COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM
July 9, 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 June 25; minutes and summary from July 2 are pending and will be reviewed at the next TMT meeting.

Sockeye Conversion Update – Jonathan Ebel, IDFG, provided an update on adult Snake River sockeye conversion, with data through July 8. He highlighted that an estimated 1,300+ Snake River sockeye have passed Bonneville (BON), with 340 past Lower Granite (LWG). Conversion rates from BON to other projects are on track, but it's still too early to compare to past years as the run is ongoing. Current conversion rates from BON to The Dalles (TDA) are as expected, with BON to McNary (MCN) and BON to LWG slightly lower but expected to increase as the season progresses. Travel times seem to be slowing slightly, possibly due to the transition from fast-moving early fish to the more current average/slower fish. When comparing conversion rates for transported versus in-river juvenile migrants, Jonathan noted that in years with high temperatures, fish transported as juveniles had lower adult conversion rates. So far this year, fish are converting similarly between these two groups.

In response to inquiry, Jonathan reported that IDFG started trap and transport from LWG on July 7, and anticipate continuing through July 24, collecting a portion of fish Mondays-Thursdays for transport to Eagle Hatchery. Overall, from ID's perspective there are no immediate concerns with sockeye conversion rates this year, but Jonathan emphasized that conditions can change rapidly.

Dworshak Operations – Jon Roberts, Corps, reported on current operations at Dworshak Dam (DWR), noting a few new links were added to the TMT agenda update, including an initial review of SOR-2025-02 operations and observations. DWR outflow is all generation flow minus 100 cfs going to the hatchery. TDG levels at or just below the dam are around 100-102% and the forebay elevation is approximately 9-10 feet from full pool. The reservoir is drafting about 1-foot/day and is expected to maintain at this rate.

Water temperature in the DWR tailwater is approximately 43°F, mixing down by Lewiston to keep temperatures below 55°F and then around 66°F in the LWG tailwater (recovering from the recent heat wave). Temperatures at Orofino and Anatone will start to come back down after the heat wave as well.

In the LWG forebay, water at the top of the pool was cooler over the July 4 weekend, then warmed with the recent heat wave; cold water at the bottom is helping keep thermal stratification at the 15–20-meter mark between 65-66°F right now. Overall, temperature stratification is expected to remain fairly stable, however, with warming expected throughout the summer.

LWG tailwater temperatures are averaging about 66°F, with slight increases moving downstream: about 67.1°F at Little Goose (LGS), 67.8°F at Lower Monumental (LMN), and 68.5°F at Ice Harbor (IHR). The IHR forebay is currently maintaining thermal stratification with about a 5°F difference between the surface and bottom levels (near 68°F). The recent heat wave did cause temporary surface warming up to 75-76°F in the LWG forebay, but bottom levels are cooler.

Jon noted that the upcoming local forecast for the region includes typical summer temperatures, with occasional 100°F/high 90°F days, but no anticipated prolonged extreme heat domes, and cooler nighttime temperatures and light winds will help reduce heat buildup.

Modeling shows that anticipated DWR water availability is sufficient to maintain 68°F in the LWG tailwater through July 23, followed by slightly higher temperatures (~69.5°F) through August 14, with the potential to reach near 71°F. Jon noted that depending on weather conditions, there may be some adjustments to water use and flow rates (possibly decreasing flow by about 1,000 cfs later in the summer to conserve water). Ongoing monitoring by the Corps Walla Walla District will continue to assess the temperature effects as the released cold water from DWR travels downstream.

In response to a query, Jon reported that the SOR has resulted in about six feet lower elevation (draft) at Dworshak compared to the normal 68°F operation. Current operations (starting last weekend) have recovered about 2-days' worth of water, reducing the potential days above critical temperature thresholds downstream. In response to another query, Jon confirmed that the early release has delayed temperature increases downstream at IHR, which is running approximately 1–1.5°F cooler than it would have without the SOR implementation. ID noted that the 6-foot draft from DWR for cooling represents between 10-12% of the total water allocated for temperature augmentation, which from their perspective is a significant proportion. WA noted the importance of monitoring temperature differentials in fish ladders at IHR as temperatures increase, especially to detect any adult passage delays.

Operations Review

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

- **Hungry Horse (HGH)**: current outflow is 1.5 kcfs, with inflows of 1.8 kcfs yesterday. Midnight elevation was 3,558.5 feet (1.5 feet from full). The project is about to start passing inflow and will increase today and tomorrow to remain about 2.2 kcfs for the rest of summer and into fall; HGH will draft down for flow augmentation down to 3,548.3 feet by the end of September.
- **Grand Coulee (GCL)**: inflows yesterday were 96.6 kcfs, with outflows of 67.4 kcfs. Midnight elevation was 1,287.9 feet (2.1 feet from full). The project plans to refill the reservoir to 1,289.5 feet before July 15; 0.5-feet is for the Lake Roosevelt incremental storage release program. After refill, the next draft target is 1,277 feet by the end of August. A 12-foot draft is planned for flow augmentation in a dry year, with an additional foot for the Lake Roosevelt incremental storage.

Chris added that this year's flow augmentation has almost concluded in the upper Snake River, with the Payette continuing to release. Total flow augmentation is 477 kaf, above the lower range of 427 kaf and below the higher range of 487 kaf. Reclamation is pleased with this year's amount, and Chris noted that irrigators and rentals helped provide water to achieve this despite extremely dry conditions.

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

- **Libby (LIB)**: current elevation is 2,444.6 feet, with inflows yesterday at 11.8 kcfs, and outflows of 7 kfs; this is the bull trout minimum flow and is expected through the end of August.
- **Albeni Falls (ALF)**: current elevation is 2,062 feet, with inflows yesterday of 14.8 kcfs, and outflows of 10.3 kcfs; the project is operating in the summer elevation band between 2,062-2,062.5 feet.
- **DWR**: current elevation is 1,590.36 feet, with average inflows yesterday of 1.1 kcfs, and outflows of 9.7 kcfs.
- **LWG**: average inflow yesterday was 35.8 kcfs, and the project is currently operating at MOP between 733-734.5 feet.

- **MCN**: average inflow yesterday was 131.6 kcfs; the project continues a special operation to support grebe nesting with a soft constraint pool elevation of 337.5 to 339 feet until July 19. *[Facilitator's Note: please see below for further conversation regarding the grebe operation.]*
- **BON**: average inflow yesterday was 128.7 kcfs; special operations will start tomorrow for treaty fishing, from July 10-12 and July 14-16. Another special operation for the Gorge Downwind Championship is planned for July 14-19 with a soft constraint below 74 feet.

Some CTUIR, ID, and OR TMT representatives raised concerns about the current special operation at MCN for grebe nesting, noting that they had not previously heard of the operation, and it seemed to have been implemented without prior discussion amongst TMT Members or a formal SOR. From their perspectives, there was a lack of transparency and coordination, especially given that fish and Tribal interests often require formal SORs and TMT coordination. ID questioned the imposed operating range (337.5-339 feet) and wondered why it wasn't set toward the lower end of the normal operating range, which could be more beneficial for fish. Salmon Managers wondered how this constraint might impact fish passage and if it might conflict with MOP considerations. There was a general request for a more detailed explanation from USFWS regarding their rationale and expected benefits of this operation.

The Corps clarified that the operation is a soft constraint within the normal operating pool range (337-340 feet) at MCN and is intended to support the western and Clark's grebe nesting, which has been newly/recently observed in the MCN pool area. The operation was requested by USFWS and coordinated over several months and maintains the MCN pool within the normal operating range; it does not impose a hard constraint. The soft constraint (337.5-339 feet) was chosen to maintain a buffer for the minimum forebay elevation to avoid operational instability. It was noted that this is not a MOP operation, rather a typical special operation request for wildlife benefits that is within normal season operations.

Moving forward, DSC will work with USFWS to provide a description of the operation at a future meeting. The Corps confirmed that updates to public information (online) regarding MCN pool elevations will be made for clarity, as the minimum elevation currently noted on one of the Corps' websites is out of date.

Erick Van Dyke, FPAC Chair/OR, reiterated Fish Managers' concerns, emphasizing a continued need for clear communications and documentation for future summer operations to ensure regional managers are appropriately informed and consulted on operations. He posted the following link into the meeting chat: https://www.nwd-wc.usace.army.mil/dd/common/projects/www/mcn.html

Water Quality – Alexis Mills, Corps, reported on recent data issues, including missing TDG data on the lower Columbia on July 6 due to a server outage (to be backfilled later) as well as missing data, first reported as erroneous, in the LMN tailwater starting Sunday due to a ruptured membrane that was fixed yesterday morning. Total dissolved gas (TDG) is below the water quality standard (WQS) now, as anticipated with low spill.

Exceedances of the 115% TDG standard occurred on July 2 and 3 in the IHR forebay with the recent heat waves and low wind events, as is typical this time of year; wind over the weekend helped reduce TDG levels. If exceedances persist in the IHR forebay, LMN can switch to a uniform spill pattern. Alexis noted that this change would only be implemented if environmental conditions are not forecasted to alleviate TDG naturally.

At MCN, TDG in the tailwater has been higher than usual (~120%), with one exceedance on July 1 and a couple in late June, occurring when spill was less than 90 kcfs (below spill cap of 145 kcfs). Observed TDG is averaging 2-5% higher than low-flow spill patterns prior to 2024, partly due to a bulkier spill

pattern, multiple bays across the tailwater that can cause spillway flow to avoid mixing with powerhouse flow, and heat waves.

Per FPP criteria, bays 1 and 2 at MCN will close today, which may help reduce TDG during the current period of low flows; if exceedances persist, a more uniform spill pattern during low flow and high TDG events could be implemented. In response to a query regarding what a "uniform pattern" means at MCN, given restrictions on certain bays being lifted and lowered, Alexis clarified that a uniform pattern would utilize available split-leaf bays in the upstream slots that are currently open (bays 6 and 9 are closed at low levels), to make spill more uniform. This would not include using bays in the downstream slots that are restricted.

Fish – Trevor Conder, NOAA reported low numbers of juveniles in the system, most being sub-yearling Chinook; with a passage index high of 33,000 at LWG declining to about 3,300 recently, and 15,000 at BON.

At BON, the adult summer Chinook index is about 7,000 more than last year, at 80% of the 10-year average; steelhead counts are lower than last year, at 89% of the 10-year average; sockeye numbers were downgraded by TAC and are significantly lower than last year at 150,000, or about 50% of the 10-year average. Priest Rapids (PRD) adult counts are similar to BON, with all species under the 10-year average.

At IHR, adult summer Chinook are about 3,000 more than last year, near 99% of the 10-year average; steelhead adults are also higher, at 120% of the 10-year average; sockeye at 150% of the 10-year average.

Power System – Ben Hausmann, BPA, reported low flows, echoing previous comments that current conditions are where we'd expect to be a month later into the summer. GCL should touch at full next week. Some projects (MCN, BON) are at minimum generation-spill the rest flows, which is unusual for this time. Issue-wise, there isn't much water flexibility.

Questions or Comments from Non-TMT Members – Kate von Reis Baron asked if GCL touching at full means it will briefly hit 1,289.5 feet? BPA confirmed that the project will reach 1,289.5 feet (full), by July 15.

The next scheduled TMT meeting will be on July 16, 2025, at 9:00 AM.
A DS Consulting Process Meeting will follow the TMT Business Meeting.

Columbia River Regional Forum
Technical Management Team
OFFICIAL MINUTES
Wednesday, July 9, 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. June 25 Facilitator Summary and Minutes
      - Approved
   b. July 2 Facilitator Summary and Minutes
      - Pending

2. **Sockeye Conversion Update** *(as of July 8, 2025) – Jonathan Ebel, IDFG*

   * *PIT Tag expansion is the number of PIT tags detected at a site multiplied by the tagging rate of the original release group.*
   * *Only hatchery fish, IDFG no longer tags natural origin Sockeye in the Stanley Basin.*
   * *Caveat: In response to some questions of concern, Ebel included a caveat adding guidance. He said that he looks at the numbers for conversion rates in the middle of the season/run to look for bottlenecks or something else is going out of whack somewhere in the system. He said that the conversion rates to past years because the run is not done yet and fish are still in transit. Naturally the conversion rate will go down as you increase the size of the reach, or the length of the reach even more so than you see at the end of the season.*

   - Abundance Estimates:
     - Over Bonneville (BON): 1308 Sockeye
     - Passed Lower Granite (LWG): 340 Sockeye
       - In the middle of the run so fish are in transit.
   - Conversion Rates:
     - BON > TDA: 91%
     - BON > MCN: 64%
     - MCN > IHR: 92%
     - IHR > LWG: 43%
     - Conversion to LWG: 26% (as of today)

- Travel Time:
  - The fish are slowing down; the number had been looking good because of the early runners through the system.
  - Now there are a handful of slower fish as the sample size increases, we will get closer to the population level for the fish that are successful.
- Figures
  - Ebel asked the FPC to show conversion rates to date to compare different years. Reflects the first half of the Sockeye run.
  - Figure 1: BON to MCN conversion as of July 8 in 2015.
    - Right now, the run is tracking 2016 which had fairly good conversion rates.
    - Compared to 2015 which was catastrophic.
    - 2015 is a good bottom bookend.
  - Figure 2: BON to MCN conversion as of July 8 in 2021
    - 2021 was a rough year.
    - It was also the second year that IDFG implemented “Trap and Haul” at LWG.
    - Fish were showing up at LWG with lesions because of the high temperatures.
    - Two of the last four years that have been concerning regarding within hydro system conversion rates that we have tracked to date from MCN to BON is higher than those two years.
  - Figure 3: BON to IHR conversion rate for 2016 and 2025 grouped by juvenile passage group.
    - Sample size has become an issue with transport and because of something that he had seen in the DART data of when comparing conversions of fish that were barged as juveniles versus fish that migrated in rivers as juveniles, Ebel asked FPC to group those and provide an up to date, to this date, comparison of the conversion rates by those two groups.
    - In years when conversion rates are pretty good, transported fish convert at a similar rate as fish that migrated in rivers as juveniles.
    - In years when it gets hot, transported fish conversion rates are significantly different from fish that migrated in rivers as juveniles.
    - To date the few fish that were transported in 2025 and have returned to BON are tracking the overall conversion rate of the larger group of fish that were migrating in river.
    - In 2016 there was a large difference between transported and in river migrants in terms of conversion rate from BON to IHR in this case.

- Figure 4: BON to IHR conversion rate for 2024 and 2025 grouped by juvenile passage group.
    - When this year and last year were compared all the sample sizes were low for transported fish.
    - There is another slightly lower conversion rate for transported fish in 2024.
    - Looking at the numbers the juvenile passage experience influences their future adult conversions. This is seen with Chinook as well.
- Ebel said that his message for this update is that conditions can turn really fast but right now there is no indication that we have a problem, yet.

Baus said thank you for the thorough update, that it was very helpful. He asked for clarification on his understanding that the emergency trap and haul operation is underway. He asked if Ebel would highlight when that started. He also asked for feedback on current operations, as far as current operations that the Corps is doing, if there was anything else that the Corps should be considering that TMT had not talked about already as it relates to improving conversion opportunities for Sockeye.

Ebel said to answer the first question on trap and transport, IDFG made the decision to trap and transport Sockeye from LWG to hedge their bets on the weather. Recognizing that the conditions, particularly in the Lower Columbia, are such that things can go badly for Sockeye very quickly if it gets really hot. He said that we have been lucky to date but we cannot tell the future. He said that IDFG started collecting fish for transportation to Eagle Fish Hatchery yesterday (July 8) and it is going to occur at the trapping rate that is being implemented for the regular sampling that occurs at LWG. He said that IDFG are not going to like in 2021 try to collect every single fish that they see at LWG. He said that it is going to be a portion of the population that would get a ride to Eagle Hatchery. He said that it started yesterday and was going to go through July 23. Further details than that Ebel said that he would have to communicate them another time because he did not have them off the top of his head. He asked if that answers that question.

Baus asked from a logistic standpoint if that would be a Monday through Thursday or is it a weekend operation too.

Ebel said that they were going to be doing Monday through Thursday, July 7 through July 24. He said that they would collect Monday through Thursdays with transport on Tuesdays and Thursdays. He said that they were using the Tribes and the kelt reconditioning tanks at LWG.

Baus said thank you.

Stranz asked if Ebel wanted to share anything out on Baus' second questions.

Ebel asked on what else we can do for Sockeye at the moment. He said that he thought those were longer term conversations. He said at the moment Sockeye conversion is looking on par with the better years that we have had in the last ten years when we have had enough PIT tags to see what was going on. He said as far as what we can do for

Sockeye right now operationally at the dams he thought we should ride it out at the moment and see what is happening. He said that the weather forecast, Roberts and others will go into that, did not look terrible so he would say at the moment the Corps should keep doing what they are doing. In terms of a long-term plan that is something to continue to talk about. He said to continue the question, did the Corps have anything they really feel like they want or need to do.

Baus said that he did not think so, everybody on the call has been working diligently over the last several TMT meetings and just wanted to make sure as they were getting that real-time update at this time, looking ahead to see if there are any additional things that we need to be talking about they wanted to take the opportunity to check in. He said no he did not have anything up his sleeve or had any options to put on the table but thank you for the update and he was glad to hear things are going as good as they can be expected to be going.

Ebel agreed, he said that the conversions are better than he thought they were going to be given the flows in the Lower Columbia two weeks ago. He said that three to four weeks ago he thought we were barreling towards catastrophe. He said that he thought that we are getting very, very lucky with the weather. He said that he hoped that this depiction_ if you look at the figures of the pooled conversion rates to date. He asked if that allayed some of Baus' concerns about this year's conversion rates to date.

Baus said that he did not hear the question at all the phone broke up.

Ebel said that he had heard some concern, and he shares that concern too in some ways but when we look at the data to date he asked if that helped folks get a better view or if it provided a better picture, so folks know where we stand right now.

Baus said that he appreciated the relative comparison. He thought it was really helpful. He said that he shared the concern early season when we had forecasted low flows. He said that he shared that concern and so it is encouraging to see, to recognize that things could be worse than they are now. He said that we are in a relatively decent situation, so he was glad to hear the update.

Ebel said that things could always (well things cannot always) be worse but we are riding along pretty thin ice, but we are still skating

Chris Runyan, BOR, thanked Ebel. He said he had a question about Figure 4, how to interpret Figure 4. He said that we are looking at conversion rates compared with in river and transported. He said that when he looked at the 2024 solid line it is a conversion rate of around 0.5 and when he looked down it is 76 fish. He asked if that meant that 150 in river fish were estimated down at BON.

Ebel said no, sorry, that is the number of detections at BON, so that is your starting number.

Runyan said so 76 is the starting number of BON.

Ebel said that was correct for the in-river migrants.

Runyan said and then for the transported it would have been 14. He asked what the relative difference was between the number of in river fish compared to transported fish. He said that he was seeing that there are_ Runyan said that if he took 76 divided by 14, he was seeing there were five times as many fish as transported. He asked if that equated to the same ratio when meaning you essentially transported 1/5 of all the Sockeye smolts. Runyan asked if that was accurate.

Ebel said no it means whatever number (and he did not have those numbers but could find them) of PIT tagged Sockeye that were transported in this case 2023 if we are thinking about this year adult returns. Of the PIT tagged juvenile Sockeye that were transported only five have returned to date. Ebel said that he did not know what proportion, we would find that out later at the end of the season, what the SAR, smolt to adult return rate, for these groups was but that number the $n_{T, year}$ is reflective of the number of PIT tagged fish known to be barged that survived to return to BON.

Runyan said so that is where the smolt to adult value_ That kind of summarizes, based on the total population size of in river compared to the total that come back, whereas right now we are kind of taking a slice in time. That SAR will kind of summarize. He asked if it shows a similar thing.

Ebel said yes, an SAR puts the juvenile population or juvenile abundance, and it takes the adults and looks at it relative to the starting abundance. He said that he was not showing SARs here, this is just a conversion rate of adults from BON to IHR.

Runyan said yes, based on the population.

Ebel said that this had nothing to do with the initial population size of these two groups or initial abundance at the collector dams.

Runyan said yes and thank you that helped.

Ebel said that he sometimes takes these things for granted.

Runyan said yes, he has to learn a lot here, but he just wanted to make sure that he was not interpreting that this was estimating based on the total population size, the starting. He said that the SAR thing we get later shows a different thing. He said that he probably confused others quite a bit but for himself he kind of understood this plot a little bit more.

Ebel said this is only adults and only reflects those adults detected at BON and where they would be in the system between BON and IHR to date.

3. **Dworshak (DWR) Operations –** *Jon Roberts, Corps-NWW*

   a. Current Hourly Data

      - All generation flow minus 100 cfs going to the hatchery.
      - There will be an updated link next week for the Corps' new website that will have DWR outflow. The information will be available in a different format.

- TDG:
  - Below DWR: 100 – 102 TDG
- Forebay Elevation: 1590.27 feet
  - ~10 feet from full
- Drafting: 1 foot/day

b. Snake and Clearwater Rivers Temperature Data

- Anatone (Snake River):
  - Temperature: >68°F
    - Consistent day and night
  - Flow cycles a little based on what Hells Canyon is doing. Looking at the trendline shows that flow will drop off and recede as we move into the Summer as the natural tributaries continue to recede through the Summer.
- Orofino (Clearwater Mainstem):
  - Temperature: >68°F
    - It is typically flashier on its fluctuations with heatwaves.
  - Flow: 3 kcfs
    - Low and it is where it is expected to be over the next week as we continue to recede on base flow.
- Dworshak (DWR):
  - Temperature: 43°F
- Lewiston (waters mixed):
  - Temperature: <55°F
- Lower Granite (LWG) Tailwater:
  - Temperature: ~66°F
    - As it cycles from being hot over the last couple of days.
- Graph – Snake and Clearwater Rivers Water Temperatures – 15 days:
  - The heatwave that was affecting the natural river system over the last few days for Orofino and the Anatone where the temperature lines go up will start to come back down over the next few days as the temperature of the extreme heat passes.
  - It will take another day or so for the water to make its way through the system, out of the mountains, and come down and then it will get a little cooler.
  - It is not expected to drop back down below 68°F but it should stay right around 72°F on average. No big spikes are expected.

c. Lower Granite Forebay Temperature String

- Cooler weather came through July 3 – 5 and then warmed back up with the heatwave.
- July 3 – 5:
  - Top of the pool: 68 – 70°F
- July 7 – 8:
  - Surface temperatures: 75 – 78°F
  - Bottom of the pool:
    - Good for cold water refuge
    - Helps the fish pump for the cooling tower
    - Helps the water going through the deep spill and the Tenner gates.
  - 15 – 20-meter line: 65 – 66.5°F
    - Like to keep the stratification line cool at 67.5 – 68°
    - Anticipate that stratification to continue to warm up slightly as we progress through the Summer.

d. Lower Snake River Temperature Report for July 2025

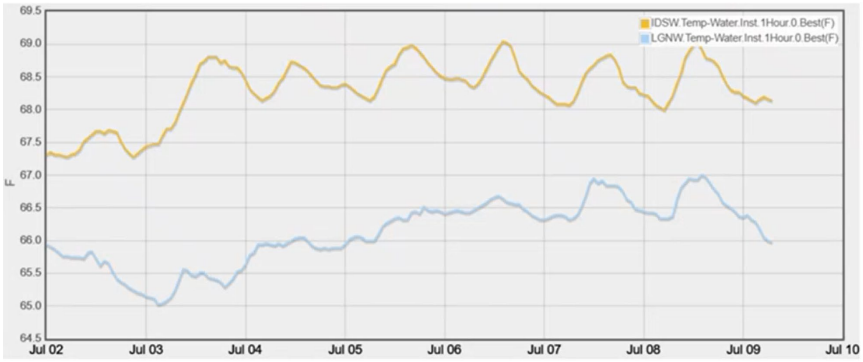
- This data was new and was added by request from TMT to look at the overall basin.
- LWG Tailwater:
  - The current average daily temperature does not always have all of the values for the day added in, Roberts said that he looks to the previous day to have a better idea of what the actual value may be for the average or the peaks.
  - Average Daily Temperature: 66.2°F (July 9)
  - Average Daily Temperature: 66.6°F (July 8)
- LGS Tailwater:
  - Average Daily Temperature: 67.1°F (July 8)
  - Still has stratification in LGS pool.
- LMN Tailwater:
  - Average Daily Temperature: 67.8°F (July 8)
- IHR Tailwater (Snake River below Goose Island):
  - Average Daily Temperature: 68.5°F (July 8)
  - IHR is a little warmer for the last couple of days with the extreme heat moving through but is seeing a pretty stabilized temperature.

e. Ice Harbor Temperature String

- Still are maintaining a slight thermocline.

- Over the weekend the temperature almost equalized out a bit but as we moved into the heatwave and IHR continued to have the cool water from the SOR moving down through the system.
- On July 7 and 8 the top of the water got fairly warm from the heat wave moving through but there was still fairly cool water (compared to a 100°F heatwave) sitting at the stratification line.
  - 15 – 20-meter line: 68°F
  - There is about a 5° differential there.

f. Dataquery Temperature Data for LWG tailwater and IHR tailwater:



- Plot of the real-time tailwater temperature at IHR and LWG.
- LWG is trending down as cooler water is coming in from the heatwave.
- IHR is also cooler as it is not being influenced so drastically by the natural weather air temperature.

2025-07-09 07:00	68.144	65.984
2025-07-09 06:00	68.162	66.002
2025-07-09 05:00	68.198	66.056
2025-07-09 04:00	68.162	66.182
2025-07-09 03:00	68.108	66.290
2025-07-09 02:00	68.144	66.326
2025-07-09 01:00	68.180	66.398
2025-07-09 00:00	68.216	66.362
2025-07-08 23:00	68.270	66.380
2025-07-08 22:00	68.270	66.452
2025-07-08 21:00	68.306	66.506
2025-07-08 20:00	68.396	66.542

- IHR was running close to 68°F as it cools down through the nighttime air as it was getting cooler air and the heat came back off the lake at night.
- LWG was the same.

g. 10-Day Regional Weather Forecast

- Precipitation:
  - Rain was not anticipated.
  - Some precipitation in Idaho on Wednesday.
- Cloud Cover:

- Little cloud cover was predicted throughout the basin

- Temperature:
  - No extreme heatwaves predicted.
  - There will be a few >100°F days but nothing lasting drastically long.
  - Moving into mid-July it is expected to be in the high-90s – 100s.
  - No heat domes are expected to set up in the region for right now.

h. Weather Forecast for Lewiston, ID

- Cooler temperatures and then warming back up to 100°F +/- a couple of degrees.
- Nighttime temperatures are still at ~30°F gradient allowing the pool to cool back down at night.
- Conditions will improve into the second half of July anytime that temperatures are down at 66 – 67°F, or even 68°F, at night with a slight breeze keeps the air not stagnant on the top of the lake and it continues to move some of the heat off.

Trevor Conder, NOAA, said that he had noted and Roberts may get into it with the rest of his presentation, but obviously we implemented the SOR which was a change there initially, more cool water, earlier. He said seeing that there is still some cool water stratification existing at IHR and potentially slightly cooler temperatures had we not done it. He said that he wanted to know if_ He said that Roberts is very familiar with the data, year in/year out. He said that he was curious in understanding if had we not released that cooler water early like we did would you expect to see less stratification at IHR, and warmer temperatures had we just managed to 68°F. He asked if Roberts was seeing an effect of that operation early on that he could say, in his professional opinion, was probably the result of releasing that cooler water early. He said maybe Roberts would get into with the review but that was the question that he had.

Roberts said that he was going to jump right into that. He said they were tracking that as it was water used.

i. REVIEW OF SOR-2025-02 - *Tuesday, July 8 at 11:30am*

Roberts explained that they have a lot more granular data but for the purposes of the discussion and trying to get something summarized in an easy enough form for TMT to have a starting point to talking this is what they put together.

- Slide 1: Dworshak – Review of SOR-2025-02
  - TMT moved water for the Sockeye under the SOR sooner than we would have if we were just operating to the 68°F.
  - If only running to 68°F
    - Ramp up: July 5
    - Full PH: July 8
  - Instead (SOR Operation):

- Ramp up: June 26

Basin Conditions from June 26th to July 5th (during SOR implementation):

- **Water temperatures from Anatone:** 65°F – 71°F (avg. 68.3°F)
- **Inflow to Lower Granite:** 34 kcfs – 40.6 kcfs (avg. 38.6 kcfs)
- **Water temperatures at Lower Granite tailwater:** 63°F – 66.4°F (avg. 65.3°F)
- **Daily High Air temperatures in the Lewiston area:** 79°F – 99°F (avg. 88.4°F)

Additional water used from DWR during SOR:
~ 120,000 AF (~6 feet of water)

- There was potential benefit with a delay in the rise of IHR tailwater temperatures and have been able to maintain a cooler stratification of the forebay.
- Allowing the Corps to continue to send cooler water step by step through each of the dams with their current known operations based on their flow.
- Note: Following slides use one-day averages for both temperature and flow.

- Slide 2: Ice Harbor – Observed and Analyzed (*through July 7*)
  - Purple: LWG Tailwater Observed Temperatures (Day Average)
  - Green: Some type of water for IHR.
    - Solid: Observed value as shown in Dataquery 2.1 (Day Average)
    - Dotted: Confidence intervals (shown last week), what IHR tailwater was projected to be if we had not implemented the SOR. Data was provided back to July 1.
    - Dashed: Confidence intervals (shown last week) regarding what IHR temperature would be doing. Will be left on because that was what the model was showing a week ago. That is what some of the decisions were based on the following week.
  - DWR water takes 8 – 10 days to mix and move it way down and then actually start showing affect at IHR.
  - June 26: Ramp up
  - July 5: We expected to see the influence of the water (marked in red). Saw the water starting to arrive and start to make a little difference and anticipate seeing a benefit from water that would have been sent through July 13.
  - July 2: TMT Meeting.
  - July 3: Water stopped in support of SOR at the TMT meeting.

  Roberts did not want to compare after that because we were then operating to 68°F and whatever operation would start to converge in the model. The anticipated plan is to track between this week and next, without changing the confidence intervals because this is what we had at the time of the initial TMT meeting and the Corps will continue to provide this.

- IHR tailwater is running slightly cooler than what would anticipate if we had not sent the water.
    - We would have been around 70°F at this point at IHR absent sending the 120 kaf through the system earlier, we would have been ~1 – 1.5°F higher.
    - Good weather is pushing the heatwave off and continuing to maintain some of the stratification at IHR relative to what we can see once the natural flow in the river starts warming up.
- It is hard to compare year to year because last year the tailwater may have been cooler or almost as cool at this point at IHR but that is because the natural river conditions was still cooler 9 – 10 days sooner and so we may not have had a 100°F temperature on those days either. This is something that we will look at offseason.
- Currently seeing a 1.5°F temperature reduction at IHR with the cold water making its way in.
- Next week they will update the plot showing the daily average temperature move through the seven days until we would not see any effect based on the SOR.
- Only have seen about two days of the water being at IHR tailwater from DWR.
    - Got there on two really good days because those were the hottest days so it helped keep some of the stratification that would have pushed down the pool.
    - The overall river temperatures are slightly cooler than anticipated moving down the river at this point.
    - Looks like it did well yesterday, it stayed around 68.5°F and was doing well today.

- Slide 3: Current Temperature Augmentation Analysis
    - Anticipating running the PH at 9.5 – 9.6 kcfs throughout the week with the 100°F days and operating to 68°F at LWG.
        - Expect the LWG tailwater to warm up.
        - Right now, it is down in the 66°F range, anticipate it to get to the high 66°F – 67°F mark.
    - Recaptured some water. Under the SOR they would have anticipated operating at 10 kcfs. Without the SOR they have ramped back down to 8 kcfs (over July 3).
    - They ramped back up on Sunday evening in anticipation of the heatwave and continue to run the PH. They have recaptured a few hundred cfs each day.
    - Current water availability is sufficient to maintain the following conditions:
        - Maintain a LWG tailwater of 68°F through July 23.
        - From July 23 to August 14 allow the LWG tailwater to be 69.5°F but there is still a potential of a few days of getting up to 71°F.

        - For the latter half of the month come back down.
    - Reminder: The days of 71°F were only seen in the top third of traces. Roughly two-thirds of their traces showed that we could still maintain the 69.5°F even with the SOR. While they could not guarantee that, based on the water that is left, we would not get a little bit higher, it is not that it looks like that was a foregone conclusion. It depends on how the weather and heatwaves move through we could stay under 69.5°F through the Summer.
    - There is a potential of decreasing the water down 1 kcfs in the second half of July, depending on how the heat plays out.
    - They anticipate being one or two-tenths of a foot over 1535 feet.

Erick Van Dyke, OR, said what we saw early in the presentation is the SOR put us six-foot elevation different it would have been had we not made the change. He asked if that was correct.

Roberts said that was correct. He said just because we would have started drafting later on. He said that we are about 6 feet lower than what we would have been if we had only been up as of today. He said that we are 6 feet lower than what we would have been based on if we had only been operating the 68°F.

Van Dyke said that was a helpful benchmark for him. He said that he appreciated that Roberts provided the idea of recovering or restoring the water to provide us more security on being able to operate for the tailwater of 68° at LWG. Roberts had said that we have recovered some. He asked if Roberts could quantify it in how much elevation that is.

Roberts said that it have been about 0.5 – 1 foot of water, somewhere in that range. He said it might be a little easier_ So last week we were looking at absent of not changing the SOR we were looking at three to four days where about one-third of our models analysis showed that we would be up to 71°F. Now, based on what we have done over the weekend, as well as how we are a little bit below 10 kcfs to manage the river, we are down to only two days, potentially being over 71°F with about one-third of our traces. So we have recovered about two days of water to get us back to 69.5°F and we will continue to try to get that to essentially zero days about 69.5°F where we can shave off a little bit of water here and there.

Van Dyke said that was really helpful. He said that he appreciated the extra explanation on how you are using the traces as well. He said that it stands out in his brain as something that makes sense and is easy to understand. Moving forward it might be useful to use that. One thing he wanted to make sure he said though was that 69.5°F was an operation that was implemented as kind of a triage issue back a few years ago. He said that the important target for him is still 68°F. So, we can continue to discuss the contrast in those two levels and that might be helpful moving forward as well. He thanked Roberts for all of the information, and taking the time to show it to TMT and to describe it. He said that he hoped those two details are useful for the next couple of times that we talk about it.

Roberts said perfect and thanked Van Dyke. He said that if we can see enough information into the future where we are at 69.5°F and have that water availability without drafting below 1535' we will continue to_ At that point the objective would be to start shrinking the time frame of July 23 to August 14. And as we get a little closer and/or if we start seeing that possibility we will definitely be needing TMT's opinion as the region on where, if we can shrink in that time frame (understanding to get us to 68°F) for a longer period of Summer since (understanding that 69.5°F is not really ideal either) but if we can get a smaller time frame of 69.5°F maybe that would be ideal too. Knowing when to try to shrink that will be helpful from the region.

Ebel said that he appreciated all the information as always and he looked forward to the discussion at FPAC next week as we navigate our way forward with the weather, however it turns out. He said in the previous slide, it is a 6-foot draft, and Van Dyke mentioned that 6 feet in recovery feet but at the top of the reservoir, 6 feet is more water than further down the reservoir. Ebel said that one important point is that the SOR was ~12%. A little over 10% of the water allocated to summer cooling was used in those days. He said to him that it is an important way to look at it as well as a proportion of the total water available, that is pretty high for what affect, and we kind of touched on it. He said that he appreciated Roberts' analysis stretching down IHR. He said that it was going to be interesting moving forward as we try to separate the weather patterns from potential impacts of that slug of water moving down because the weather has been different with the cold weather swings, and that is thankfully so. Ebel said long story short, he really appreciated it, Roberts. He said that he looks forward to the further analysis and he just wanted to make sure people think about this also in the relation to the total available water as a volume and as feet sometimes, feet in the reservoir, while more tangible than volume is misleading.

Roberts said thank you to Ebel, he said that can definitely occur with the reservoir being wider at the top. So a volume of water per foot_ In addition though throughout the Summer weather at a certain elevation we also pick up inflow to the reservoir, so it is a little bit more than the overall volume that we look at one for the other. He said yes there is a little more water at the beginning for inflow than there is at the end. So just to try to keep it as generic as possible, it is still a little over 10% of the overall water set aside for the Summer Operation before the Dworshak Board comes into play. He said that the Corps would continue to update the graphs and have that information available for people over the next couple weeks.

Charles Morrill, Washington, said he wanted to echo the thanks to Roberts for the information that he had provided. He said that the other comment that he had was that as we see temperatures increase at IHR, one of the things we watch is temperature differential in the ladder. If you look at last year's data by the middle of the July we were seeing temperatures not in the South Bay Ladder, but surface of 75° – 76°F. He said that one of the things that we will be watching and hoping that the differential is not enough to cause passage delay.

Roberts said that he would be out for the next two weeks so Willow Walker will be available for those meetings as well as Jessika Solleder, who is also running a lot of the analysis behind the scenes as she continues to develop here as she is working on the system. So, for everyone's awareness Walker will be available so please let them know if there are any specific meeting times or alternatives or anything the region would like them to run in preparation for TMT next week and they will work to prioritize those and get them completed for Monday morning.

4. Operations Review

a. Reservoirs

Reclamation – Chris Runyan

- Hungry Horse Dam
  - Outflows: 1.5 kcfs
  - Inflows (7/8): 1.8 kcfs
  - Midnight Elevation: 3558.5 feet
    - From Full: 1.5 feet
  - Operations:
    - About to start passing inflow.
    - Will increase today and tomorrow and will be at 2.2 kcfs which is about the flow needed to get the End of September Draft out.
    - HGH will be drafted for flow augmentation.
  - End of September Elevation: 3548.3 feet
- Grand Coulee Dam
  - Inflows (7/8): 96.6 kcfs
  - Outflows: 67.4 kcfs
  - Midnight Elevation: 1287.9 feet
    - From Full: 2.1 feet
  - Current Operation:
    - Plan is to refill reservoir to an elevation of 1289.5 feet sometime before July 15. The half foot is for the Lake Roosevelt Incremental Storage Release Program.
  - Future Operations:
    - After GCL reaches full, the target for GCL will be a draft down to 1277 feet by the end of August. They will get there because they have a 12-foot draft for flow augmentation in a dry year and then they have an additional 1 foot for the Lake Roosevelt Incremental Storage Project.
- Upper Snake Flow Augmentation

- Flow augmentation is about wrapped up.
- Payette:
  - Payette is continuing to release its flow augmentation.
- Total:
  - 477 kaf
  - Above the lower range of 427 kaf, and not quite to the higher range of 487 kaf.
  - Based on how this year played out in the extreme dry conditions since April BOR was happy with getting as much as we did.
  - Willing seller procedure to get the rentals, a lot of irrigators provided that water.

Corps – Catherine Dudgeon, Corps

- Libby Dam (Lake Koocanusa)
  - Elevation: 2444.6 feet
  - Inflows (7/8): 11.8 kcfs
  - Outflows: 7 kcfs
  - Operations:
    - The 7 kcfs is the Bull Trout Minimum Flow. That flow is expected to last until the end of August.
- Albeni Falls (Lake Pend Oreille)
  - Elevation: 2062 feet
  - Inflows (7/8): 14.8 kcfs
  - Outflows: 10.3 kcfs
  - Operations:
    - Still operating in their Summer Elevation Band of 2062 – 2062.5 feet.
- Dworshak Dam
  - Elevation: 1590.36 feet
  - Inflows (7/8): 1.1 kcfs
  - Outflows: 9.7 kcfs
- Lower Granite Dam
  - Previous 1-Day Outflows: 35.8 kcfs
  - Operations: MOP (733 – 734.5 feet)
- McNary Dam
  - Previous 1-Day Average Inflows: 131.6 kcfs

- Operations:
  - Still doing the special operation for grebe nesting with a soft constrain of 337.5 – 339 feet until July 19.

- Bonneville Dam
  - Previous 1-Day Average Flows: 128.7 kcfs
  - Operations:
    - Starting tomorrow the Tribes will be doing treaty fishing again.
      - July 10 – 12
      - July 14 – 16
    - Gorge Downwind Champs special operation
      - July 14 – 19
      - Forebay above 74 feet as the soft constraint.

Tom Lorz, Umatilla/CRITFC, asked if she said a grebe operation at MCN. He said that was a new one on him.

Dudgeon said yes, grebe nesting.

Lorz said that he had not heard that we had a grebe nesting requirement at MCN. He asked when that popped in. He said that was a new one.

Dudgeon said that this had been in the works for a couple of months, at least.

Aaron Marshall, Corps-RCC, said that the Corps originally were reached out to by USFWS last year letting them know that they started observing some Western and Clarks grebes nesting in the MCN pool. He said that they let the Corps now that they were monitoring their nesting and other behaviors out there and then this year the Corps and USFWS started coordinating several months ago to talk about the potential for an operation in MCN pool to help support their nesting this year. Marshall said that this is relatively new to have them observe so many grebes nesting in the MCN pool so this year the Corps is coordinating with USFWS for this. He said that it is about a month-long operation to hold the MCN pool near the middle of the range to support their nesting period. He said that it sounded like it was going, pretty good success right now.

Dudgeon said that they had gotten an update.

Marshall said that they were able to make the operation work within the normal parameters there for MCN.

Lorz said that he was just trying to figure out if we had talked about this in TMT or FPOM. Or was it something that the Corps and US Fish were talking about because maybe he is falling asleep like Trevor in bird meetings he was not sure, but this is the first that he was hearing about it.

Dudgeon said that the special operation started on June 23. She said that she thought that it had been mentioned it the last couple of meetings, but it probably just got under the radar with everything else going on.

Lorz said that he never heard it called Grebe Operation. He said that he was going to go back and check his notes because he did not see it in the notes either as notified as Grebe.

Stranz said that it was good to know now. She asked if Lorz wanted to know more.

Lorz said no, he said that he guessed he had to pay more attention at TMT when you talk about grebes.

Trevor Conder, NOAA, said that smelling salts works pretty good.

Lorz asked if that was Conder's secret, he thought Conder used bird droppings.

Stranz said that the grebe operation is happening at MCN and maybe if folks need more information on that they can reach out to the Corps directly. She said that she was not sure if there was more that Lorz needed.

Van Dyke said that he agreed with Lorz and maybe Conder. He said that he was not sure if Conder agreed with Lorz. That this is something that he did not recognize by the label as well. He said that he would certainly need to check back on how to interpret that one and what the region may have missed. He said his question was that he had been tracking discussions on expectations of Summer Operations and he wanted to ask someone at the Corps which guiding document folks are using for Summer Operations this year, specifically is the FOP the document that we should be tracking for expectations on what summer operations are delivered.

Baus said that the Corps is operating in accordance with the 2025 FOP.

Van Dyke said when they pay attention to ongoing activities the FOP would be their reference point. He said that was the hope that_ he asked if made sense, or if he was misinterpreting what Baus said.

Baus said that he did not quite catch that. He asked Van Dyke if he said when we are looking ahead to Summer. He asked Van Dyke to repeat the question.

Van Dyke said when we track operations moving forward through the Summer, the reference point is the FOP for establishing our recognition and understanding of what to expect through the Summer. He asked if that was correct.

Baus said yes, that was correct.

Ebel said that he did not want to extend the grebe thing. He said that he did miss it probably, and he does recognize that we did say something about grebes in the last couple of weeks. He said that it was very kindhearted of the Corps. He aske what exactly are the parameters on this new grebe operation. He asked if like one foot_ Exactly what are those parameters.

Dudgeon said that they have a soft constraint in the MCN pool from 337.5 – 339 feet. That is within McNary's normal operating band and soft constraints, so it is not like hard and fast, like you have to stay within that band.

Lorz said the question is, is it higher or lower in the band. He said is this a fish negative or fish benefit.

Ebel said that was what he was trying to figure out too.

Marshall said that the normal operating range at MCN is 337.0 to 340.0 feet. So, it is just a three-foot operating range already for the normal range at MCN, so this is a 1.5-foot constrained range that is right near the middle. He said that he hoped that helped.

Ebel said he was trying to think about, we have disagreements and try to have these soft and hard constraints quite often, fight for them sometimes for fish and then have one come out for grebes without discussion is confusing. He asked why not 337 to 338.5, why a half-foot higher than MOP.

Stranz asked to check quickly to see if we have Dave Swank with TMT.

Lorz said that TMT does not, Swank is at the lamprey thing.

Van Dyke said that he was not sure Swank's input would be as informative as someone else at USFWS. He said that the reality here is that we are talking about the minimum operating pool impacts on fish passage and how those things matter to the fish managers. He said that was what he generally heard at this particular place in the system is that MOP is not something the Corps considers something that we put into play. He said the same as in the Snake, so that is where the disconnect potentially here is coming in.

Stranz asked Van Dyke to say the last part again about the MOP in the river in a different way, she did not think she quite understood.

Van Dyke said that it is a long-standing that he was saying it too much or making too strong a point about it will maybe kick people in multiple directions. He said right now the Lower Columbia is managed differently than the Snake in terms of minimum operating pools. He said that was an ongoing conversation when it comes to trying to provide for fish passage. He said that the operating ranges that we are hearing right now are not the full operation, it is being called the normal operation range, which disconnects these terms in ways that makes it hard for us to talk in the TMT openly in a public meeting about the nuances. He said that there is an issue here and this feels like something that deserved better coordination. He said that was what he was hearing from folks and that it is catching them a little off-guard.

Stranz said that was fair.

Van Dyke said that the operating ranges that are expected that are in the FOP we need to think about how water passing through the reservoir system can best be managed to try to influence a rivering signal for anadromous species.

Marshall said a couple of things to clarify. He said that they do not have a minimum operating pool operation at MCN. He said that they have the normal operating range 337 to 340 feet and many time throughout the year at all of the projects we have special operations that come in for many different purposes: for recreation, for construction, for bridge inspections. This one happens to be for a wildlife intended benefit and as long as those operations fit with the Corps' normal operating range and within the normal seasonal operations then from time to time, the Corps is able to accommodate that. So with this one they were able to land on an operation that would work for all the interested parties, the hydro power system operations and support the grebe nesting.

Ebel said that he felt that this was something that was a request from the USFWS that should have been discussed in TMT. He said that he was confused as to how simple it was to get this when it is like pulling teeth for fish. He said that they are still toward the upper end of that range and operating within a soft constraint. He asked why they did not operating towards the bottom.

Marshall said that the current operation is 337.5 – 339 feet as a soft constraint so it is really right near the middle of the already small 3-foot operating range. He said that one thing to note about why they are not able to constrain it further to the bottom end of the range is that they need to maintain some space, so they do not drop below the minimum forebay elevation. He said that it is not realistic to expect that they are going to just normally operate in the bottom half foot of the forebay range anyway because the challenges in just managing that pool elevation. So that 227.5 give the Corps a half foot buffer above the minimum forebay elevation to accommodate any unexpected fluctuations in the pool.

- *Ben Hausmann (Unverified)10:28 AM*
- *This grebe op feels pretty similar to tribal fishing ops where we hold a forebay with a constraint to limit fluctuation--in that case for net integrity and in the grebe case to limit impact to vegetative nesting mats.*
- *Erick Van Dyke ODFW (Unverified)10:30 AM*
- *Please pull up the link https://www.nwd-wc.usace.army.mil/dd/common/projects/www/mcn.html*

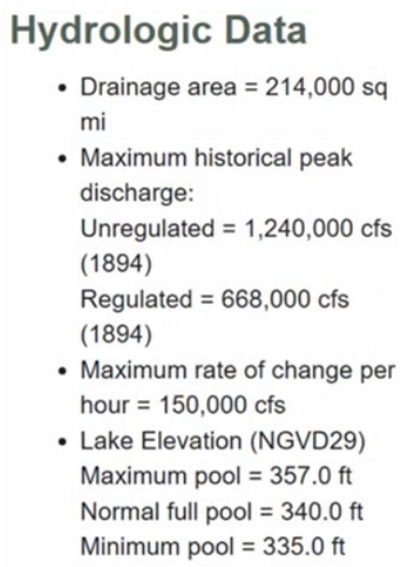
Ebel said he guessed he was looking at it like the Corps is pretty much operating within half a foot between 338.5 and 339 feet and have been since he guessed when they started the operation where you can see in the data the pool just kind of rises. He said it would be nice to have the USFWS coming to discuss why this is and he saw Ben Hausmann, BPA, he said that it does seem like the treaty fishing SORs and operations. He said that it was confusing him because it came out of nowhere.

Stranz said that was what she was observing herself, that folks are reacting because they were not aware of it. She said that she did think that having USFWS here to represent their request would be best. She said the last couple of meetings we have not had the USFWS representative here, though he was here on July 2. But maybe we ask

Swank to either bring somebody else in to share with us what their operation is and the rationale behind it or we ask Swank to do that next time.

Lorz said he had to respond a little bit to Hausmann, as much as Hausmann would like to maybe tie this to something like a fishing operation, the Tribes submit an SOR and that had been going through _ that is a very different process. This was not even an SOR. The Action Agencies (AA) and USFWS had an internal talk and there is probably a teletype that no one has seen. Lorz said that it so just catching most of the FM a little flat footed that when they do operations like for fishing tribal history stuff, they put in SORs and go through the whole rigorous process. This kind of came out_ Looks like they have some internal discussions, and the AA felt they could do it and that is great, that is all fine and well but from a transparency, and tracking standpoint, we need some sort of paper trail on this. In the meeting notes it does not even day grebe operation it just says soft constraint, it does not even say for how long. He said that he was just surprised that we seem to be a little willy nilly on this one. It does not see to be_ We did not seem to quite have the same level of paper trail on this that we normally are expected to do and required to do on most operations.

Stranz said that Van Dyke put MCN dam and Lake Waluwa in the chat. She asked if he wanted to speak to the link



Van Dyke asked for the link be pulled up so folks could see it. He said that he wanted to ask specifically about the details that are provided in a public site that identified pool operating data. He said if you look down at the bottom lake elevations are published in this way on this site, a site that Van Dyke felt many on TMT go to. He said what he has just heard is that 357 feet is the normal. He said in this particular space says 357 feet is the maximum pool. He said that he did not really want to argue that part. He said in trying to understand how much of a range MCN has. We heard 3 foot; in reality this is expressing it as 5 feet. The difference between the normal full pool at 340 feet and the minimum pool is at 335 feet. He asked for them to help him understand how to interpret what is being said here about operations when this information express it in a little different scenario.

Marshall said that it looked like they needed to make an update to the minimum pool elevation that was listed on this webpage. He said that the normal operation range is a **minimum of 337 feet, maximum of 340 feet for the normal operating range**. The maximum pool elevation shown listed there is under like a flood surge type condition. So, they would not operate above_

Van Dyke asked if Marshall was saying that they cannot operate the 335-foot minimum pool at MCN.

Marshall said that was right.

Van Dyke said and that was because something has changed. He asked for more detail about why that would be,

Marshall said that the original congressional authorized elevation for the minimum pool for MCN was 335. Since construction of the rest of the hydropower system, the minimum operating range for MCN is 337 for the minimum elevation.

Van Dyke said that we would not be able to get to the details that he thought would be of interest in that question in this meeting. He said that they may be able to talk more about that and how the changes had come about and whether they are linked to things that we hear about in meetings like this without much warning or if they are linked more to the coordinated actions that we are all trying to be aware of.

Hausmann said that he wanted to clarify his statement when he was talking about the similarity between Tribal fishing constraints. Like one just came out today. He said that his point was that it did not necessarily specify an elevation so much as a constraint, so he was kind of referencing that the same way. We have some of these operations that we will say we need a foot and a half hard constraint. The Tribal fishing aspect, he did not think care where that lies, as long as it is consistent, and it felt like this was similar in that way. He said that he did not mean to say that this one was coordinated as thoroughly or even as good enough. He said that he did think that this one kind of came out of the blue, for what it was worth. He said that he did see some language in emails about this concern, which was a brand new one to him, not that long ago but they were conversations from last Summer. He said that his only point was that it was not a brand-new issue, but it was brand new to him, so he understood people's frustration with how we got to where we are.

Stranz thanked Hausmann for that acknowledgement. She said that she was hearing from FM that additional coordination would have been appreciated on the grebe nesting operation and that even into the future it would be helpful to hear something from USFWS.

b. Water Quality – *Alexis Mills, Corps*

- Data Issues
  - Have had several data issues since the start of this month (represented by the black dots).
  - July 6 – Lower Columbia
    - Due to a server outage.
    - Data will be backfilled at a later date.
    - There were no exceedances of the Water Quality Standard (WQS) at those projects.
  - July 6 – Lower Monumental

        - Over the weekend, starting on Sunday.
        - Missing data that at first was reported as erroneous data.
        - Due to a bad membrane on the sonde and was replaced yesterday morning.
        - TDG is now below the WQS now as we would anticipate at the low spill levels.

- TDG
    - Ice Harbor Forebay gauge – July 2 and 3
        - Exceedances of the 115% WQS.
        - It is typical for this time of year when we get heatwaves and low wind events and there is no degassing downstream of LMN.
        - The wind picked up last week and over the weekend so that did strip the gas out of the forebay and we fell below the WQS.
        - If they see persistent exceedances of the WQS in the IHR forebay the tool that they have in their toolbox to reduce TDG is to switch to a uniform pattern at LMN, they will only implement that change if they did not anticipate that environmental conditions would alleviate TDG on their own.
    - MCN Tailrace TDG
        - TDG in the tailrace had been bouncing around 120% TDG and there was an exceedance on the July 1 as well as a couple exceedances starting in late June.
        - All of these exceedances occurred when spill was less than 90 kcfs, which is far below the current spill cap of 145 kcfs.
        - MCN is averaging ~2 – 5% higher TDG this year than they have observed in low flow spill patterns prior to 2024.
        - Potential Factors:
            - The current spill pattern at low flows is bulkier than it was in 2023 and prior years.
            - Multiple bays scattered across the tailwater can allow the spillway to retrain up on itself rather than mix with the PH flow, causing a plume of higher TDG that makes its way to the north shore where the gauge is located.
            - As is true with most projects, they do see higher TDG levels at MCN when we get a heatwave so that is also exacerbating the issue.
        - Per criteria in the FPP Chapter 5 at MCN spill bays 1 and 2 will be closed today as spill is anticipated to be less than 70 kcfs for the remainder of the spill season.

- If the issue persists, the Corps is developing a more uniform pattern to implement during low flow and high TDG events.

Van Dyke said thank you for the update. He said that he appreciated all the information that she provided. He thought it was helpful. He said because MCN is under the emergency spillway operation scenario, and there is a lot of work planned and expected there. He asked if Mills could be more explicit about what she meant when she said uniform given that there are several bays, like Bays 1 and 2, that are restricted to lifting it up and then putting it back down.

Mills said that the uniform spill pattern would be restricted to the bays in the upstream slots. They would not use engineered lifts of gates in the downstream slots to make the pattern more uniform.

Van Dyke said that was helpful for him. He said to remember one of the things that fish passage is focused on at this time of year is dispersal behavior that is occurring with Fall Chinook juveniles. The impacts on that will be something that we will track.

c. Fish

Salmon – Trevor Conder, NOAA

- Juveniles
  - Not a lot of juveniles in the system.
  - Subyearling Chinook
    - Still declining, it is still variable
    - There was a high index at LWG of 33,000 but then we were back down to 3,300.
    - Smolt Passage Index (two-week average)
      - Lower Granite: 3,300
      - Bonneville: 15,000
- Adult Salmon Counts
  - Summer Chinook
    - BON: 7000 more than last year.
    - Priest Rapids is fairly similar to Bonneville in that everything is under the 10-year average.
    - IHR: 3000 more than last year.
    - Ten-year YTD Average:
      - Bonneville: 80%
      - Ice Harbor: 99%
  - Steelhead
    - BON: Under where we were last year.

- IHR: More than last year.
- Ten-year YTD Average:
  - Bonneville: 89%
  - Ice Harbor: 120%

- Sockeye
  - BON: Recently downgraded by TAC.
  - Passage Index per day
    - Bonneville: 150000
  - Ten-year YTD Average:
    - Bonneville: 50%
    - Ice Harbor: 115%

d. Power System – *Ben Hausmann, BPA*

- Low flows, where we are now, is where we would expect to be a month from now flow wise.
- Will touch full at GCL next week.
- MCN and BON have been at the min gen spill the rest flows.
- Things are fairly normal/good as far as operations.

5. Public Questions

Kate Von Ries Baron, CHPM, said she had a question for BPA. She asked with GCL touching pool if that was briefly hitting 1289.5 feet.

Hausmann said yes, that Runyan would probably be more able to speak to it but the anticipation he had was that we would be hitting that toward the end of next week. That was the number.

Runyan said by July 15.

6. Set agenda for next meeting – July 16, 2025 *(+Process)*

Meeting Location: Microsoft Teams

a. DWR Update

b. Sockeye Conversion

c. USFWS Grebe Update (tent.)

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)	Tom Lorz
Yakama Nation	Keely Murdoch, Tom Iverson
Bureau of Reclamation	Chris Runyan
Army Corps of Engineers	Doug Baus (Chair), Aaron Marshall, 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	Tom McDonald
Bonneville Power Administration	Ben Hausmann

Other Attendees (non-TMT members):

COE – Jessika Solleder, Steven Lee, Catherine Dudgeon, Alexis Mills, Jonathan Roberts, Leah Hamilton, Michelle Yuen

BPA – Tammy Mackey, Carolina Andes

NMFS – Emi Melton

Washington Ecology – Thomas Starkey

DS Consulting – Emily Stranz (Facilitator), Colby Mills

CorSource – Andrea Ausmus (BPA note taker, Contractor)

EKI – Eve James

FPC – Erin Cooper, Noah Campbell

Columbia Basin Bulletin – Mike O'Bryant

AVA – Steve Lentini

GCPUD – Eva Stites, Shaun Harrington

PSE – John Chandler

Energy EPS – Josh Rasmussen

NPCC – Kate Self

CHPM – Jay Fintz, Kate von Reis Baron, Lance Beyer

PGE – Phil DeVol

Unaffiliated – Mike Buchko, Ryan Mihuc, Kenneth Curtis, Melissa Schlichting, Miguel Verduzco