that and

then there is also how many fish are getting through without a PIT tag and spawning, but at least it is a reference point.

3. **Dworshak (DWR) Operations –** *Willow Walker, Corps-NWW*
   a. Current Hourly Data (July 23, 2025 @ 12:00am PT)
      - Forebay Elevation: 1577.46 feet
      - Inflow: 1500 cfs
        - Driven largely by some rain in the system.
        - Higher than we have seen over the past couple of weeks.
      - Releasing: 6.4 kcfs
      - Drafting (@8 kcfs): 0.8 foot/day
      - Drafting (@6.4 kcfs): 0.7 foot/day

   b. Snake and Clearwater Rivers Temperature Data
      - Orofino (Clearwater Mainstem):
        - Last Heatwave (week ago): Upper 70s to 80°F
        - Current Temperature: Upper 60s to 70°F
      - Lewiston (waters mixed):
        - Last Heatwave (week ago): 54° – 55°F
        - Current Temperature: 52° – 53°F
      - Lower Granite (LWG) Tailwater:
        - Temperature: ~68.2°F

   c. Lower Granite Forebay Temperature String
      - Last week LWG's sensor went out and we were missing data from July 14.
        - Walker has not checked in with the Water Quality Team to see if they had any backfill data because there have been several other gauges in the system that are critical for this time of year, like they had to run out and take care of the LMN TDG gauge.
      - July 17 – 18
        - Surface water heated up and the warm surface water went down to the 15 – 20-meter mark.
        - At the same time the heatwave water from upstream was hitting.
        - Warm water pushed down while we also had warmer water from the bottom meeting in the middle, leading to a slightly warmer tailwater temperature.
      - Today
        - The water has cooled down.

- The weather has since been cooperating.

d. Lower Snake River Temperature Report for July 2025
   - July 17 – 19
     - It is warmer across the board.
   - Last few days have provided relief and are trending downwards.

e. 10-Day Regional Weather Forecast
   - Cloud Cover
     - July 22 – 23 there was some cloud cover and rain in the system.
   - Precipitation
     - Over the next few days there is not much hitting the area, there is a bit in the Upper Snake region but temperatures locally.
   - Temperatures
     - Temperatures locally are not getting to the 100°F range until we moving into early next week around Tuesday where red begins to show up.
     - It looks like it will only be for Tuesday and then it will start trending back down as we enter into August.
     - The next warming period to keep our eye on.

f. Weather Forecast for Lewiston, ID
   - Temperatures are hanging at the mid – low 90s
   - The low 90s will be helpful especially if there is some cloud cover.
   - Tuesday July 29 is the 100°F warmer day before hopefully coming back down to the 90s after that.

g. Current Model Results - posted Wednesday, July 23 at 7:40am
   - The analysis is now more similar to previous Summers.
     - On the right is the Corps' SQL model analysis (shorter term look) and the bullets on the left offer some information about the longer-term look from a different analysis.
   - Short Term Analysis
     - The Orange and Green lines there is a big dip in water temperature starting to make their way into the system.
     - We were able to take advantage of that and drop DWR discharge further than expected, from 8 kcfs to 6.4 kcfs.
     - We do see the 100°F day come up early next week so we will need to increase back to the 8 kcfs range to be able to not let the tailwater temperature get above 69.5°F.

- Note: ~6 kcfs is about the lowest you would see the Corps run DWR outflows in the Summer. If it goes lower than that we start to see effects of the temperature getting too warm in the Clearwater itself, near the Spalding area. Depending on what is going on in the rest of the system it can also make it too hard to come back from any loss in stratification in LWG. It is the 5 – 6 kcfs that they start to see the Spalding issues. Outflow is at 6.3 kcfs as of the meeting.

- Long Term Analysis
  - Good news, with being able to run the 6 kcfs, which is lower than the 8 kcfs that was expected. We were tracking during this relaxed July 23 – August 14 period a decent likelihood of seeing about two 71°F days. However, with the 6 kcfs spill it now looks like we have saved enough water, and the risk has significantly lowered.
    - In the longer-term analysis, it was just above the top 30% of traces, now it is just under the top 10% of traces. It is much improved and in the ten day there is not a likelihood of that occurring.
  - Reminder: The highest risk periods for the rest of the Summer, generally when we have Doble testing at LWG since we have less generation going, and if we have significant heat waves that stick around for a while, especially if those two things coincide. Those are periods to keep in mind and look out for.
  - The team was still thinking that after August 14 and through the end of Summer we will have the water to bring things back to 68°F and keep the August target elevation at 1535'.

Jay Hesse, Nez Perce, said that Walker had highlighted the risks in terms of Doble testing. He asked her to remind him if the risk was associated with LWG operations or one of the other Projects. He asked if it is LWG, when was that scheduled for.

Walker said that she was specifically referring to LWG in this case, as it has the biggest impact on LWG tailwater and the Doble testing is scheduled for August 11 – 13.

**4. Operations Review**

a. Reservoirs

*Reclamation – Chris Runyan*

- Hungry Horse Dam (HGH)
  - Inflows (07/22): 1.8 kcfs
  - Outflows: ~2.2 kcfs
  - Midnight elevation: 3557.6 feet
    - From Full: 2.4 feet
    - Drafted: 0.5 feet since last week.

- Operations:
  - Two weeks ago, they had just started to increase HGH up to the 2.2 kcfs outflow, it should be around that range until the end of September to meet their end of September draft.
- End of September draft: 3548.3 feet
- Conditions: Over the last couple of days, it has been cooler than normal up in the Flathead and they received a little over 1.5 inches of rain for the last couple of days.
- Columbia Falls flow (07/22): 5.9 kcfs

- Grand Coulee Dam
  - Inflows (07/22): 93 kcfs
  - Outflows: 95.2 kcfs
  - Midnight elevation: 1287.0 feet
    - From Full: 3 feet
    - Drafted: 1.1 feet last week.
  - Grand Coulee Refill
    - Filled: Saturday July 12
    - Elevation: 1289.5 feet
    - Half foot from full to take into account the Lake Roosevelt Incremental Storage Program.
  - Operations:
    - GCL is being operated to meet their end of August draft, includes the flow augmentation based on TDA low water year and accounts for the additional 1 foot for Lake Roosevelt Incremental Storage Program.
    - From now until August 30, GCL will do its best to keep its flows steady or decreasing across the month as it targets that elevation.
  - End of August draft: 1277 feet
  - Flow Augmentation: 12 feet

*Corps – Catherine Dudgeon, Corps*

- Libby Dam (Lake Koocanusa)
  - Current Elevation: 2447.4 feet
  - Inflows: 13.7 kcfs
  - Outflows: 7 kcfs (Bull Trout minimums through the end of August.)
- Albeni Falls (Lake Pend Oreille)
  - Elevation: 2062.1 feet

- Average 1-Day Inflow: 12.6 kcfs
- Outflows: 12 kcfs
- Operations:
  - Still operating in their Summer elevation band.

- Dworshak Dam
  - Elevation: 1576.97 feet
  - Average 1-Day Inflow: 1.4 kcfs
  - Outflows: 6.4 kcfs
- Lower Granite Dam
  - Average 1-Day Inflow: 29.7 kcfs
  - Operations:
    - Operating in their MOP range.
- McNary Dam
  - Average 1-Day Inflow: 124.7 kcfs
- Bonneville Dam
  - Average 1-Day Inflow: 132.8 kcfs
  - Operations: Received another request for Treaty Fishing. Starts tomorrow.
    - July 24 – July 26
    - July 28 – July 31

b. Water Quality – *Alexis Mills, Corps*

- TDG
  - Values are below the Summer water quality standard of 115% in the Project forebay and the 120% in the Project tailrace.
- LMN
  - Contrary to what is shown with the 135% at LMN, this is erroneous data, there is likely a blown membrane on the sensor. The Corps Walla Walla are working to replace that this week, and the erroneous values will be removed from the database.
- MCN
  - Last update Mills mentioned some of the exceedances in the MCN tailwater.
  - Since that update MCN did switch to a low flow spill pattern that mitigates for the high TDG levels. From the time of implementation of the new pattern we have not seen an exceedance of the 120% water quality standard in the MCN tailwater.

- IHR
  - Last update also mentioned a few 116% TDG in the IHR forebay.
  - They have not seen any exceedances since July 16, and they did not need to implement the uniform pattern at LMN to manage for the TDG because there was sufficient wind to strip the TDG out of the IHR forebay.

Morrill said that temperature is one of the water quality elements and he did not get his hand up quickly enough before Walker had finished with her excellent summary. He said that one of the things that he mentioned in the meeting on July 16 was the concern that we used about 10% of the DWR volume for the SOR operation and the concern for exceeding 68°F was based on whether there were potential high temperatures and the need for water to maintain or stay close to 68°F and the perception and concern then was that we could exceed 68°F and go as high as 71°F for a number of days and the weather pattern has been beneficial or helpful in not seeing that and the number of days at risk is much lower now. But again, he wanted to remind TMT that there is a fixed TDL out there for 68°F and the operation could have had a significant impact on exceeding 68°F and in Morrill's opinion that would be a concern for Washington Ecology as well. He said that he thought that it was important to highlight that, yes the operation provided a small gain in temperature, we do not know for sure at this point in time what benefit that provided the Sockeye but the operation did result in concern for temperatures exceeding the 68°F and exceeding up to 71°F had we had some heat domes present in addition to what was built in to the model that the Corps provided. He said that he thought that was an important point to be aware of and just wanted to echo that and share that point again.

c. Fish

*Salmon – Emi Melton, NOAA*

- Juvenile Outmigration
  - Subyearling Chinook
    - Trapping at BON has ceased since July 13 because of the water temperature but they still see fish coming out of LWG.
    - Smolt Passage Index (two-week average)
      - Lower Granite: 1500 - 5000
- Adult Salmon Counts
  - Summer Chinook
    - Winding down both in the Mid-Columbia and the Snake River.
    - Passage Index per day
      - Priest Rapids: 400 – 700
      - Ice Harbor: 40 – 83 (last week)

        - Ten-year YTD Average:
            - Priest Rapids: 73%
            - Ice Harbor: 101%
            - This pattern is very similar to what we are seeing in Sockeye as Melton had discussed earlier, in that the YTD relative to the ten-year average is higher in Snake River than it is in the Mid-C.
    - Steelhead
        - Returns have increased since the last report.
        - Passage Index per day (last week)
            - Bonneville: 1600 – 2200
            - Lower Granite: 20 – 80
            - Wells (Mid-C): 5
        - Ten-year YTD Average:
            - Bonneville: 130%
    - Sockeye
        - Snake River Sockeye are winding down at LWG.
        - Passage Index per day
            - Lower Granite: >50
            - Rocky Reach: 1800 – 3200
        - Ten-year YTD Average:
            - Lower Granite: 150%
            - Rocky Reach: 37%
    - Shad
        - Decrease at BON relative to the last report.
        - Passage Index per day
            - Bonneville: 300-5000
        - Ten-year YTD Average:
            - Bonneville: 77%

Morrill said that one of the comments that he was going to share and maybe Jay Hesse, Nez Perce, was going to touch on the same thing was that although the passage numbers for subyearling Chinook are low at LWG those fish are largely naturally produce fish out of the Clearwater and again, although it is low, those fish are still extremely important so water temperatures, water flows, spill, so forth and so on, are still important for us fish managers to be aware of. He said that he thought that he wanted to share that perception with others that although the large bulk of the

hatchery come out earlier, we still have a very important component of that wild stock of Clearwater migrating during the latter part of the Summer.

Hesse thanked Morrill for highlighting that, it was not the topic that he was going to raise but a good one for people to be aware of. He said that he wanted to highlight that even though our labels for run type are very discrete dates at the dams separating when Springs/Summers become Falls and we are still in the "Summer" Chinook time frame. Snake River Fall Chinook are in the system and there have been a total of 16 PIT tags detected at BON and 4 of the 16 have actually migrated past IHR at this point. He said that he wanted people to understand that there is some overlap in the run-timing of those stocks and they do not magically switch at a certain date. He said that one, he brought that up for awareness, and two is relative to the temperature management in the Lower Snake that we have been discussing for the past month, a significant part of that discussion revolved around maintaining a suitable migration corridor for Snake River Fall Chinook and August 18 is that date that we have on paper for Summers to become Falls at LWG yet we have a significant number of actual Fall run fish in the system prior to that and those are starting to show up now.

*Lamprey Update – Dave Swank, USFWS*

- Adult Counts
  - Daytime Ladder Counts
    - Looking at a low return year, similar to where we were last year on this date.
    - Bonneville (2025): 14589
    - Bonneville (2024): >15000
  - Ten-year YTD Average:
    - Bonneville: 50%
  - Nighttime Ladder Counts
    - More fish are passing BON passing at night
    - Bonneville: >37000
  - COE Lamprey Daily Counts Report
    - The COE Counts give a more complete picture of what is going on at BON. The ratio between the day and the nighttime counts are definitely skewed a little this year. We are seeing more passing at night than typical.
    - 16-hour count: 14589
    - Night 8-hour count: >37000 (appears higher than average)
    - LPS count: 15434 (trending lower as a fraction of the overall count)

- Swank was not sure if there was a particular reason why we would be seeing a little bit of difference in the proportions this year. Just wanted to point out that the daytime counts were only telling a piece of the story.

Morrill asked if Swank would remind him if the numbers are additive, the 16-hours, 8-hour night count, and the lamprey passage.

Swank said yes, they are all separate.

Stranz asked that when you look at the whole run is it still 50% of the ten-year average.

Swank said that was a good question. He said that he did not have easy access to the historical night ladder and LP count, so he could not make that comparison quickly. It takes him a little while to get that, but he could do that and was planning to do that certainly for the end of the season.

d. Power System – *Tony Norris, BPA*

- The temperatures have moderated a little bit without any extreme heat waves in the forecast, so just meeting load.

**5. Public Discussion/Questions**

Erin Cooper, FPC, said that she wanted to take us back to the Sockeye for a minute. She said that they were not the only ones who are going to be putting out an analysis postseason about this operation, but not everyone would read that and what is said in meetings had a way of sticking in people's heads. She said that she wanted to point out that years when we have seen poor Sockeye conversion between IHR and LWG are also years when we have seen poor conversion between BON and MCN and we did not have poor conversion between BON and MCN this year so that is something to keep in mind as we move forward in thinking about the impact of the operation. And then the other thing that she wanted to point out is that the timing for Sockeye in the Upper Columbia is not the same as timing for Sockeye in the Lower Snake, so it is very early and not accurate to be making comparisons of conversions between those and she does not start to look at for the CSS, Sockeye survivals, for Wenatchee and Okanogan populations until the end of July. She said that she wanted to put a note of caution into interpreting results that way.

Thomas Starkey, Washington Ecology, said that he wanted to echo some of the comments that Morrill was making earlier. He said that he thought that he was absolutely right in pointing out that there is a bit of a different landscape on the Snake and Columbia right now through Ecology's TMDL work and 401 certifications for the Army Corps dams. He said that he did not think that he was here to weigh in on the biological pros and cons of the DWR operation, but he thought that Ecology's team was thinking hard on it and will be commenting and requesting that next time similar sources like these are contemplated by this group that the 401 authority in Washington is given a bit more of a chance to weigh in on changes in operations that deliberately exceed State criteria. Just for added context Washington is about to approve a compliance schedule for all eight of the Army Corps dams on the Snake and Columbia

that try to curb temperature exceedances and mitigate those things and set up a schedule to implement actions and measures needed to improve temperature. And SORs like these that are kind of split decisions to change operations are not exactly conducive with some of those efforts. So Washington is going to be asking for an opportunity to comment and review any sort of change in operations in the future.

**6. Continued TMT Sockeye Comments**

Ebel said that he was interested to see how the types of operations for managing water for fish across the season are going to be moving forward with the introduction of the 401 process but that was not what he was going to say. He said that he wanted to echo Cooper's comments. We have a lot of information on these fish, but he wanted to point out to the question from BPA about the effectiveness of this and how you know we are not going to know until the end, but he does get a very well-timed update from Idaho's Sockeye person who actually knows. He looks more in detail and is following this so to let folks know Idaho has collected and moved 150 Sockeye. And to the timing and temperature aspects of this, of the 56 PIT tags that passed BON before July 1 converted to LWG at 82% and moved fairly quickly, he said that he would get travel times on those. The conversion rate of fish passing after July 2 is 17% out of 35 tags with two that might still be alive. So already we are seeing that timing effect and he thought for next week, if it would be helpful, he quickly went through the last few years to check the date when water temperatures at TDA and IHR crossed 68°F in a consistent basis and he thought that was pretty interesting in the context of what we have seen in terms of conversion rates for at least the last few years, so he might include that table so folks can take a look next week.

Morrill said to Ebel's points are well taken and we have said before that there is thermal accumulation process and at some point, in time, that does have an impact. He said that he thought this is an example of that and as we look at that data more closely, we obviously will be able to share more information. He said that he thought that his point is right on when we talk about the impacts of similar accumulation below MCN below IHR, it does have an impact.

Melton said that this is good information for us to keep thinking about. She said there were a couple things she did want to flag. To the point of thermal accumulation, it is totally true that thermal accumulation does make a difference and so passing through IHR is about one piece that does make a difference to the survival. The second piece that she wanted to point out is that Snake River Sockeye is really a small abundance in number so, she did not know what the threshold was but when we are talking about survival of two fish that could make a difference in years where we are talking about the natural population being 10 to 20 fish. So, she just wanted to put those numbers in context for the risk that the Snake River Sockeye is facing.

Stranz said that it sounded like we have more discussion and kind of look back to what happens on Sockeye and temperature issues in the future. We will have more information soon to inform those conversations.

7. **Set agenda for next meeting – July 30, 2025**

   Meeting Location: Microsoft Teams

   a. Dworshak Update

**Today's Attendees:**

| Agency | TMT Representative(s) |
|---|---|
| NOAA Fisheries | Trevor Conder |
| Oregon | Erick Van Dyke |
| Washington | Charles Morrill |
| Kootenai Tribe | |
| Confederated Tribes of Colville Reservation | Dennis Moore |
| Umatilla Tribe (CRITFC) | |
| Yakama Nation | Keely Murdoch, Tom Iverson |
| Bureau of Reclamation | Chris Runyan, Eric Rothwell |
| Army Corps of Engineers | Douglas Baus (Chair), Aaron Marshall, Lisa Wright |
| US Fish & Wildlife Service | Dave Swank |
| Idaho | Jonathan Ebel |
| Montana | Brian Marotz |
| Spokane Tribe | |
| Nez Perce Tribe | Jay Hesse |
| Warm Springs Tribe | |
| Confederated Salish and Kootenai Tribes | |
| Bonneville Power Administration | Tony Norris, Ben Hausmann |

Other Attendees (non-TMT members):

COE – Eric Chow, Steven Lee, Oscar Espinoza, Tom Conning, Christopher Peery, Catherine Dudgeon, Alexis Mills, Willow Walker, Nicholas Bertrand, Leah Hamilton, Patricia Madson, Haytham Ouiedat

BPA – Carolina Andes, Tammy Mackey

NMFS – Emi Melton, Darren Ogden

Washington Ecology – Thomas Starkey

Oregon DEQ – David Gruen

Flathead Commissioner – Randy Brodehl

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

EKI – Eve James

FPC – Erin Cooper, Noah Campbell

Energy EPS – Joshua Rasmussen

Columbia Basin Bulletin – Mike O'Bryant

AVA – Mike Dillon

PGE – Phil DeVol

PSE – John Chandler

NPCC – Kate Self

Unaffiliated – Kenneth Curtis